

# ANNUAL REPORT 2014-2015



# FEANI NATIONAL MEMBERS



	<b>AT</b> ÖIAB - Österreichischer Ingenieur-und Architekten-Verein		<b>IT</b> CNI - Consiglio Nazionale Ingegneri
	<b>AZ</b> CES - Caspian Engineers Society		<b>KZ</b> KasZEE - Kazakhstan Society of Engineering Education
	<b>BE</b> CIBIC - Comité des Ingénieurs Belges / Belgisch Ingenieurscomité		<b>LU</b> DA VINCI - Association Luxembourgeoise des Ingénieurs, Architectes, Scientifiques et Industriels
	<b>BG</b> FNTS - Federation of Scientific Technical Unions in Bulgaria		<b>MK</b> IMI - Engineering Institution of Macedonia
	<b>CH</b> SIA - Swiss Society of Engineers and Architects STV/UTS - Swiss Engineering STV		<b>MT</b> COE - Chamber of Engineers
	<b>CY</b> ETEK - Technical Chamber of Cyprus		<b>NL</b> KIVI - Koninklijk Instituut Van Ingenieurs
	<b>CZ</b> CSVTS - Czech Association of Scientific and Technical Societies CKAIT - Czech Chamber of Chartered Engineers and Technicians		<b>NO</b> NITO - The Norwegian Society of Engineers and Technologists TEKNA - The Norwegian Society of Chartered Scientific and Academic Professionals
	<b>DE</b> DVT - Deutscher Verband Technisch-Wissenschaftlicher Vereine		<b>PL</b> PŃT - Polish Federation of Engineering Associations
	<b>DK</b> IDA - Ingeniørforeningen i Danmark		<b>PT</b> Ordem Dos Engenheiros
	<b>EE</b> EAE - Estonian Association of Engineers		<b>RO</b> AGIR - The General Association of Engineers in Romania
	<b>ES</b> IIE - Instituto de la Ingeniería de España INGITE - Instituto Nacional de Graduados en Ingeniería e de Ingenieros Técnicos de España		<b>RS</b> SITS - Union of Engineers and Technicians of Serbia
	<b>FI</b> UIL - The Union of Professional Engineers in Finland TEK - The Finnish Association of Graduate Engineers		<b>RU</b> RUSEA - Russian Union of Scientific and Engineering Associations
	<b>FR</b> IESF - Ingénieurs et Scientifiques de France		<b>SE</b> SVERIGES INGENJÖRER - The Swedish Association of Graduate Engineers
	<b>GR</b> TCG - Technical Chamber of Greece		<b>SI</b> ZDIT - Association of Societies of Engineers and Technicians
	<b>HR</b> HIS - Croatian Engineers Association		<b>SK</b> ZSVTS - Association of Slovak Scientific and Technological Societies
	<b>HU</b> Budapest University of Technology and Economics		<b>UA</b> SPIO - Union of Scientific and Engineering Associations of Ukraine
	<b>IE</b> Engineers Ireland		<b>UK</b> EC - The Engineering Council
	<b>IS</b> VFI - Association of Chartered Engineers in Iceland TFI - The Icelandic Society of Engineers		



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# STATEMENT BY THE PRESIDENT

## Mr. José VIEIRA/ President of FEANI



In recent decades we have been witness of a formidable development of science and technology that even will accelerate in the coming future leading to an increasing potential of technology in modern society. Technological advancements are also a means for furthering knowledge in academia and can even have significant impacts in social and economic transformations in the future.

Due to the technological democratization of society, dramatic changes in social life have been registered transforming modern civilization on a more individual level. Personal computers, mobile communication devices, robots and cyborgs are some examples of the future of the recent past.

On the other hand global warming and its consequences are critical issues currently threatening humanity. Innovation on clean and efficient energy, water and food security, smart

and green cities, nanomaterials, etc., are assuming increasing importance in our 21st century society.

When we address those threats and challenges we realize the overwhelming and ubiquitous involvement of engineering and engineers. FEANI as the leading, oldest and largest European Engineering Federation must be aware that the practice of engineering solving social problems through the use of machines, devices, systems, materials and processes, does not exist outside the domain of societal interests and must be committed with a permanent and audible voice for the engineering profession in Europe. That is the reason why FEANI should strive to be recognized as the authoritative voice of European Engineering Associations, assuming the mission of promoting the mobility, the excellence in education and the professional development of engineers in order to enhance the visibility of the value of engineers to society.

In the period concerning this Annual Report FEANI had prioritised a significant set of activities following the strategic guidelines assumed by the Executive Board. Some of them are related to: (i) the role of the engineer in society; (ii) special focus on young engineers; (iii) added value for membership of National Members; (iv) active cooperation with other engineering professional associations.

Fifteen years ago, in March 2000, facing the increasing globalisation and an ageing population, the European Council launched the Lisbon Strategy, also known as the Lisbon Agenda, whose ambition was to make the EU, by 2010, “the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”. This strategy was based on the assumption that the EU was lagging behind other global regions, namely the USA and Southeast Asia, in most of the key technical and scientific fields. Apart from the financing of selected research and technology related programmes, most of its goals were not achieved. Moreover, in comparison to the original challenges, the issues confronting European society today are even more pressing. In particular, the continued globalisation of

the economy coupled with the growing emergence of new scientific and technological developments in areas such as biomedical engineering, nanotechnologies, and information and communications technologies. This was the rationale for the timely and highly relevant FEANI conference “Lisbon Strategy: Engineering the Future”, held in October 2015 in Lisbon, where 220 participants from 30 different countries could take advantage of the expertise of leading European researchers, industrialists and politicians.

Europe is facing a difficult vocational problem in attracting young people for engineering studies. It is now doubtful, and it will become worst in the future, the European supremacy on innovation and industrial competitiveness. On the other hand there are great discrepancies in the distribution of engineers with shortage in northern countries and surplus in the southern countries which brings opportunities for mobility. Education, training and employment of young engineers is an European problem to what FEANI and the National Members must be aware. In October 2015, included in the FEANI Annual Business Meetings, in Lisbon, the first European Young Engineers Forum was held. The conference “Collaborative Engineering - The European Way” had the participation of 155 attendees from 14 different countries, and constituted a very successful forum for open discussion of the future of science and technology in Europe and the employment challenges for young engineers.

Mobility of engineers in Europe implies mutual recognition of academic and professional experience. FEANI European Monitoring Committee had a deep reflection on the effectiveness of the three available instruments: INDEX, EUR ING title, and Engineering Card. This should be seminal for a wider and more integrated future discussion about the implications of the Article 49a of the directive on the recognition of professional qualifications.

As a leading European Professional Association, FEANI searches for continuous and effective cooperation with other engineering professional organizations such as: World Federation of Engineering Organizations (WFEO), European Network of Accreditation Agencies for the Engineering

Education (ENAAE), European Council of Engineering Chambers (ECEC), European Council of Civil Engineers (ECCE), Board of European Students of Technology (BEST), European Young Engineers (EYE), etc. The organisation of the “European Engineers Day” and the “Common Training Principles” project are examples of this FEANI cooperative work with other European associations.

Hopefully in the future the special relationship between FEANI as a Professional Association and ENAAE as an Institution for Accreditation of Engineering Education will result in a more intensified and close cooperation in common projects. Regardless of the specific model for this cooperation, I am sure that these two institutions have the appropriate expertise and the necessary network links to promote a common platform aiming the enhancement of visibility and social recognition of engineering in Europe. I am convinced that a holistic and integrated view of the engineering reality and its relationship with academia and industry should be very beneficial to improve the quality of engineering education, the competences of engineers and mobility of students and professionals, while safeguarding and promoting the interests of engineers and the society as a whole.

High standards of safety and well-being in modern societies can be achieved through advances in engineering. FEANI may ensure that the professional qualifications of the European engineers meet the requirements of creativity and innovation necessary for this aim. I feel confident that with the support of the National Members, FEANI may be in a position to help - not only for this to be desirable - but possible. ■

# STATEMENT BY THE VICE-PRESIDENT

## Mr. Ralph APPEL/ Vice-President of FEANI



**H**ow important will the profession of engineers be in the future? What kind of technical and social changes do we face? What are the challenges in front of young engineers?

When I first got elected into the role of Vice President in FEANI, the oldest and largest European Federation of National Engineering Associations, it was the beginning of an exciting journey into the future. None of us had any definitive answer to the questions we raised or could tell with certainty how the engineering world is going to change. What was certain however is that it was not going to stand still, but will only continue to evolve - think alone of the digital transformation that lies in front of us today, often referred to as "Industry 4.0". We in the FEANI have an opportunity to steer this development into the right direction and support it from the engineer's perspective. So, over the recent years, I have come to appreciate very highly our collective work, the various discussions and decisions, and above all the desire to move the engineering sciences forward at the European level.

We do not yet know how specifically the engineering profession is going to evolve, but we do know who will play the main role in that evolution: the next generation, our young engineers. From the beginning of my work with FEANI, it has been my and our objective to support and to encourage our future engineers. This has not changed. On the contrary: especially at times when, for example the digital change is starting to have such great influence on the world in which we work and live, it is enormously

important that the engineers of the future have the very best preparation – all over Europe. It must be our role in FEANI to provide the engineers of tomorrow and the young experts of today with the opportunity to gain and enhance experience that will be so important for their profession in the future. They should be able to learn how to best apply ideas and to form an opinion as well as how to share ideas in practice, to discuss and to search for solutions together.

All of these characteristics will be important in meeting the challenges that they will face in their future as engineers. Because of the digital change, our professional group sees great demands in terms of complexity and flexibility, but also big opportunities. The engineers in Europe are already well educated, but they will need additional skills to be able to successfully meet the challenges ahead. For example, not only must engineers have specialized and deep expertise, they must also more and more possess interdisciplinary skills. Because of the merging of production technology, automation technology and IT-software, more and more tasks will have to be mastered in a field that is defined very widely and flexibly from a technological, organizational and social standpoint. The classic engineer who was strictly the technical expert will now have to offer a broader profile and market him or herself more widely. Engineers will be working in more loosely defined job profiles instead of clearly defined specialty areas. They will be working primarily at interfaces rather than in traditional functional areas. In many cases they will be working in inter- and multidisciplinary teams and settings.

FEANI is already offering future engineers a solid preparation for those challenges. At the general meeting in Lisbon, young engineers got to experience for the first time their own event, which, as we were thrilled to see, was attended by a large number of participants from our various member associations from all over Europe. They had a chance to exchange ideas in a professional context on topics such as digitalization, new materials or energy. Naturally this also included a fair amount of diverse experiences, views, opinions and solution proposals, but that is precisely why such a meeting is so exciting and constructive. This is where we should definitely pick up the ball and provide our future engineers with opportunities to get actively involved and to participate in beyond the boundaries of their own country.

Another great success and good example was the European Young Engineers (EYE) Conference, which was organized by VDI this year and took place in Hannover alongside the annual Hannover Fair. The topic was “Digital Transformation” and offered a diverse program to the nearly 70 participants from 12 European countries. Seeing the young engineers from entirely different backgrounds discussing technical matters, organizing things on their own and working out new perspectives and ideas, was great to watch and left me with a very positive impression about the future. I am sure our future engineers will master the challenges to come, if we continue to support and prepare them in the right way.

I am looking forward to our future cooperation within FEANI and I feel certain that we are on the right track together. ■

# STATEMENT BY THE TREASURER

## Mr. Ulf BENGTTSSON/ Treasurer of FEANI



With total assets of EUR 507.159,05 at the end of 2014 and EUR 434.377,06 at year-end 2015, the FEANI Central Office has gone through some difficult years. In spite of the considerable efforts made to further reduce operational costs, two consecutive years of deficits could not be avoided. Also 2016 announces itself as a difficult one in breaking even, despite the implementation of radical measures to optimizing our cost structure. In this respect, our general office expenses will be further reduced by relocating the FEANI Central Secretariat in April 2016 to a smaller, but more attractive and less expensive venue in the Brussels European quarter. In the period 2008 to 2015 we reduced total overhead costs with 12% and went from 4.4 FTEs to 2.7 FTEs.

As Treasurer I am particularly worried about the main reasons causing these deficits. They relate to non-committed members, refraining from complying to their prior obligation, which is to pay their annual membership fee, despite numerous reminders. The reasons for this non-compliance may vary, but none of them is acceptable over a longer period of time. At many occasions, the Finance Committee, the Executive Board and the General Assembly have debated this issue and considered each specific case in isolation. As a result, the Organization has adopted its Statutes in 2014 to allow National Members in difficulty to opt for the status of "Suspended Member" for a maximum duration of three years. This should allow for an acceptable transition for members in difficulty to

return to their previous level of commitment, while the FEANI community of 35 National Members is maintained.

In addition to the concerns on non-paid membership fees, FEANI is also challenged by the further successful development of its products: the frequently consulted INDEX on Engineering Education in Europe and the maintenance of the Eurlng Register with further issuing of new Eurlng certificates. We also must reflect on the societal and economic value of continuing the promotion of the EngCard as we do not seem to obtain a critical mass in terms of number of cards issued.

Despite these financial concerns, I am confident that we will be successful in turning this development around. A first effort thereto has been made by six National Members who voluntarily increased their contribution in 2015. At the same time FEANI staff continues to master an increased workload while focusing on the promotion and visibility of our Organization, especially in the European political arena. Our main effort during 2016 will be the cooperation with ECEC on the EU project on Common Training Principles. With a future solid funding, FEANI can continue to provide its members with attractive services and strengthen its successful public affairs to the benefit of 4 million engineers in Europe. ■

# STATEMENT BY THE SECRETARY GENERAL

## Mr. Dirk BOCHAR/ Secretary General of FEANI



In this Annual Report we provide for a decentralised and national overview of the activities of our 35 FEANI National Members and also focus on a number of topics which should merit our attention as they increasingly influence the way in which we work. Those topics relate to globalisation, the European Union and their impact on our profession.

As in any other supra-national Organization, finding consensus on key policies with 35 member nations remains an ongoing challenge, but much has been accomplished over the last five years in increasing our visibility and ensuring a higher participation and engagement of our National Members. We have developed a wider range of activities, products and events with the setting up of the National Members Forum and various working groups on different themes, such as on Common Training Principles for Engineers, Business Development, IT and Finance. In the light thereof we organized a successful FEANI congress in October 2015 on "The Lisbon Strategy". We play a key-role in

the organization of the European Engineers Day of which the next event is scheduled for September 2017. We take pride in the fact that our relationships - within our network and with partners around the world, such as the WFEO, the EU, etc. - prosper through trust, transparency, fairness and mutual respect. Through these processes our representatives are encouraged to use their knowledge and skills to the full. Our Central Secretariat in Brussels continues to support national members across Europe through the delivery and dissemination of high-quality information and efficient services on European affairs. In return, the National Members - where well-supported staff is available - continue to contribute with expert advice in our various bodies.

In October 2015, the FEANI General Assembly decided that the boundaries of our European network should coincide with those of the signatories to the European Higher Education Area (Bologna Process). This decision has provided for clarity as to which countries can still be attracted in widening our network. We are pleased that with Ukraine in 2016 and possibly also Turkey as from 2017 onwards, our network will cover an ever larger market. Working together within the Bologna area, makes our meetings easier in terms of membership and participation, notwithstanding the fact that education remains a national responsibility, implying complexities in comparing levels of acquired education. For that reason, more synergies with ENAEE (see later in this brochure) are being sought: the development of one European database for the education of the engineering profession will be established in combining the FEANI INDEX and the EUR-ACE database in the near future. This is required for a more complete and more user-friendly application for future engineering students, academics and industry. In this way, and through more intensified cooperation between FEANI - as the leading European Professional Engineering Body - and ENAEE - as the European Network of Accreditation Agencies for Engineering Education - we will be able to present ourselves as the "European Engineers", a concept which both our Organizations are committed to accomplish and implement in the following years. Our management must

also aim at ensuring a sustainable future for the Organization as a specific, self-financed and successful international body. Reforms have recently been adopted and apart from modernising our membership framework, supporting actions have also been provided to optimise the management of the network and its links with other Organizations in the engineering field (ECEC, ECCE, BEST, EYE, etc.). In a continent where the opinion on the outlook of the EU is becoming polarised between those who believe it is no longer fit for purpose and those who point to its enormous achievements, FEANI wishes to continue serving as an example of how to achieve and determine harmonized policies. Founded in 1951, our Federation is not outdated : our National Members remain essential in attracting youngsters to the engineering profession, in promoting apprenticeships, in liaising with industry, in guiding future engineers in the multiple options of continued professional education and in enabling them to work cross-border and internationally with as little administrative burden as possible. The completion of this mission in the 21st century global environment, does imply new challenges.

Globalisation was expected to turn the world into one prosperous village. In many aspects of society, our profession has certainly contributed to that by designing and building new infrastructures, by developing better and faster transport modes, by tackling the issues of renewable energy and climate change, by considering environmental protection, etc. However, in some European countries, globalisation has also had a price and has led to a decline of the welfare-state with considerable consequences for the next generation. In the EU 28, more than 17% of the age range 20-24 years, is not in employment, education or training (NEET). In countries in the South of Europe this exceeds 30%. Typical middle-class jobs in the manufacturing industry have moved away to other continents, without a lot coming back in return. Yet, the perceived stagnation in the EU is relative. Western countries are still amongst the richest in the world and the middle-class remains a lot richer than those in the emerging economies. Our wealth remains enormous and fifty years ago people in our countries could only dream of the living standards we have achieved today. The challenge of our Organization today is that we should not be complacent and

compare ourselves with fifty years ago or with the emerging economies, but with our future. Our young generations suffer from precarious employment contracts or the lack of any employability at all. Today's de-industrialization is as disruptive as the transfer of Europe from an agrarian society to an industrialized one was in the middle of the 19th century. As professional Organizations we have a task to ensure that future generations have the right skills and are not left behind. Therefore, Industry 4.0, to which our Vice-President referred previously, must be a prime concern.

In the light thereof, FEANI successfully qualified to be a project partner in three important EU funded projects which are all in line with our corporate mission and objectives. We participate in the "Creation of a system for the documentation and validation of non-formal and informal learning in the engineering profession" (lead by VDI in Germany); in the project "Professional Roles and Employability of Future Engineers" (lead by the University of Leuven Belgium) and in the project "Development of an Action Plan for the EU STEM Coalition" (lead by Platform Bèta Techniek in the Netherlands). The goal of the latter project is to stimulate and support member states to establish a successful national STEM strategy. We are strongly convinced of the importance of international exchange of knowledge and experience and of the benefits of international cooperation. "Fostering and Development of Talent" has also been chosen as the motto of the Slovak Presidency of the EU Council, because supporting talent has a strong potential to increase competitiveness and drive innovation. As a partner of the EU STEM coalition FEANI will assist in building momentum for a strategic approach to developing talent, to ensure it is best used to build a prosperous Europe.

Finally, we wish to amplify that we must continue to support and be involved in the interaction between business, education, governments and other stakeholders to identify and exchange on how STEM and ICT-skills shortages can be structurally addressed in the long term. Those skills will be a key component for European competitiveness and productivity as they are needed across a broad range of sectors. As FEANI we have a main task to play in being a key-enabler to achieve these strategic objectives. ■

# EUROPEAN MONITORING COMMITTEE (EMC)

## Mr. Lars FUNK, Chair of the EMC



The European Monitoring Committee is concerned with a couple of important projects. The most important ones are the Implementation of the new Index-Update-Procedure and the Reframing of the EUR ING title and the engineering card.

The procedure for updating the FEANI INDEX was changed in the last year. This was so important because the Index is on the one hand the most popular product of FEANI, on the other hand we all know that the Index is not up to date, which means that engineering programs in many countries are not listed in the Index although they fulfill the FEANI criteria for engineering courses. To hold the Index up to date is not an easy task, considering the number of new Bachelor and Master Programs every year. In the past EMC checked every single course before it was added to the Index. Obviously this is not a suitable procedure to handle thousands of courses in Europe.

The procedure is now working in the way that the National Monitoring Committees are responsible to hold the index up

EMC members	Acting as "Ambassador" for
Malcolm Booth (UK)	United Kingdom
Giovanni Cardinale (IT)	Italy, Romania
Anastasios Chatzidakis (GR)	Greece, Cyprus
Christoph Gemperle (CH)	Switzerland, Serbia
Lars Funk (DE)	Germany, Luxembourg
Eli Haugerud (NO)	Norway, Iceland, Estonia
Gabriel Henriest (FR)	France
Marco Jagodic (SI)	Slovenia, Hungary, Bulgaria
Monica Normark (SE)	Sweden
Damien Owens (IE)	Ireland, Poland
Carsten Eckhart Thomsen (DK)	Denmark, Finland
Gabriele Schachinger (AT)	Austria, Slovakia
David Sedano (ES)	Spain, Russia, Croatia, Macedonia
Alfredo Soeiro (PT)	Portugal, Ukraine
Karel de Wever (BE)	Belgium, Netherlands, Czech Republic

to date for their respective country. It is their task to check whether the engineering courses in their country fulfil the (Input-oriented) FEANI-Index criteria and/or the (Outcome-oriented) EUR-ACE criteria. EMC is no longer checking single courses, but monitoring the work of the NMCs and ensuring that FEANI quality criteria are observed. Next to a regular reporting by NMCs, Audits will be done every five years to enable EMC to get a deep look into the work of each NMC. After a successful Audit the NMC gets permission to update the Index for five years. EMC feels confident that this procedure will help to come to an updated Index in short time. More than 1/3 of the FEANI members are already following the new procedure.

It is obvious that a much closer communication between NMCs and EMC seems to be necessary to run the system. For that EMC defines "ambassadors" in the way that every EMC member acts as contact person for two or three NMCs. The responsibilities are shown in the following table:

The second EMC priority is to look for possibilities to reframe the EUR-ING title and the engineering card concept. In fact it is necessary to increase the number of issued cards as well as EUR-ING titles sufficiently. For that it is important to get support by industry as well as to look for cooperation agreements with universities. FEANI and its members should use this opportunity that is profiling itself towards these important stakeholders. Additionally it is important to develop the engineerING card system to hold a

forward-looking system in place - much more related to the demand of the labour-market than the professional card as described in the directive. Due to that it is under discussion how to develop more possibilities to document and validate the CPD-activities.

EMC is looking for possibilities to bring the EUR ING title and the engineering card concepts together. This implies the investigation of possibilities to establish a common training platform for engineers as described in article 49a of the new directive on the recognition of professional qualifications.

Concerning the EUR-ING title the new electronic application form has been successfully implemented in all FEANI countries. It will help EMC as well as NMCs and the FEANI secretariat to handle the applications more efficiently. EMC has finished the revision of the "FEANI CPD code and policy" and ran a CPD questionnaire for employers and EUR-INGs. The results are published on the FEANI website and will be presented in May 2016 in Porto. The survey will help to define more FEANI activities in the field of CPD. ■

## FEANI INDEX

programmes fulfilling the FEANI requirements



## engineerING card

engineers graduated in a programme listed in the FEANI Index



## EUR ING Title

engineers graduated in a programme listed in the FEANI Index and fulfilling the FEANI requirements for professional experience and cpd

# REPORTS OF THE NATIONAL MEMBERS

## REPORT OF THE AUSTRIAN FEANI NATIONAL COMMITTEE

# OIAV



**Österreichischer Ingenieur-und Architekten-Verein**

**Year of Adhesion:** 1951

**Declared engineers:** 5 000

**Number of EUR ING:** 437

**Member associations:** The Austrian National Committee for FEANI connects with the following Member Associations: Österreichischer Ingenieur-und Architekten-Verein (ÖIAV), Verband Österreichischer Ingenieure (VÖI), Österreichischer Verband für Elektrotechnik (ÖVE)

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### **Refurbishment of historical “House of Engineers and Architects” - completion of the second building phase**

For the Austrian FEANI National Committee the main project in the reporting period 2014/2015 has been the completion of the second refurbishment phase of our “House of Engineers and Architects”. Owned by the Austrian Society of Engineers and Architects (OIAV), the “House of Engineers and Architects” is one of the most significant palaces along Vienna’s Ringstrasse. It was built by Otto Thienemann in 1870 - 72 based on the

model of English club houses which were inspired by the Italian Renaissance.

During the second phase of refurbishment (completed by the middle of 2014) the staircase, the ancient lift and the attic have been restored and respectively expanded. Apart from that the front facade has undergone a renovation.

The restored attic area is now used as headquarters of the ÖVE - Austrian Electrotechnical Association.

On September 30th in 2014 the two associations OIAV and ÖVE officially celebrated the re-opening of the “House of Engineers and Architects” which has successfully been restored to its original glory. Numerous national as well as international guests have attended the ceremony.



### **New platform GMAR**

OIAV, OVE and OCG (Austrian Computer Society) founded the “Society of Measurement, Automation Control and Robotics” (GMAR - Gesellschaft für Mess-, Automatisierungs- und Robotertechnik). This Austrian platform sees itself as a holistic representation of all people, companies and institutions (research, scientific, educational) working in and being interested in these areas.

A solemn kick off-event with speakers from academia and industry took place on the 8th of June 2015, to mark the establishing of GMAR.

### **femOVE**

femOVE - the women’s platform within the OVE - has been successfully re-introduced and is in upswing due to various events and activities. 2015 proved to be a very successful year for femOVE as the membership base had been increased in this period by 30%. New initiatives and partnerships have been successfully launched. Two of the network’s meetings, each including lectures and visits, were very well attended and accepted with great enthusiasm. Apart from that, regular gatherings as well as a business breakfast were organized.



### **ScienceClip.at**

Within the framework of “ScienceClip.at”, the video-platform run by the OVE, various events and projects have been organized in order to give young people an insight into the fascinating world of science and technology. During the reporting period the platform has promoted activities such as its third video competition for pupils and students who were asked to submit entertaining, understandable and well-founded science videos.



### **New section within OIAV**

Upon the initiative of Prof. Dr. Heinz Brandl, president of the Austrian Society of Engineers and Architects, the OIAV founded its new section „Building Automation“. A kick-off event focusing on the future importance of building automation in general took place in late autumn 2015. About 150 interested people attended the event which showed in particular that with good projects the interaction of applications, detailed design, construction, operation and maintenance are of key importance.



## **Max Fabiani - 150th birthday**

Together with the Slovenian Embassy the Austrian Society of Engineers and Architects commemorated Max Fabiani's 150th anniversary in 2015. Max Fabiani was a famous Slovenian architect who maintained good relations with Vienna, where he completed his studies and held a professorship at the Technical University.

The architect, urban planner, inventor and thinker designed a variety of buildings in Vienna and thus contributed many landmarks, collaborating for example with Otto Koloman Wagner, also known for his lasting impact on the appearance of Vienna.

The Max Fabiani commemorative year was celebrated with events and an exhibition to be seen in Ljubljana and later on in Vienna. Life and work of Fabiani were presented and admired during a ceremony hosted by the Slovenian Embassy in Vienna together with the OIAV. This solemn event was held in the splendid hall of the so-called "Ingenieurhaus" (House of Engineers) and marked the end of all celebrations taking place in 2015 in honour of Max Fabiani.

Apart from the above mentioned events and activities of the OVE as well as the OIAV, the Austrian National Committee applied for the approval to update the FEANI Index and participated in the discussion concerning the new engineers' law. ■



## REPORT OF THE BELGIAN FEANI NATIONAL COMMITTEE



### Comité des Ingénieurs Belges - Belgisch Ingenieurscomité (CIBIC)

**Year of Adhesion:** 2008

**Declared engineers:** 54 000

**Number of EUR ING:** 326

**Member associations:** The main Member Associations connected with CIBIC are the Fédération Royale des Associations Belges d'Ingénieurs civils, d'ingénieurs agronomes et bioingénieurs (FABI), Koninklijke Vlaamse Ingenieursvereniging (KVIV), Union Francophone des Associations d'Ingénieurs Industriels de Belgique (UFIB), Vlaamse Ingenieurskamer (VIK)

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The Belgian engineering education has been reorganized some years ago as follows: in Flanders the two Master studies, 'Ing.' (industrial engineers, 4 years) and 'ir.' (civil and bio engineers, 5 years) respectively, are part of the university education and, as such, the engineering master degrees from the University Colleges (Ing.) have been integrated into the universities. In the French speaking part of the country the 'ir.' programs are part of the universities (5 years), the 'Ing.' are part of the University Colleges with duration of 5 years as well. On the Flemish side the engineering organizations KVIV (ir.) and VIK (Ing.) merged and since January 2016 the new organization is called "IE-NET Engineering Society" (ir. + Ing.). In the French speaking community the two organizations FABI (ir.) and UFIB (Ing.) are still organized separately but have a strong cooperation through the IB platform (Ingénieurs Belges). CIBIC is an umbrella organization for these different organizations and represents all the Belgian engineers with a Master's degree. To be more complete and transparent: the bachelors in the domain of engineering are not represented by CIBIC, and to our knowledge have no professional organization(s) to represent them.

A full activity report should include the activities of at least these three organizations. The three of them organize a range of activities directed at their members, are active in CPD, have activities in defending the interests of their members and a lot more. The organization patterns are however quite different.

Remarkable and interesting on the French speaking side is a yearly organized round table with three stakeholders: education of engineering, professional member organizations and employers of engineers. The idea of CIBIC is to strengthen this effort and to try and achieve this as a first step in the Flemish community, and later on for the Belgian national level - a goal that meets some complexity to achieve. On the Flemish side, the two groups (ir. and Ing.), have a clearly different culture, partly based on the different profiles in their education and based on a long history of separate organizations. This implies a considerable effort for the realization the ambitious plan of bringing together the stakeholders. The need for the two different profiles, the one more focused on practical and applied education (Ing.), the other on more abstract and

conceptual education (ir.) in the same domain, asks for elaboration and clarification. Clarification, not only within the professional organizations, but also with the involved stakeholders at least: the sector of education, the professional organizations, the representatives from the employers' side and the governmental representatives. The goal is to bring this topic to a common discussion and research, to a level relevant for society, transcending the individual interests.

CIBIC tries to make European topics interesting for Belgium and Belgian topics interesting for Europe. One topic seems to be of special interest: the evolution of measuring and validating the competences of an engineer. In Belgium we are strongly based on diploma recognition. The 'continuous learning or CPD' and 'experience' are getting more and more important in the validation process. Some countries in the FEANI family have more experience with this approach. Europe is clearly directing in the approach "diploma - Life Long Learning - experience". Isn't this a challenge for Belgium with a lot of opportunities? We can imagine there will be a strong evolution regarding this topic in the near future. We may expect this topic is of common interest to Belgian stakeholders and for Europe, as a unifier of differences.

This goal creates another and not so evident challenge for CIBIC: the definition and gathering of the stakeholders in the engineering environment. Elaborating a list of organizations would be a good start, but reveals to be a real challenge.

In conclusion: our organization follows ambitious plans in spite of restricted means, whilst being mostly based on voluntary work. ■



## REPORT OF THE BULGARIAN FEANI NATIONAL COMMITTEE



### Federation of Scientific Technical Unions in Bulgaria (FNTS)

**Year of Adhesion:** 2004

**Declared engineers:** 15 000

**Number of EUR ING:** 45

**Member associations:** FNTS brings together a number of 19 Associations and 34 Territorial organizations.

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Over 2014-2015 more than 2000 conferences, symposia, seminars, round tables, discussions, exhibitions, workshops, competitions and other scientific, technical and organizational events were organized and co-financed nationally in partnership with scientific organizations, universities and SMEs from Bulgaria and abroad. The main events were in the field of IT, electronics, electrical engineering, Energy, mechanical engineering, mining, standardization and metrology, transport, food industry, chemical engineering, promotion of innovations, patents and inventions.

#### We can mention the following events:

1. Annual Awards "Engineer of the Year" and "Young Engineer of the Year"
2. Celebration of the 130-th Anniversary of the Federation of Scientific and Engineering Unions in Bulgaria
3. Seminar-discussion of the bill on "Electronic Management Act" - February 2015
4. "Prospects for development of the electrical industry in Bulgaria" - March 2015
5. Forum "ELECTRONICS 2015", May 2015
6. "9th Japanese Mediterranean Workshop on applied electromagnetic engineering for magnetic, superconducting, multifunctional and nano-materials - JAPMED'9" - June 2015
7. International Seminar "Engineering Education and Realization of Young Engineers" EEPRIE - June 2014 and July 2015
8. International Conference INFOTECH - September 2014 and September 2015
9. International Conference "Electrical Machines, Electrical Drives and Power Systems" - October 2015
10. National forum "Electrical engineering and Electronics" - September 2015
11. National forum "Energy" - September 2015
12. National Conferences with International Participation "TELECOM 2014" and "TELECOM 2015", October 2014 and October 2015.
13. National Conferences with International Participation "Acoustics" - 2014 and 2015
14. National Exhibition "Inventions, Transfer, Innovations" in 2014 and 2015
15. Career Forum for young graduates in the field of Electrical engineering and Electronics - December 2015

16. National Forum - "Challenges and opportunities for development of regions" 2015
17. XII International Congress "Machines, technologies, materials"
18. XI National Exhibition with international participation: Foods, beverages, new technologies and software products for food industry
19. XIII National conference with international participation on open and underwater mining
20. National conference with international participation "Electronica 2014", May 2014
21. International Symposium on Electrical Apparatus and Technologies SIELA 2014, May 2014
22. 10th International Conference "E-beam Technology EBT 2014", June 2014
23. National forum "Electrical engineering and Electronics", September 2014

are traditional and take place on annual basis. We shall celebrate this year the 75th - Anniversary of the Higher Engineering Education in Bulgaria, so the accent will be put on the challenges and future aspects of engineering and technical education in Bulgaria. We are expecting more information about EU tenders and tendering procedures and the opportunities as FEANI members to participate collectively in the process. ■

The main future key-activities (priorities) of the Federation of Scientific and Engineering Unions in Bulgaria will be in the same framework. The majority of our events





## REPORT OF THE CROATIAN FEANI NATIONAL COMMITTEE

# HIS

HRVATSKI INŽENJERSKI SAVEZ  
CROATIAN ENGINEERING ASSOCIATION



### Croatian Engineering Association (HIS)

**Year of Adhesion :** 2010

**Declared engineers:** 35 000

**Member associations:** HIS keeps the connection between 36 Engineering societies in Croatia, members of HIS

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It is our pleasure to provide information and increase the visibility of Croatian Engineering Association, highlighting its role, the main activities and achievements in 2014 and 2015. Croatian Engineering Association (Hrvatski Inženjerski Savez, HIS), is National society of engineers in Croatia composed of 36 members societies of different engineering disciplines with over 20.000 engineers in total.

In our efforts to be recognized as the authoritative voice of Croatian engineers we have succeeded in enlarging our organization with 4 new members, engineering societies that have joined HIS and accepted our strategy and policy. Our financial independence gives us strength in the dialogue with relevant partners, educational institutions as well as with governmental bodies whenever strategic questions related to technology, higher education programs or reindustrialization and related economy are on the table.

In order to contribute to the work on mobility through FEANI instruments such as the FEANI INDEX, the EURING title and the Engineering card, very appreciated by our members, we stimulate the debate with the higher education institutions that deliver engineering programs, and we support their involvement.

### The main achievements in 2014 and 2015

Croatian Engineering Association organized the National Engineering Day on March 2<sup>nd</sup>, 2015, in collaboration with the Croatian Academy of Engineering and supported by the Croatian Academy of Sciences and Arts. It was the first time a gathering in appreciation to engineering professions, but it would be organized on the same day every year in future. The date reminds of the first engineering association: Croatian society of Engineers and Architects has been constituted on March 2<sup>nd</sup>, 1878.





Prof. Vjera Krstelj PhD, the President of Croatian Engineering Association, emphasized in her Welcome Greetings and opening speech the importance of promotion and strengthening the role of engineers and their much needed contribution in strategic decisions, particularly in technological aspects for the sustainable development. Also stressing the need of the international cooperation she informed about the FEANI - HIS cooperation, particularly in facilitating the mobility asserting and developing the professional identity of engineers in Europe

The National Engineering Day brings together engineering and science, universities and companies warning about the importance of engineers' contribution but also of their social responsibility.

The Croatian Engineering Association was awarded with the Croatian Government Charter (Povelja Republike Hrvatske) which the President of Croatia Ivo Josipović handed over to the President Prof. dr. Vjera Krstelj on February 9th, 2015, acknowledging thus our endeavours in promotion, development and protection of engineering professions, the exceptional influence in sustainable development, and

not least our capacity in building relationships and bringing together experts for interdisciplinary cooperations.

For us the affirmative governmental support is very important for the future activities, since we as engineers have a lot of activities that rely on legislative aspects. This kind of recognition is helpful in working with administration by showing that the Croatian Engineering Association is worthwhile of cooperation.

The permanent priority of the Croatian Engineering Association is the gathering and bringing together of engineers/engineering societies and organizations of different professions with the goal in promotion and better positioning of engineering professions. However, we are not entirely satisfied with our activities towards our young engineers. We intend to improve this in the future on the level of interdisciplinary and intersectorial cooperation.

Parallel to this general mission we will facilitate the mutual recognition of engineering qualification in Europe and towards an harmonization/ unification of a conceptual scheme for professional competence and its educational foundation including formal, non-formal and informal learning.

It is obvious that FEANI plays the main role acting strategically in bringing together National Members helping in promoting of the mobility. FEANI could support the work on the approach criteria and framework for MRA on training of engineers and continuous development of their skills and abilities/certification schemes. This could be the extension of FEANI INDEX to non-formal learning for regulated and related professions. The Parties to the Agreement should be the FEANI members, National Engineering Associations. ■



## REPORT OF THE CYPRUS NATIONAL COMMITTEE



### FEANI Cyprus National Committee

**Year of Adhesion :** 1970

**Declared engineers:** 2 200

**Number of EUR ING:** 84

**Member associations:** Following the discussions between the Technical Chamber of Cyprus (ETEK), Cyprus Civil Engineers and Architects Association (CCEAA) and the Cyprus Professional Engineers Association (CPEA), aiming at the best representation of Cyprus internationally, it was agreed that ETEK will assume the representation of Cyprus in FEANI. Furthermore, it has been decided to restructure the Cyprus National FEANI Committee so as to consist of 8 members: 4 representatives of ETEK, 2 of the CPEA and 2 of the CCEAA.

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The Candidate Support Project (CSP) has been founded in 2012 based on the EPO cooperation roadmap, and ETEK is a member of the CSP National Working Group.

The cooperation within the CSP includes the project "STS-Med: Small scale Solar units for Mediterranean communities". According to the project presentation, STS-Med intends to spread out the advantages from the adoption of pioneering solar technologies to improve energy efficiency in public buildings through four demonstrative plants, based on concentrating solar systems, in Cyprus, Italy, Jordan and Egypt.

Regarding the Cyprus Pilot, the integration of the Fresnel collector on the HVAC of the Novel Technologies Laboratory will be performed by Air Control, which was awarded the corresponding open tender. This integration involves the connection of the Fresnel collector to the absorption chiller already on site. A thermal collector will ensure the production of chilled water for 2 hours (100 kW thermal) with no heat input from the Sun. The Fresnel collector is programmed to be installed in the beginning of July 2016. (As per STS Med - Newsletter N°10). ■



## REPORT OF THE CZECH FEANI NATIONAL COMMITTEE



### **Czech Association of Scientific and Technical Societies (ČSVTS)**

**Year of Adhesion :** 1996

**Declared engineers:** 50 000

**Number of EUR ING's:** 116

**Member associations:** Czech Association of Scientific and Technical Societies (ČSVTS) and Czech Chamber of Certified Engineers and Technicians (ČKAIT) are the two main Member Associations in the Czech Republic.

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The Czech Association of Scientific and Technical Societies (ČSVTS) held celebrations to mark the 25th anniversary of the founding of its organization in May 2015. The celebrations were divided in two parts, namely technical and ceremonial ones. The technical part in the framework of the Conference took place in the headquarters of the ČSVTS in Novotného lávka 5 in Prague 1 on May 18th 2015. The Conference was called "Science and Technology in the Czech Republic", the motto "The Perspectives of Technics and Technologies by the Year 2030". The ČSVTS and its societies nowadays gather a considerable intellectual potential representing mainly associated engineers, technicians and other experts who with a specific orientation contribute to performing the tasks which are confronted with our society, European and global societies. These challenges cannot be solved without improving the use of the results of science for innovation of technics and technologies, and without their putting into practice using new engineering methods. Individual presentations have indicated views on these problems, starting from their scientific solution, followed by innovations and putting into practice.

On May 28th 2015, the celebration meeting under the auspices of the President of the Czech Republic Miloš Zeman

was held on the occasion of the 25th anniversary of the founding of the current ČSVTS and at the same time in commemoration of the 150th anniversary of the founding of the Czech Association of Engineers and Architects, the first association of engineers and architects in the territory of the Czech Republic. Among the participants were present ministers of the Government of the Czech Republic, deputies of the Parliament of the Czech Republic, President of the Czech Academy of Sciences, President of the Confederation of Industry of the Czech Republic, President of WFEO and President of FEANI, and other representatives of international engineering associations (VDI, CAST, ZSVTS, FSNOT, Kuwait Society of Engineers) and a great number of other distinguished persons. After speeches of Czech guests, the highest awards were conferred on distinguished persons by the Czech Association of Scientific and Technical Societies. Guests were also offered to examine selected technical projects and presentations of students.

In March 2015, the Czech National Committee for FEANI held the round-table discussions on the theme of "EUR ACE® Accreditation - A Certificate of High Quality Engineering Degree Programs" with the aim of informing mainly the representatives of technical universities, Ministry of Education,

Youth and Sports of the Czech Republic, Ministry of Industry and Trade, Ministry of Labour and Social Affairs, industries, engineering societies and technical university students about the significance of the quality management system of high quality engineering degree programs in accordance with the European Higher Education Area (EHEA) within the framework of European Network for Accreditation of Engineering Education (ENAE). President of ENAE Prof. Dr. Bernard Remaud and President of the Polish Accreditation Commission of Universities of Technology Bohdan Macukov were invited to the round-table discussions to give keynote lectures.

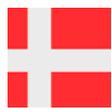
In 2015, the ČSVTS in cooperation with the partner organization Guarant International, Czech Republic, prepared a proposal for organizing of the World Engineering Conference and Convention (WECC2023) in Prague in 2023. With this intention of addressing lots of renowned national and foreign institutions, the ČSVTS gained their support, including individual member organizations of FEANI and their President. The proposal of the ČSVTS was submitted by delegates of the Czech Republic doc. Ing. Daniel Hanus, CSc., EUR ING and prof Ing Jaromír Volf DrSc. at the WFEO General Assembly held in Japan's Kyoto on December 4th 2015 which was unanimously accepted and therefore the ČSVTS was entrusted to organize the most significant world's meeting of engineers.

The Czech National Committee in cooperation with the Czech Chamber of Certified Engineers and Technicians Active in Construction continued the preparation towards the establishing of the accreditation agency authorized to award the European quality label of EUR-ACE® in 2015.

In December 2015, the Czech National Committee for FEANI in cooperation with the Confederation of Industry of the Czech Republic held a workshop "Professional Engineer - The Holder of Technical Innovations". The goal of the workshop was to inform employers and other interested persons about the existing FEANI system providing the assessment of the professional quality of graduates of technical engineering programs and their readiness for doing their jobs complying

with the requirements for practice, and to inform of tools to enable the employers to gain credible information of engineering competences of individual persons interested in obtaining the position of engineer. Representatives of the Government of the Czech Republic and Ministry of Education, Youth and Sports, delegates of technical universities, Human Resources Managers, delegates of the Czech Chamber and engineering societies of the ČSVTS took part in the workshops. ■





## REPORT OF THE DANISH FEANI NATIONAL COMMITTEE



### Ingeniorforeningen i Danmark (IDA)

**Year of Adhesion :** 1960

**Declared engineers:** 83 000

**Number of EUR ING:** 350

**Member associations:** The Ministry of Education has an Advisory Committee covering all polytechnic and non-university education where IDA is represented and offers advice on short cycle engineering degrees.

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The main IDA Vision and Strategy are defining four central working areas:

1. A clear identity as engineer and for IDA
2. Globalization of the Engineering Profession and Labor Market
3. Influence on science and technology
4. Core Business for the members of IDA: Extended service and professional networking.

### Making it attractive to become an engineer

IDA has the vision that by 2020 there is a new "storytelling" about engineers containing an identity that is able to deliver a professional pride and making it attractive to become an engineer.

IDA is a founding partner in the organization Engineer the Future which is cooperation between organizations, engineering institutions, technical universities and companies primarily within industry. The organization consists currently of 47 partners who all contribute to describing the engineering profession and how engineers are working within the wide range of different engineering fields. Before young people must take their choice of study



the partners in Engineer the Future make coordinated campaigns to inform them of the professional and personal opportunities in becoming an engineer.

### The employment of engineers in Denmark

The number of unemployed engineers in Denmark continues to decrease. The latest statistic shows that the general unemployment for every engineering specialization is less than 2%. IDA is actively contributing to an active labor market policy for engineers and scientists in order to ensure that Danish engineers and international engineers working



in Denmark are flexible and can develop their skills while working in Denmark. IDA offers e.g. personal guidance concerning career development and offers different types of courses in order to provide engineers and scientists with updated information about a wide range of subjects relevant for the professional and personal development.

### Cooperation with governmental bodies

IDA is actively contributing to the development of the national and international policies within the labor market, education, innovation and research. IDA has e.g. worked actively by developing an optimal framework for production technology. The rather large number of SMV's in Denmark



have successfully integrated production technology and by doing so increased their productivity significantly.

### Professional networks

IDA has put an emphasis on developing the app 45 professional engineering networks in order to facilitate the exchange of new technological knowledge and experience. The professional networks are a huge success for gathering the engineers and for providing engineers with the possibility to network by meeting other engineering and scientists.

### Globalization

**IDA is playing the leading role in the globalization of the academic professions in Denmark. This is carried out within three main areas:**

1. International engineers and scientists coming to Denmark
2. Danish engineers working abroad
3. Engineers and scientists working in a global context in Danish companies.



IDA has set the ambitious goal that 10% of the members shall be international engineers by 2020. The growth in professional meetings and conferences conducted in English has therefore increased significantly. At the same time IDA is cooperating closely with the Danish ministries, international organizations and other relevant authorities about raising awareness and making it more interesting and easier for international engineers and scientists to work in Denmark.. ■



## REPORT OF THE DUTCH FEANI NATIONAL COMMITTEE



### **Royal Dutch Society of Engineers KIVI**

**Year of Adhesion :** 1959

**Declared engineers:** 22 100

**Number of EUR ING:** 661

**Member associations:** The Royal Dutch Society of Engineers KIVI was founded in 1847. It is the national Engineering association of the Netherlands, with professionals of all disciplines of engineering as its members. The association provides a large number of activities for its members, aimed at a continued professional development.

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The Royal Netherlands Society of Engineers (KIVI) is the largest engineering society of the Netherlands, with over 20.000 members and sections for all engineering disciplines.

Our primary objective is to support engineers in their professional development and help advance their careers. In order to do so we provide in-depth and cross-sector knowledge sharing and networking. We pay special attention to developing international careers and help improve mobility. Another important part of what we do is to stimulate debate and to promote the importance of technology and engineers in society, in order to find solutions for today's grand challenges and to improve our everyday lives. We encourage adequate investment in education, research and innovation and are a recognized partner for both government and industry on these topics.

In 2015 two activities stood out: The Chartership Structure and the Prins Friso Ingenieursprijs (Prince Friso Engineering Prize).

### **Chartership Structure**

On 14 September 2015 the Royal Netherlands Society of Engineers (KIVI) awarded Chartership status to four Chartered Engineers and one Incorporated Engineer. These engineers were the first in the Netherlands to receive this international qualification from KIVI. They distinguish themselves with this title on their technical and innovative capacity. The prestigious titles were awarded during a festive ceremony

All engineers are from Royal HaskoningDHV, a big independent international engineering and project management consultancy. RHDHV is a Founding Father of the Chartership Structure of the Netherlands, the company was strongly involved in setting up the system.

Erik Oostwegel, Chairman of the Executive Board of Royal HaskoningDHV is very enthusiastic about the Chartership: "We see the benefits of such a 'quality mark' for the development of our employees. This creates for us as a company a consistent and uniform development process worldwide. This in its turn facilitates the (international) cooperation.

Moreover, we see that this qualification strengthens our competitive position. Since these engineers were awarded Since the first Chartered Engineers were qualified, the interest has been overwhelming, both from companies and individual engineers.

The titles Chartered Engineer (CEng) and Incorporated Engineer (IEng) can only be awarded to an engineer with a minimum of 5 years of work experience, who has a track record of continuous professional development and has been successfully peer reviewed.

### Prins Friso Ingenieursprijs / Engineer of the year 2015



For years KIVI has awarded the Engineer of the Year prize to engineers who distinguish themselves in their work by innovative power, entrepreneurship, personality and societal impact. The winner can call himself Engineer of the Year for the whole year. With this award, KIVI provides engineers a platform and supports dialogue with and between engineers. The KIVI Engineer of the Year award highlights the value of engineers to society.

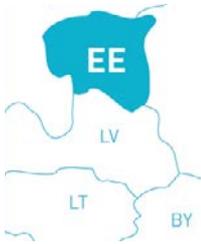
Since 2015 the prize bears the name Prince Friso Engineering Prize. Prince Friso was Prince of the Netherlands. He studied mechanical and aerospace engineering. In his work Prince Friso combined his engineering skills with its financial and economic insight. He stood at the intersection of engineering and society, and in connection with innovation and valorization. Prince Friso was a very valued member of KIVI and held a passionate argument in 2004 at the annual KIVI conference, with the theme "Market Success of innovation".

Allard van Hoeken, at that time head of new energy at Bluewater Energy Systems, won the first Prince Friso Engineering Prize and was awarded Engineer of the year 2015. "Van Hoeken knows how to book international successes by combining technical innovation with commercial insight. He can also passionately convince and inspire others to make the switch from traditional energy to renewable energy," said jury chairperson Micaela dos Ramos, Executive Director of KIVI.

Throughout the year Allard van Hoeken acted as ambassador of the engineering profession. ■



# REPORT OF THE ESTONIAN FEANI NATIONAL COMMITTEE



## Estonian Association of Engineers

**Year of Adhesion :** 1995

**Declared engineers:** 911

**Number of EUR ING:** 43

**Member associations:** EAE comprises all the major engineering institutions in Estonia, and represents Estonian engineers in the matters of importance to the engineering profession as a whole. The major institutions, the founder members of the EAE, are the Estonian Association of Civil Engineers and the Society of Estonian Mechanical Engineers.

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Estonian Association of Engineers is a non-profit organization, acting in public interests. The Association is an umbrella organization, bringing together the professional organizations of engineers, trainers of engineers and innovative employers, and all those interested in developing the engineering knowledge and technology.



**Membership of the Estonian Association of Engineers comprises 11 professional organizations, 2 universities, 1 higher school, 1 professional education institution and 4 companies of stature:**

1. Estonian Society for Biomedical Engineering and Medical Physics
2. Estonian Association of Civil Engineers
3. Estonian Society for Electrical Power Engineering

4. Estonian Transport and Roads Association
5. Estonian Association of Engineers for Heat Engineering
6. Estonian Mining Society
7. Estonian Association of Systems Engineers
8. Põlva Association of Engineers
9. Estonian Electronics Society
10. Estonian Association of Mechanical Engineers
11. Tallinn University of Technology
12. Estonian University of Life Sciences
13. Tallinn University of Applied Sciences
14. KH Energia-Konsult
15. Viru Keemia Grupp AS
16. ÄF-Consulting AS
17. Grafitek OÜ
18. AS Amhold
19. Tallinn Polytechnic School

In the reporting years, one general meeting and six meetings of the Board were held. The priority in activities has been assigned to valuation of engineering education and engineer's profession.

The key areas were related to the RESEARCH AND TECHNOLOGY PACT (PACT), focusing on the activity, involving the concerned parties and local self-government.

The Association goes all out to involve into common activity the hobby circles, basic schools, gymnasiums, professional education institutions, universities, applied higher schools, entrepreneurs, amalgamations of companies, unions and public sector. The Association also participates in composing the basic schools' and gymnasiums' curricula, doing it not only respecting the technology, but also contributing to composing the modern methods of teaching basic-school and gymnasium mathematics. There is a well-planned activity to achieve the goals of PACT. We organize regularly lectures, practical classes and supervising of hobby circles in basic schools, gymnasiums and professional education institutions. We have selected the target groups from schools, where most graduates enroll at universities to study areas of technology.

The Association participated actively at the cooperation conference of Research Agency. We presented the role of engineering and technology in development of society and the opportunities of youth for studies and work in the area. Broadening of the PACT by involvement of public sector and local self-governments is absolutely necessary for getting the PACT under way; it is the priority of the Association. Quite naturally involvement of the state and companies' funds is needed to implement the activities of the Pact. We are eagerly hoping for support from Program TeaMe+, complemented by public applications contest for funding a single project to be organized within it in 2016.

### **The activities organised by Association:**

- Roundtable "From research to business"
- Dissemination of information through Internet environment [www.insener.ee](http://www.insener.ee)
- Finalising the composing of engineer's professional standards
- Processing of Euro-engineer qualification applications
- Adjustment of results of reforms of the Foundation Estonian Qualification Authority to working principles of the Association

The Association is represented in three professional councils and our member organizations participate in the work of 8 professional councils, including health and education.



The responsibility for the work on the substance of the case for awarding to the graduates of Estonian colleges and universities the primary profession has been vested in the Association since 2016. The standard of primary profession is being composed presently. It is our professed objective to grant to graduates of university master curriculum in engineering the profession "diploma engineer" (i.e. certified engineer), level 7, primary profession, to grant to graduates of university of applied sciences the profession "engineer", level 6, primary profession.

The qualification committees of member organizations of the Association are engaged in analysis on points of fact when awarding the engineer qualification. Laws too, stipulate that engineer qualification shall be mandatory in a number of specialist jobs, which has given a new impetus to the drive to seek the engineer qualification. As suggested by the Association, members of faculty of higher schools teaching some professions must possess the engineer qualification.

The Association has been delegated by Fédération Européenne d'Associations Nationales d'Ingénieurs (FEANI) the right to accredit, subject to FEANI criteria, the higher education curricula, to be fulfilled by applicant for qualification of euro-engineer (EurIng). ■



## REPORT OF THE FINNISH FEANI NATIONAL COMMITTEE

  
Uusi Insinööriliitto



### **Insinöörijärjestöjen kansallinen komitea (KANSKO)**

**Year of Adhesion :** 1960

**Declared engineers:** 77 649

**Number of EUR ING:** 690

**Member associations:** The Finnish National Committee gather 4 other Member Associations that are independently registered: Driftingenjörersförbundet i Finland rf, Uusi Insinööriliitto UIL ry, Tekniikan Akateemiset TEK, Tekniska Föreningen i Finland rf.

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The Finnish National Committee for FEANI (SFNC) has representation of four Finnish engineering organizations: Union of Professional Engineers in Finland, Academic Engineers and Architects in Finland TEK, Tekniska Föreningen i Finland and Driftingenjörersförbundet i Finland DIFF. The SFNC Board met four times, in addition to this an annual Degree Committee meeting was organised. These organizations represent a majority of engineers with bachelor, master or doctoral level education in Finland, two of them represent particularly the Swedish speaking engineers in Finland.

The SFNC Board followed the development of the EU Common Training Framework initiative and its implications on the engineering profession. The Finnish Education Evaluation Centre, which is authorised to award EURACE labels, gave a presentation the status of EUR ACE accreditation of engineering programs in Finland to the Board. Accreditations university programs aren't yet common in Finland.

The Committee was involved in the preparation of the Northern countries initiative of strategic focus areas for FEANI, which was presented in the AMBs of Lisbon. The Committee members are involved in the collaboration

between the Nordic engineering organizations: guest membership agreement was updated.

SFNC representative Saarikangas was involved in the work of the EMC and Taukojärvi in the NMF meetings, both of them have represented the committee in the Annual Business Meetings. ■

## REPORT OF THE FRENCH FEANI NATIONAL COMMITTEE



### Ingénieurs et Scientifiques de France (IESF)

**Year of Adhesion :** 1951

**Declared engineers:** 160 000

**Number of EUR ING:** 2 740

**Member associations:** More than 140 associations are CNISF' members. These can be found in the IESF website.

**7 rue Lamennais - F-75008 Paris**

**Tel: + 33 1 44 13 66 88 - Fax: + 33 1 42 89 82 50**

**mlecointe@iesf.fr**

**www.iesf.fr**



Thanks to the large number, as well as the diversity, of its members, partners and affiliates, IESF is an exceptional source of information and knowledge. IESF makes engineers' voice heard on important issues such as the impact of new technologies, the evolution of conducts and expertise of engineers or the foreseen adaptation of initial and continuing education. Also IESF highlights the very important role of engineers and scientists for economic and durable national growth.

In 2015 IESF has organized for the 3rd time the national event "Engineer's Day", gathering more than 5000 participants from all over the country. The active role and implication of French engineers and scientists for the competitiveness and economical recovery of France was put into perspective and a wide review of the impact of technological evolution in all industrial sectors and on the future perspectives for engineers was made.

Like every year IESF realized its national survey of engineers issued from engineering schools certified by the CTI (Commission for Engineers Diplomas). This survey enables to better understand career evolution and opportunities, professional and personal sources of satisfaction as well as the conditions offered to French engineers abroad. The survey also analyzes the status and conditions of women engineers inside companies. The study came out with an interesting view on the way new technologies impact the methods of working of engineers and has led to know in more details some innovative and entrepreneurial initiatives of engineers.

IESF has continued its mission of promotion of the French scientific and engineering education system to young college students throughout presentations by experienced engineers all over the country. This represents about 1000 interventions in colleges per year with an audience of more than 38 000 students - of which 18 000 females.

IESF also realizes many actions aimed at public decision makers, professors, political leaders, companies and general public. As an example, a White Paper presenting "8 proposals for the economic recovery of France" was published. ■



## REPORT OF THE GERMAN FEANI NATIONAL COMMITTEE



### Deutscher Verband Technisch-Wissenschaftlicher Vereine (DVT)

**Year of Adhesion :** 1951

**Declared engineers:** 250 000

**Number of EUR ING:** 2 795

**Member associations:** The German law system does not plan an official or normal relationship to governmental authorities. Our member associations and DVT itself have good relations to the relevant authorities and governmental authorities are consulting DVT and VDI (Verein Deutscher Ingenieure) in general engineering matters. VDE (Verband der Elektrotechnik Elektronik Informationstechnik) is another example of an important Association in Germany.

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**Tel: + 49 30 310078 155 - Fax: + 49 30 310078 216**

**info@dvt-net.de - www.dvt-net.de**

The following is a short summary of the recent developments in the German engineering community.

The engineering chambers in Germany started an initiative some time ago with the goal to bring about a revision of the engineering laws (Ingenieurgesetze) in all of the 16 federal states of Germany. The chambers justify this as a reaction to the implementation of the revised "Directive on the recognition of professional experience" (2013/55/EU).

The initiative of the chambers has led to different approaches to the revision diverging from state to state. This process would have ultimately culminated in different regulations concerning the right to bear the professional title "Ingenieur" in Germany. VDE and VDI, however, together with other engineering associations, were able to prevent this development for now.



In June 2016, DVT elected Dr.-Ing. Hans Heinz Zimmer as their new chair. Dr. Zimmer is the former CEO of VDE, the German Association for Electrical, Electronic & Information

Technologies. Dr. Zimmer will, as chair of DVT, automatically also be the chair of the German National Committee of FEANI.

On 1 July 2016 VDI - The Association of German Engineers - has taken over the agency of DVT, the German Association of Technical and Scientific Societies. Responsibility for the coordination of the DVT office and the FEANI activities on the national level now lies with Dr. Thomas Kiefer of VDI.

This development is part of the process of realigning the activities of DVT. DVT is a German umbrella organization comprising 34 engineering and scientific associations.

#### The central goals of the realignment are:

- Strengthen DVT in its function as the German National Committee of FEANI.
- Support DVT in the coordination of the German positions on engineering education and the professional development of engineers.
- Develop DVT into the organization responsible for the international representation of the interest of German engineers.

- Facilitate the development of DVT into a platform for communication and information exchange of all its member associations.

In May 2016, VDI participated in a survey organized by ECEC with the goal to collect statistical information on the regulation of the engineering profession in the different European countries.

Although VDI was not addressed directly by the ECEC it did participate in the survey.

VDI's position on the CTF is clear: A CTF can be a suitable instrument to create a common standard for engineering education in Europe, thus supporting recognition and mobility. A CTF, however, must not lead to a monopoly of the chambers on the question, who is an engineer.

On 1 September 2015, FEANI, U. Porto and several engineering associations joined VDI in a project to develop a system for the documentation and validation of non-formal and informal learning of engineers as an add-on to the engineering card.

So far, **the work of the project team has created the following outcomes:**

- DRAFT process for the documentation and evaluation process,
- DRAFT concept giving an introduction to the project, providing background information on non-formal and informal learning, and describing the methodology of the process, and
- DRAFT glossary with definitions of relevant terms.

The next phase will see the integration of these different parts into one single concept. This DRAFT concept will then form the basis for several multiplier events with the relevant stakeholder groups from the business, the unions, and the European political level.

The second project phase after the finalization of the concept will have its focus on the preparation of implementation and (if possible) implementation of the concept into the existing engineering card system. ■



# REPORT OF THE GREEK FEANI NATIONAL COMMITTEE

**TEE**

ΤΕΧΝΙΚΟ ΕΠΙΜΕΛΗΤΗΡΙΟ ΕΛΛΑΔΑΣ



## Greek National Committee FEANI

**Year of Adhesion :** 1952

**Declared engineers:** 85 000

**Number of EUR ING's:** 384

**Member associations:** The Greek National Committee consists of representatives of the Technical Chamber of Greece and the six engineering Associations, among which the Technical Chamber of Greece.

**European Community Affairs Office - c/o Technical Chamber of Greece**

**4, Nikis Str. - GR-10563 Athens**

**Tel: + 30 210 329 13 48 - Fax: + 30 210 329 16 14**

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**<http://portal.tee.gr>**

The Technical Chamber of Greece (TCG) is the representative body of all the qualified engineers in Greece and the statutory Technical Counsellor of the Greek State. In this context, during the two-year period 2014-2015, the TCG has developed the below stated activities pertaining to the areas of its interests.

### TCG e-Initiatives at a glance

- 1. Building Permit Electronic issuing system**, which allows the electronic submission of permit requests-applications and relevant documentation-by the builder's architect/engineer as well as the internal management control and approval of applications by Building Service staff and the immediate notification of the applying engineer.
- 2. Engineer's Legal Manual - Legislation and Engineering Regulations** - a digital Law Library, serving as a practical tool for the practicing Engineer
- 3. On-line National Certification Examinations System for Building Energy Auditors**
- 4. Digital ID of Buildings:** A user friendly system facilitating the interaction of citizens and Engineers with State authorities

### Participation in European and International Organizations

The Technical Chamber of Greece is an active member of the international engineering community and the National

Member representing Greece in several International and European Organizations. Regarding FEANI, in 2015, there was a change in Greek National Committee members and a representative in EMC has been nominated. Furthermore, 31 Greek Engineers have applied for Eur-Ing title. As far as other international organizations are concerned, TCG's representatives participated in important Events such as the 59th General Assembly of ECCE (May 2014), the WEC Executive Assembly in Colombia (Oct.2014), the 11th General Assembly of ECEC, the 2nd Engineers Day, in Brussels (Nov.2014), the SEFI's Technical Committee meeting (Nov 2015) and the WFEO General Assembly in Kyoto (28/11-4/12/2015) etc. In addition, a MoU has been signed, in Athens, on April 2015 between the TCG and the Beijing Association for Science and Technology (BAST).

### EU Initiatives and co-funding projects

The TCG as the advisor of the Ministry of Environment & Energy and the Central Union of Municipalities of Greece (KEDE) closely follows all new developments in European sustainability policies and initiatives such as the Covenant of Mayors (CoM). As the CoM National Coordinator, the TCG promotes the CoM among municipalities in Greece and the development of Sustainable Energy Action Plans (SEAPs) as the primary means of achieving the reduction of CO2 emissions. TCG has the capacity and know-how to provide administrative and technical support to KEDE's members in

the process of local energy planning and its implementation. In this framework, it demonstrates a commitment towards supporting and facilitating in any way the DATA4ACTION initiative with the declared intention to join the ENERGeE-Watch European Network. Moreover, TCG has been participating in the IEE co-funded EU projects since 2012. With reference to UPSWING (2014-2017) - Upgrading the Construction Sector Workforce training and qualification in Greece, the project aims to boost construction workers' knowledge and skills on energy efficiency in construction in order to meet the 2020 energy and climate targets for Insulation technicians, aluminum & metal constructions craftsmen and installers - maintainers of burners.

## Events

1. European Researchers' Night (September 2014 & September 2015): Since 2005, the European Researchers' Night, a Europe-wide public and media event for the promotion of research careers, takes place simultaneously in several hundred cities all over Europe on the last Friday of September each year. The European Researchers' Night aims to bring researchers closer to the general public and to increase awareness of research and innovation activities, with a view to supporting the public recognition of researchers, creating an understanding of the impact of researchers' work on citizen's daily life, and encouraging young people to embark on scientific careers.
2. Workshop, Athens 16th December 2014, City Hall: Leading experts from Engineering Education, Associations, Technical Chambers, Industry Construction Sector and local authorities discussed on global problems, trends and policies on "University Engineering Education and skills for Innovation, Entrepreneurship and Creativity" aiming at strengthening and fostering Academia connection with local labor market and the knowledge alliance with industry, by integrating Education and Employability of Engineers with Sustainable Development requirements.
3. Exhibition on Greek Architecture Projects that have been awarded in International Competitions of UIA : Santorini Island (Oct.2014), Athens (Jan.2015), Kavala (Sept.2015)
4. Kick-Off Event & Seminar, Athens 24th January 2015: TCG and the International Federation of Surveyors -FIG have organized Celebration Events for Greek Presidency in FIG. Around 60 International participants and more than

100 Greek surveyors spoke over the theme "Ensuring the Rapid Response to Change, Ensuring the Surveyor of Tomorrow" that is also the new theme of FIG for the term 2015-18.

5. Informative Event, Athens 30th June 2015: TCG, as CoM National Coordinator, organized an event on "Latest developments in the field of energy saving "; as part of Energy Days celebrations. The Event aiming to inform on the production, use and saving of energy, was targeted to Engineers, Local Authorities and to any interested party. The purpose of the event was to highlight the latest developments on issues related to energy saving in financial, institutional and legislative framework and on a practical level.

## Future Key activities

All the key future activities of the Technical Chamber of Greece will aim at continuing to providing excellent services to its members, safeguarding the authority of the profession of Engineer and promoting, through its scientific work and initiatives, the role of the Engineer at the national and international level. Besides, the TCG will devote every effort to unleashing the hidden potential and creativity of the Greek people. In this regard, acting as a mediator between the Market and the State, the public and the private sector, great emphasis will be given on the highlighting of the growth prospects for the energy sector in Greece.

Furthermore, the TCG will organize, throughout the year, a series of events. Indicatively, an International workshop on "Sustainable Real Estate Markets", reviewing real-estate taxation, the inquiring of the value of the Land- Register for the efficient land management and the proposed reforms in the real-estate market in Greece will be held on 19-21 September 2016. Furthermore, in October 2016, the TCG will host the 64th General Meeting of the European Council of Civil Engineers' (ECCE).

Regarding the TCG future activities relating to the FEANI scope of interests, the TCG, as the Greece national partner in FEANI and with a view to facilitating further the mobility of its members, will recommend all the engineering programs which are not already incorporated in the FEANI Index and fulfill the needed requirements, be included in the FEANI Index. Within this framework, the TCG will continue to award the Eur-Ing title to an increased number of Greek Engineers who are interested in practicing their profession abroad. ■



## REPORT OF THE HUNGARIAN FEANI NATIONAL COMMITTEE



### **Hungarian National Committee for FEANI**

**Year of Adhesion :** 1990

**Declared engineers:** 7 200

**Number of EUR ING:** 658

**Member associations:** The 17 Member Associations of the Hungarian National Committee for FEANI are so called "social organizations" ruled by the right of combination and assembly.

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## REPORT OF THE ICELANDIC FEANI NATIONAL COMMITTEE



### Association of Chartered Engineers of Iceland

**Year of Adhesion :** 1965

**Declared engineers:** 3 900

**Number of EUR ING's:** 17

**Member associations:** The two Associations connected with the National Committee of Iceland are The Association of Chartered Engineers in Iceland and The Icelandic Society of Engineers.

**The Icelandic Society of Engineers.**

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**Tel: +354 5359300 - Fax: +354 5359311**

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### Main key-activities and events of our national association over 2014-2015

**VFI (Master Educated Engineers; Verkfræðingur):**

- Engineers' day held for the second time on April 1st 2016. The event gained great publicity in media and is very important to encourage young people to study engineering. New technology is presented and colleagues have opportunity to meet. It also plays a big role in recruiting new members.
- New rules for the Assessment of application for permission to use the professional title "Verkfræðingur". These rules are a cooperative work of the Association of Chartered Engineers in Iceland and the Ministry of Industries and Innovation and came in to effect in late 2015.
- Submission of FCD and SCD education fields in Icelandic Universities to FEANI (INDEX).

**TFI (3,5 years BSc Engineers; Tæknifræðingur )**

- Producing presentation material on what includes in the education and professional life of "tæknifræðingur" (BSc 3,5 years)
- New rules for the Assessment of application for permission to use the Professional title Tæknifræðingur. These rules are a cooperative work of the Society of Chartered Engineers in Iceland and the Ministry of Industries and Innovation. Will come in to effect in autumn 2016.
- Submission of FCD and SCD education fields in Icelandic Universities to FEANI (INDEX).
- A formal wish on talks about merging TFI and VFI

As to our next, future key-activities, educational matters are of utmost importance as the professional title is protected by special law in Iceland.

In this context, cooperation with FEANI is very important. The VFI sees the FEANI INDEX an important tool in the future. ■



# REPORT OF THE IRISH FEANI NATIONAL COMMITTEE



## **Engineers Ireland**

**Year of Adhesion :** 1966

**Declared engineers:** 17 801

**Number of EUR ING:** 1 336

**Member associations:** The Institution of Engineers of Ireland was founded as The Institution of Civil Engineers of Ireland in 1835. It received its Royal Charter in 1877. This Charter passed into Irish legislation when, in 1922, Ireland achieved its independence.

**22 Clyde Road - Ballsbridge - IE-DUBLIN 4**

**Tel: +353 1 665 1300 - Fax: +353 1 665 1350**

**[membership@engineersireland.ie](mailto:membership@engineersireland.ie)**

**[www.engineersireland.ie](http://www.engineersireland.ie)**

Engineers Ireland had a busy 2015. Membership numbers increased, the second year since the recession that there is positive growth. To support our members overseas we established a branch to support our members in Australia and New Zealand. The Australia branch is centered in Melbourne and actively engages with key local industry players.

As a lead in to mandatory CPD (from 2017) Engineers Ireland made 10 high quality learning modules available to all members free of charge.

Our President for 2015/16 is Mr Bill Grimson, who was a lecturer in the Dublin Institute of Technology and formerly a member of the FEANI EMC. Mr. Grimson has published over 80 journal papers, reports and book chapters in the area of Health Informatics and Engineering Education. He is the Chair of the Health Informatics Standards Consultative Committee of the National Standards Authority of Ireland (NSAI). During the year Caroline Spillane was appointed Director General. Prior to undertaking this role Caroline was the chief executive officer at the Irish Medical Council. Caroline has held senior roles in organizations including Assistant National Director

with the HSE, operating within the Children & Families Social Services Directorate and chief executive officer of the Crisis Pregnancy Agency.

As part of our commitment to the global engineering profession Engineers Ireland hosted delegations from many international engineering organizations including IEEE, Institution of Mechanical Engineers (UK), IDA (Denmark), IOSH(UK) and Institution of Civil Engineers(UK). We continued to represent our members' interests by advocating for tighter controls for building regulations to protect the consumer. We made submissions to Government departments on its Statement for Strategy as well as contributing to the debate on investment in Ireland's water infrastructure. At a European level Engineers Ireland actively engaged on FEANI work groups to improve the status of engineers and the promotion of the engineering profession.

Engineers Week 2015, an outreach program to schools, was a huge success with 600+ volunteer engineers making contact with 58,000 students, their parents and teachers. ■



## REPORT OF THE ITALIAN FEANI NATIONAL COMMITTEE



### **Consiglio Nazionale Ingegneri (CNI)**

**Year of Adhesion :** 1951

**Declared engineers:** 17 801

**Number of EUR INGs:** 220 000

**Member associations:** The Consiglio Nazionale Ingegneri was founded in 1925 in accordance with law n.2537 of October 23, 1925. Today CNI is the legal representative of Italian engineers with institutional duties for the defence of the important interests of the entire profession.

**Via XX Settembre 5 - I - 00165 ROMA**

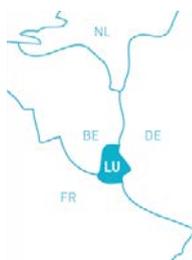
**Tel. : +39 06 853 54739 - Fax : +39 06 697 67050**

**segreteria@cni-online.it - esteri@cni-online.it**

**www.tuttoingegnere.it**



## REPORT OF THE LUXEMBOURG FEANI NATIONAL COMMITTEE



### **Association Luxembourgeoise des Ingénieurs (ALI)**

**Year of Adhesion :** 1951

**Declared engineers:** 1 100

**Number of EUR ING:** 33

**Member associations:** "ALII is representing the Industrial Engineers as well as the Technical Engineers in Luxembourg. The ALII has narrow relations with the newly founded University of Luxembourg, the members of the Government, the members of Parliament and the Professional Chambers to have the Engineers' positions prevail in respect of the technical and professional training as well as of the laws and regulations governing the professional life of the Engineer."

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## REPORT OF THE KAZAKHSTAN FEANI NATIONAL COMMITTEE



RU

KZ

**Kazakhstan Association of Engineering Education (KAZSEE)**  
**Year of Adhesion : 2015**

**Microdistrict 1/36 - 050062 Almaty - Kazakhstan**

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**Alimov.kazsee@gmail.com**

**www.kazsee.kz**

During the period 2014-2015 year Kazakhstan Engineering Education Association held an event dedicated to the 16 issues of accreditation and certification of engineering personnel. A particularly important event was the Message from the Head of State to people of Kazakhstan and it was discussed at the enlarged meeting of the Kazakhstan Association of Engineering Education KAZSEE.

As noted by KAZSEE experts, President's speech is an important anti-crisis program, the key to overcome the new global challenges and to further develop a dynamic Kazakh society. Kazakhstan has to restore economic growth in order to join the 30 most developed countries of the world through increased private initiatives, the implementation of institutional reforms and effective modernization of all spheres of society.

The development of professional engineering education and enhancement of the prestige of working professions will contribute to a new project for the implementation of free and universal vocational education.

The president of KAZSEE, the academician Mutanov G. held a speech at the first Forum of the British and Kazakhstan universities. The first forum of Kazakhstan and British universities was held in London with participation of the

leadership of the Ministries of education and science of the UK and Kazakhstan, November 2nd, 2015. Convened at the initiative of the Ministry of Education and Science of Kazakhstan and with the support of the Ministry of Business, Innovation and Skills of the UK, the British Council and UK Trade & Investment, the forum became a unique platform for exchange of experience for 35 Kazakh and 32 British universities, the first leaders of which discussed the prospects of cooperation in the implementation of international education programs. During the meeting they discussed the possibility of training of Kazakhstani specialists for priority projects of the National Plan "100 concrete steps" and the state program of industrial and innovative development at leading universities in the UK. The forum allowed representatives of the national universities to present the export potential of Kazakhstan segment of education and hold bilateral meetings with British counterparts. About 100 negotiations were organized on further cooperation of the British and Kazakh universities. A number of documents were signed following the results of the forum. There was a memorandum of cooperation between the Ministry of Education and Science of Kazakhstan, Nazarbayev University and the University of Cambridge. Similar memoranda were signed by other national, public and private universities in the two countries.

## **International Meeting “The system guarantees the quality of engineering education: accreditation of educational programs and certification engineering staff”**

On December 12th 2015 Kazakhstan Association of Engineering Education KAZSEE plans to hold the International Meeting “The system guarantees the quality of engineering education: accreditation of educational programs and certification engineering personnel” with the participation of the Ministry of Education and Science of the Republic of Kazakhstan, the Ministry of Health and Social Development of the Republic of Kazakhstan, al-Farabi Kazakh National University, the University of Florence (Italy), the Institute of Engineering of Porto (Italy), the Union of European Federation of Engineering Education, Association for Engineering Education of Tajikistan, the Association for Engineering Education of Uzbekistan, the Association of Engineering Education of Kyrgyzstan.

The purpose of the International Meeting will discuss the problems of integration of the Central Asian region in the recognition of qualifications of the European Union.

Galimkair Mutanov has been awarded IGIP Senior Member by President of International Society for engineering education IGIP, Prof. Dr. Michael E. Auer. The 44th IGIP International Conference (International Society for Engineering Pedagogy) held in Florence on September 20-24. Founded in 1972, IGIP unites today 130 countries of the world and aims at promotion of research methods in engineering sciences teaching and methodology. Awarding this special title to KazNU Rector, President of IGIP Dr. Michael E. Auer emphasized the role and merits of Professor G. Mutanov for his outstanding achievements in global engineering education and pedagogy. Thus, he said, for the first time in the history of independent Kazakhstan and Central Asia, at the initiative of European experts Kazakh scientist has been nominated to a higher level in the register of international engineers and educators. Mutanov is the only post-Soviet scientist to get this honorable title. IGIP Senior Member is the highest title in engineering education and pedagogy and is awarded for recognition of professionalism and provides free professional activity in the global educational space.

With his direct participation was created and certified Training IGIP Kazakhstan center in Kazakh National

University named after Al-Farabi conducting teacher training programs approved by meeting the requirements for qualification (ING-PAED IGIP). Specialists who have received the title of “International university teacher of engineering” can apply for their inclusion in a special register, which allows them to be further competitive in the European Union countries.

This award is proof of the real contribution of Professor Mutanov G. M. and his school of engineering pedagogy, in the development of technical and science education in Kazakhstan, for determining the qualifications of teachers of technical disciplines of international level of IGIP standards. Thus, Kazakhstan has another step in the rating of the International Society for Engineering Education IGIP and provided involvement in process of training for SPIID-2 such international structures, as ENAEE, IFEES and IGIP. KAZSEE representatives took part in the Third International Conference on Transformations in Engineering Education. KAZSEE representatives took part in the Third International Conference on Transformations in Engineering Education, in Pune, India from 8 to 12 January 2016..

## **Kazakhstan Association of Engineering Education KAZSEE became a full member ENAEE.**

On November 17, 2015 in Brussels, Belgium took place General Assembly of European Network for Accreditation of Engineering Education ENAEE in the field of engineering education. The key topic of the agenda of the General Assembly of Kazakhstan was the adoption of the Kazakhstan Association of Engineering Education KAZSEE a full member ENAEE. Solid KAZSEE delegation fully opened before the European partners KAZSEE significant contribution to the development of engineering education, both in Kazakhstan and in the world. ENAEE is aimed at specialized accreditation of engineering and technical-science educational programs with assignment of EUR-ACE label and entry into the all-European register of the accredited engineering programs.

## **Kazakhstan is a locomotive for engineering education in Central Asia.**

At the initiative of the Kazakhstan Association of engineering education KAZSEE was created Central Asian federation of engineering societies and Khujand agreement was signed. This was declared on October 12th-13th 2015 in Khujand.

Participants of this agreement along with the Kazakhstan Association of engineering education KAZSEE became: Association of engineering education of Kyrgyzstan, Society of engineering education of the city of Tashkent and Council for accreditation at Association of graduates of the Tajik technical university (TPI). Formation of the regional organization of engineering communities will promote improvement of quality of engineering education, increase of competitiveness of experts, mutual recognition of qualifications of engineering shots, thereby providing professional mobility of engineers.

Support by the European network on ensuring quality of ENAEE of the given initiative of creation of uniform educational space with the subsequent mutual recognition of qualification will allow stirring up activity of the Kazakhstan Association of engineering education as only structure which has the right to be the member of this organization. Thus, on the basis of the Kazakhstan Association of Engineering Education creates the uniform platform that integrates both the European Community, represented by the European Network for Quality Assurance in Engineering Education and the Central Asian region.

Tasks of the Hudzhandsky Agreement are completely correlated with strategic problems of the State program of industrial and innovative development throughout 2015-2019 where preparation of a highly qualified competitive personnel and confirmation of their qualification are priority tasks. Khujand SPIID 2. In the period from 20 to 24 September 2015, Florence hosted the World Forum for Engineering Education - a unique platform for the discussion of topical issues of training for technical and engineering specialties. Traditionally, the Forum brings together expert engineering community in more than 130 countries.

### **The modern development of Kazakhstan under the Plan of the Nation - "100 Steps"**

"The Modern State for all" is a question of high-tech economy, in connection with the question of improving the quality of human capital and of engineering education, which, in turn, calls for effective implementation of the State program of industrial-innovative development SPIID 2 for the preparation of certified personnel for engineering graduates by international standards. SPIID 2 provides

connectivity between science and sectors of the economy on the basis of 10 universities of Kazakhstan, to which the University Consortium was created.

The delegation of the Consortium of universities to train specialists within SPIID-2 headed by the President of the Kazakhstan Society of Engineering Education (KAZSEE), rector of the Kazakh National University named after Al-Farabi Galimkair Mutanov participated in the World Forum on Engineering Education. The purpose of the visit - to attract international organizations to strengthen cooperation with the European Network for Accreditation of Engineering Programs ENAEE, the International Federation of Engineering Education Societies IFEES and the International Society for Engineering Education IGIP and the signing of memorandums of cooperation with these reputable organizations. For the members of the consortium - rectors of universities of Kazakhstan these organizations held a seminar on the quality of engineering education. As part of the integration into the Bologna process also met members of the Kazakh consortium with the Conference of Rectors of Italy, which will give a new impetus to the development and promotion of the Kazakh-Italian cooperation.

Participation in this forum has enabled the Consortium to establish contacts with the above internationally renowned organizations, to explore and learn from their experience in the implementation of SPIID-2. As part of the agreements reached at the universities of Kazakhstan will be new opportunities for the accreditation of educational programs in technical and natural science professions by assigning a European mark EUR-ACE, as well as the certification of experts on international standards.

### **Seminar "Quality in engineering education: problems and prospects".**

In June 26-27, 2015 KAZSEE on the premises of the Kazakh National University named after Al-Farabi was held a workshop - Training on "Quality Assurance Issues in Engineering Education in Kazakhstan: problems and prospects". The work was attended by experts of universities in Almaty, Pavlodar. ■



## REPORT OF THE MACEDONIAN FEANI NATIONAL COMMITTEE



### Engineering Institution of Macedonia

**Year of Adhesion :** 2010

**Declared engineers:** 3 597

**Member associations:**

**16 - Dame Gruev 14a - 1000 Skopje, Macedonia**

**tel: +3892 3229 040 - fax: +3892 3296 266**

**imi@engineer.org.mk**

**www.engineer.org.mk**



The main activity of the Engineering Institution is the awarding ceremony held on Plaoshnik, Ohrid where the best graduated students in engineering are awarded with a gold engineering ring with the logo of the Engineering Institution. The

number of the awarded engineers is constantly increasing, since the number of the new faculties in Macedonia is rapidly growing. His Excellency Djordje Ivanov, the president of the Republic of Macedonia is the patron of this awarding.

We have released to issues of the magazine "Engineering" is the last two years, our President and Secretary General have been guests in few TV and radio debates about "The necessity of the engineering staff in Macedonia".

### The Engineering Institution has become richer with a few new engineering associations:

1. IGAS INSTITUTE
2. GASEOUS TECHNIQUES,
3. FUEL Fuel
4. Utilization Energy Lubricant and
5. Association for Information and Communication Technologies ICTACT



Today the Engineering Institution consists of 16 associations of engineers of different categories.

Our future key activity is the issuing of the Engineering Card which we have not been able yet to do. We are actively seeking help and support from the other countries that already use it. One of the major challenges in front of us is the recognition of Macedonian diplomas of the engineers who work in Europe after graduating in Macedonia, and in this context we are very satisfied with our cooperation with FEANI. ■

## REPORT OF THE MALTESE FEANI NATIONAL COMMITTEE



### Maltese Chamber of Engineers

**Year of Adhesion :** 1978

**Declared engineers:** 700

**Number of EUR ING:** 195

**Member associations:** There are 5 Member Associations in Malta, among which the Chamber of Engineers, the Engineering Board or the Faculty of Engineering at the University of Malta.

**Professional Centre - Sliema Road - GZIRA GZR 1633, Malta**

**Tel: +356 2133 4858 - Fax: +356 2134 7118**

**info@coe.org.mt**

**www.coe.org.mt**

### Communications and Public Relations

The Chamber continued to provide members with a regular Events & Opportunities circular, a monthly e-newsletter, and updated information on its website. It also published its quarterly magazine called Engineering Today.

### Yearly activities

On the 21st of May 2015, the Chamber organized its 23rd Annual Engineering Conference with the theme: "Energy and Transport". On the 8th December 2015, the Chamber organized the 14th edition of the Malta Engineering Excellence Awards.

### Ethics and the engineering profession

Aware of the fact that some engineers are not complying with the Code of Professional Ethics, the Ethics and Disciplinary Committee of the Chamber conducted a survey among the members of the Chamber regarding ethics within the profession. A seminar for the members of the Chamber was organized on the 30th October 2015 to discuss the findings of the survey and to give more information and guidance to members on the interpretation of the Code.

### Professional development of Engineers

A subcommittee of the Council was set up within the Chamber to draft a white paper in relation to the implementation and promotion of Continual Professional Development in our profession in line with the initial guidance document issued by the Federation of Professional Associations (Malta) following the introduction of the Services Directive by the EU.

### The Chamber and the EU

The Chamber met officials of the Engineering Board and of the Ministry of Transport and Infrastructure to discuss alleged infringements arising from the Engineering Profession Act, the law that regulates the engineering profession in Malta, regarding the definition of 'Partnership of warrant holders' and the issue of set tariffs. These had been considered by the EU Commission as infringements and barriers to the concept of free trade with the EU.

### International activities

During 2015 there were a number of international activities that the Chamber of Engineers was involved in with the most important being the FEANI General Assembly that this year

was held in Lisbon, Portugal in October 2015. The assembly continued to discuss various matters of utmost importance to all the Engineering professionals within the EU. The most important item on the agenda was the introduction of a Common Training Framework and whether FEANI should go ahead on this, especially since the EU was keen that some organizations promote this idea further.

Furthermore, on the 26th of September 2015, our Secretary for International Affairs, Prof. Dr. Ing. Paul Micallef attended the General Assembly Meeting of the European Council of Engineers Chambers (ECEC).

We have also continued to follow the activities of the World Federation of Engineering Organizations (WFEO) of which we are associate members. In particular, the Chamber subscribed to the WFEO's commitment to climate change action.. ■



## REPORT OF THE NORWEGIAN FEANI NATIONAL COMMITTEE



### Norwegian National Committee for FEANI

**Year of Adhesion :** 1965

**Declared engineers:** 134 000

**Number of EUR ING:** 194

**Member associations:** The two Norwegian Engineering organizations, TEKNA and Norges Ingeniørorganisasjon, NITO (The Norwegian Society of Engineers) are both recognized by the national authorities. This means that both organizations are represented in various official bodies, among them the Council for Engineering Education, and other official bodies concerned with engineering matters.

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### Falling Oil Prices - Consequences

The Norwegian economy has been hit hard by the collapse of oil prices, which has fallen from approximately \$110 to \$35 a barrel the last 19 months. The decline has led to reduced activity, cuts in maintenance and production budgets, as well as reductions in modernization investments. As a result, plunging oil prices has increased unemployment along the south and west coast of Norway.

Engineers and technologists are the workers hit hardest by the decline in employment. In Rogaland alone, unemployment among NITO and Tekna members increased fivefold over the past year. There is no sign suggesting that oil prices will increase significantly in the near future - which means things are unlikely to pick up anytime soon. The organizations therefore believe unemployment among engineers and technologists will continue to rise through 2016. However, if the economic growth is slightly higher next year, we are confident we will see a stronger demand for engineering skills.

### Quality in engineering education

The Norwegian government has initiated comprehensive changes to both structure and content of the higher education sector. The major reason for these changes is to increase quality in Norwegian research and higher education through stronger academic programs and a reasonable degree of efficiency.

NITOs concern is regarding the importance of improving the quality in engineering and technological education. These educations are expensive, due to need of laboratory equipment, close supervision of students and strong collaboration between the industry and research. In Norway, the majority of higher education institutions is public and therefore receives public funds. To ensure the quality of the institutions, the steady and continuing finance is of the utmost importance. NITO has repeatedly brought up the issue regarding the lack of funding for educational institutions in Norway.

## Recruitment to STEM



Despite a decline of the economy, specifically in the oil and oil-related industries, there will be a great demand for engineers and technologists in Norway both now and in the future. Both NITO and Tekna will continue to work on improving the recruitment towards higher technology educations, particularly by focusing on better STEM qualifications in primary and secondary school levels.

Tekna are focusing on recruitment to the STEM educations to enable Norway to still have a drive on innovation throughout the country. Even though the oil price has scared a lot of young students away from petroleum studies, the focus has been on how to recruit into other STEM studies to be able to meet the need for engineers in the future. Tekna is supporting a lot of programs for young to be introduced to the STEM-subject early school years. Norway has had a shortage of qualified STEM teachers, and Tekna has supported the process of getting unemployed petroleum engineers with their on-site experience into other business areas, e. g. teaching.

An important issue is to close the gender gap in engineering and technology. The percentage of female engineers in Norway is approximately 23, thus too low to ensure necessary recruitment and diversity in the sector. NITO strive to encourage women to seek a career in engineering by promoting female role models in the industry. In collaboration with The Ministry of Petroleum and Energy, the International Women's Day March 8 is and will be an arena to focus on women in STEM.

Trond Markussen, the president of NITO, has been the chairman and The Secretary General of Tekna, Ivar Horneland Kristensen, has the role of Secretary General of the Norwegian NC. The Norwegian NC has had one meeting in 2015, and The General Secretary of FEAN, Mr. Dirk Bochar visited Oslo and Longyearbyen for Nording (Nordic Engineers meeting) in August 2015.

## The Norwegian NMC 2015



1. Eli Haugerud, Tekna (Chair)
2. Marianne Bevum, NITO (Secretary)
3. Maria Middelthon, NITO
4. Tove Rodahl, Tekna



The Norwegian NMC has had three meetings during 2015 and has processed 2 EUR ING applications. Both were accepted as EUR INGs. The NMC has also invited employers and EUR ING title members to participate in a survey to get an overview over continuing professional activities (CPD) throughout the engineers in Europe.

Norway has been accepted for automatic update of the FEANI Index. In 2015, more than 150 courses have been entered into the FEANI Index. Due to several universities in Norway are merging, this process will continue throughout 2016.

### **Aiming to save 400 000 lives a year**

Every year, 3 million newborn infants and 280 000 women die during childbirth for reasons that could easily be prevented. Engineer Tor Inge Garvik of Lærdal Global Health develops simulation equipment that is used in training midwives and other childbirth attendants.

“Simulation is an established part of the process of developing expertise in well-resourced health services. The products developed by Laerdal Global Health give midwives in countries with fewer resources access to this very efficient



method of learning, and helps them build the confidence they need to tackle difficult situations during and after a birth,” Tore Inge tells us. The birthing simulator looks like a bag that you can attach around your waist. The inside of the bag contains a copy of a woman’s uterus with a baby doll inside. The person playing the part of the birthing mother can twist and turn the doll and simulate a birth.

Other examples of the company’s products include oxygen masks to enable newborn infants to start breathing, a breastfeeding simulator, a heart rate monitor, and simulators for learning how to help newborn infants to breathe themselves (NeoNatalie) and to care for premature infants (PremieNatalie). Laerdal Global Health received the world’s most important design prize, the Index: Award, in 2013 for MamaNatalie.

### **Other FEANI activity**

Trond Markussen, the president of NITO is also a Member of the FEANI Executive Board. One of the NMC members is also an active participant in EMC (Eli Haugerud). FEANI North has had a meeting in Copenhagen Sept 2015 to discuss how to interact with each other and support FEANI activities. ■

## REPORT OF THE POLISH FEANI NATIONAL COMMITTEE



### Polish Federation of Engineering Associations

**Year of Adhesion :** 1992

**Declared engineers:** 51 000

**Number of EUR ING:** 351

**Member associations:** "The Polish National Member of FEANI, i.e. the Polish Federation of Engineering Associations (PFER) as well as its Member Associations function on the basis of and in accordance with the Polish Law on Associations (Act of April 7 1989). Polish Federation of Engineering Associations is a non-governmental and self-financing organization, which does not get subsidies from the government."

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### FEANI Annual Business Meetings

In October, 2014 Polish Federation of Engineering Associations had the honor to host the FEANI delegates as the events took place in Gdańsk, Poland. Firstly, in cooperation with Gdańsk University of Technology the two-day Conference was held at their premises on the subject of 'Education of Engineers - Key Task for the Successful European Future'. Next we had Engineering Card Meeting followed by the National Members Forum and FEANI Executive Board Meeting. The entire day of activities

ended with a Gala Dinner held at the beautiful Medieval Castle in Gniew. On Friday, October 9, FEANI General Assembly was held at Gdańsk House of Technician, PFER local branch.

During 4 days of events 26 FEANI Member Countries were represented, with a total of 96 delegates.

During the GA it was decided that the next General Assembly will take place in Lisbon, Portugal (8-10 October).

In October 2015 the delegation of Mrs. Ewa Mańkiewicz-Cudny, President of Polish Federation of Engineering Associations and Mr. Józef Suchy, Vice-President of Polish Federation of Engineering Associations attended FEANI Annual Business Meetings in Lisbon, Portugal.



### EURING Title and Engineering Card

In the period between 2014-2015 thirty eight new Polish engineers were awarded the EURING title. By the end of 2015 there were 355 Polish engineers with the EURING title. In 2014-15 another 31 Polish Engineers were granted the Engineering Card.

By the end of 2015 PFEA switched from paper into on-line Engineering Card application form. A new dedicated landing page was also launched. In cooperation with Technical Universities and Local Branches, PFEA is preparing a series of lectures for students and members of Engineering Associations, starting from 2016.

### 2015 - Jubilee Year for Polish Engineers

A year of 2015 was announced by the PFEA National Council a Jubilee Year for Polish Engineers. PFEA celebrated 180 years of foundation of the first Polish Engineering Association, 110 years of Warsaw House of Technician, 70th anniversary of establishing Polish Federation of Engineering Associations and 60th anniversary of foundation of Museum of Technology and Industry.

The Celebrations were inaugurated at Warsaw House of Technicians, Headquarters of Polish Federation of Engineering Associations, with the meeting of Polish Engineers from home and abroad. A series of other events were organized during the entire year all over Poland.

The Anniversary Celebrations ended in November with the Engineers' Gala where one of PFEA guests was Mr. Dirk Bochar, Secretary General FEANI, who received Polish Federation of Engineering Associations' Golden Badge of Honour. ■





## REPORT OF THE PORTUGUESE FEANI NATIONAL COMMITTEE



### **Ordem dos Engenheiros**

**Year of Adhesion:** 1954

**Declared engineers:** 31 000

**Number of EUR ING:** 96

**Member associations:** The Portuguese FEANI committee was created in 1993, following an agreement signed between the Ordem Dos Engenheiros and the Ordem dos Engenheiros Técnicos. There is no formal coordination of the two institutions.

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### **Laws and regulations**

During 2015, Portuguese authorities approved several important laws and regulations with significant impact on engineers' professional lives:

1. Law 123/2015 - New professional bodies by-laws, approved in accordance with Law 2/2013, which established a new legal framework for the creation, organization and operation of professional public associations;
2. Law 40/2015 - New professional qualification scheme due to technical managers, including the project design and underwriting, project coordination, direction of public or private work, managerial oversight of public or private works;
3. Law 41/2015 - New legal framework for the exercise of construction activity.
4. Regulation 420/2015 of Ordem dos Engenheiros - List of professional engineering practices, organized by engineering specialty.

### **Professional Qualification**

We are consolidating the implementation of our continuous training accreditation system. Till now, a significant lot of providers and training initiatives have been applied in the system and have achieved positive results. Furthermore, we go on accomplishing our own CPD events, such as conferences, seminars, meetings or workshops.

### **International Mobility**

Europe: As we give great importance to our membership in FEANI, it is under this federation that we want to continue acting predominantly on the international mobility of our members.

Other geographical areas: We also devote special attention to associations such as Portuguese speaking countries, Macao, African and Ibero-American countries, always with the objective of supporting the intervention of the Portuguese Engineering and promote the employability of Portuguese Engineers.

### **Engineering education.**

Engineering teaching issues: We are strengthening relations and regular meetings with the universities and polytechnic schools, on engineering teaching issues.

High School level: In addition to the actions related to Engineering Schools, another area of operation continued in 2015 with the connection to the Secondary School. This initiative's aim is to encourage the interest of students for engineering areas, captivating the attention of young people to them and making them feel the importance of engineering in human development.

### **FEANI Portuguese activities**

**2015 was the first year of the Portuguese NMC - National Monitoring Committee activities. In the function of this national body we highlight:**

1. keeping the EMC – European Monitoring Committee – informed on the structure of our engineering education and the standard of the individual Schools and/or Programs.
2. including the Engineering Programs in FEANI INDEX
3. checking the Education and the Professional Engineering Experience of an applicant before proposing his registration as EUR ING.

We are developing the activities for the Engineering Card, important to Engineers and Employers as a tool that shows a comparable educational profile whose recognition is based on international standards. It is easily used by professionals and employers. In this first year, Portuguese NMC assessed 13 Engineering programs and 15 applications for the title EUR ING.

### **Lisbon FEANI ABM 2015**

The 2015 FEANI General Assembly, with its accompanying events, took place in Lisbon, Portugal, from the 8<sup>th</sup> to the 10<sup>th</sup> of October 2015. The events included a FEANI Conference, National Members Forum, European Monitoring Committee, General Assembly and the 1st European Young Engineers Forum. The Conference was organized under the FEANI patronage, with the theme “Lisbon Strategy: Engineering the Future”.

On October 9<sup>th</sup>, the General Assembly Meeting took place in the Cultural Centre of Belém.

Stressing our honor and our pleasure to have received in Portugal those events, we address to the Swedish FEANI member our best wishes for the Stockholm FEANI ABM 2016, next autumn. ■



## REPORT OF THE ROMANIAN FEANI NATIONAL COMMITTEE



### **The General Association of Engineers in Romania (AGIR)**

**Year of Adhesion :** 1996

**Declared engineers:** 12 500

**Number of EUR ING:** 218

**Member associations:** In Romania, the first durable, professional engineering association, was founded in 1881, under the name of Polytechnical Society. The Romanian General Association of Engineers was founded in 1918. Both associations coexisted until they merged in 1949. In 1989, the Romanian General Association of Engineers has been reconstituted as a lawful successor of the original associations.

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AGIR's permanent actions carried out under the framework program for 2014-2017 approached in the last two years the current problems of our society. Events and actions were reflected mostly in our "Engineering Universe" bimonthly publication. The period to which we refer is marked by the celebration of 25 years since the AGIR was reestablished.

The program of actions carried out by subsidiary branches, societies and AGIR circles mainly aimed the development and diversification of specific activities in order to attract new members, develop collaborative relationships, organize scientific, technical, cultural and artistic activities, or had a commemorative and anniversary character. Technical and scientific events play an important part in the work of the association, taking into account their impact, including the one in public space. Important scientific events attracted a higher number of participants compared to previous years: the 10th edition of "Technological progress - A Research Outcome", the 9th edition of "Education - essential component of environmental policy", conference World Water Day, the 21st edition of AGIR Prize, awarded on the occasion of Engineer Day celebration.



Also, AGIR branches have been organizers and co-organizers of several homage and anniversary events. Among the conferences and international symposia we can mention: Scientific Symposium of Romanian Engineers Abroad - SINGRO 2014, the 15th edition of National Conference "Professor Dorin Paul - founder of Romanian hydropower", from Sebes, International Student Symposium "ELStud" and "Hard & Soft" International Student Competition, from Suceava, the 3rd International Conference on Polymers Processing Engineering from Galati, International Conference on Electronics, Computer Science and Artificial Intelligence.

Vocational training is a major concern for AGIR, so we can mention the training courses organized by the Technical Experts Settlement and Consultants Society.

The Participation in invention fairs both at home and abroad is exemplified by members of branches Dolj, Galati, Iasi, Maramures, Suceava and Textile Engineer Society.

Among other events held, we also mention book launches by AGIR members from Bucharest, Dolj branch, Telecommunications Engineers Society, Textile Engineer Society.

For the purpose of advancing the association activity AGIR has promoted local action on TV or radio, and our members published scholarly articles in magazines or newspapers at home and abroad, especially from our local groups Bihor, Dolj, Galati, Suceava and Military Engineers Society.

On the central level, AGIR continued its project SAFENET "Research for predicting and improving the efficiency of failsafe networks urban traffic" and the "Professional Intergenerational Cooperation and Mentoring - ProMe", from Ambient Assisted Living Program, with partners from Austria, Netherlands, UK and Belgium.



Our collaboration with universities, schools, colleges, local government, prefectures, municipalities, territorial labor inspectorate, school inspectorates and NGOs also played a central role on the agenda AGIR.

AGIR's popularization in academia and the mobilization of students in their last year of study to join our association is an ongoing effort in all our branches.

For promotion and appreciation of outstanding achievements, the association has awarded diplomas and medals to important engineers, research institutions and students on the occasion of technical and scientific events or for special involvement in association activities.



We have been encouraging the involvement of our branches in publishing activities and enriching the library book fund both through acquisition and through donations. AGIR initiated Books for children and young people in Moldova 2015 campaign. To support this campaign the association has purchased a total of 400 volumes that were added up a total number of 2500 volumes which were distributed in schools and gymnasiums in Moldova.

The activity aimed at information-system management and communications was expanded. Wishing to be more involved in the activity of its members, AGIR initiated "the weekly newsletter" where are advertised events nationwide for the upcoming week, published along the editor's note. We communicate in this way the activity program to AGIR branches thus allowing a more rigorous pursuit of the programmed actions. Events are published in the "Engineering Universe" and announced through postings on AGIR's site and Facebook.

It was recently proposed and approved by the Directory Council for each local branch to have its own website, to promote existing members, to attract new members, to publish information and news of local interest.

We highlight in particular the activity of the LiteraryEng Circle, Epigrammatists Engineers Circle, VisionarEng Circle, Concertino Choir and also Engineers Orchestra "Petru Ghenghea", an emblem of the engineering art, whose concert halls were always crowded.

AGIR appreciate its members who, through their involvement in organizing events and further work, increase the visibility of the association. ■



## REPORT OF THE RUSSIAN FEANI NATIONAL COMMITTEE



### **Russian Union of Scientific and Engineering Associations (RUSEA)**

**Year of Adhesion :** 2007

**Declared engineers:** 110 000

**Number of EUR ING:** 6

**Member associations:** RUSEA is a Union of a total of 23 Engineering Associations. Among these we can count the: All-Russian scientific- technical society of paper and woodworking industry, Russian society of geodesy, mapping and land management, Russian Geological Society, Russian engineering-technical society of railroaders or the Russian Society of information technologies and computer science.

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## REPORT OF THE SERBIAN FEANI NATIONAL COMMITTEE



### The Union of Engineers and Technicians of Serbia (UETS)

**Year of Adhesion :** 2007

**Declared engineers:** 3 280

**Member associations:** The UETS has individual members and 42 collective members in the Republic of Serbia: 20 republic's professional associations, 7 republic's multidisciplinary engineering-technicians' associations, 1 provincial engineering-technicians' association, 14 municipal and regional engineering-technicians' associations.

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### Our main areas of work in 2014 - 2015 were:

1. CPD (organization of the congresses, conferences, scientific meetings etc)
2. Publishing activity
3. Specialist's exams
4. Various projects at national level
5. The implementation of the project EngineerING CARD in Serbia

The UETS, in cooperation with universities, faculties, enterprises, economic and professional associations, organized, in 2014 and 2015, various scientific and professional meetings and held regular annual international symposium dedicated to water and wastewater systems, with the participation of representatives of water organizations, government institutions, educational institutions, non-governmental organizations, chambers of commerce and so on. The UETS collective members also organized their own meetings. For example, the United Association of Serbia for Quality (UASQ) organized regular annual International Convention on Quality. The UASQ is a full member of the European Organization for Quality (EOQ). Two Congresses PROCESSING and KGH-HVAC CONGRESS were held in the organization of

the Serbian Union of Electrical and Mechanical Engineers in 2014 and 2015. Another UETS collective member, the Union of Architects of Serbia, was in charge for the presentation of the Republic of Serbia on the Venice Biennale. The Serbian Planners Association organized and held two Urban Planners Exhibitions. The Association of Landscape Architects, collective member of UETS, organized and held two Landscape Architecture Exhibitions in 2014 and 2015.

The UETS publishes the magazine "Tehnika". TEHNIKA is the leading Serbian scientific and technical magazine covering areas from science and professional topics and it has been published for 71 years in a row. This journal is exchanged with foreign professional organizations, and distributed to the hundreds of collective subscribers (water supply organizations, chambers of commerce, government institutions, educational institutions, private companies, CSOs). The UETS collective members also publish their expert magazines: "KGH (Air-Conditioning, Heating, Cooling)", "Procesna tehnika (Process Engineering)", "Ecologica", "Tekstilna industrija (Textile Industry)", "Forum", "Šumarska industrija (The Forestry Industry)", "Zaštita materijala (Protection of Materials)".

The Union of Engineers and Technicians of Serbia organizes and conducts Specialist's exams for engineers and technicians of three different technical disciplines. The candidates have to pass the exam in front of the Commissions appointed by the Ministry of Mining and Energy. Right to pass the Specialist's Exams have the technicians, engineers and graduated engineers with two years of working experience on businesses for which the taking of Specialist's exams is predicted.

### **The UETS has its Development Centre (DC)**

**In the course of 2014-2015 years the contributors of the DC UETS worked on the realization of two important projects:**

1. Methodology for design and implementation of Generalized HACCP System in waterworks (water supply) organizations;
2. Providing of the safe and quality drinking water to the population of Serbia - basic human right.

### **Objectives:**

1. Long-term supply of the Serbian population with safe and quality drinking water, because clean drinking water and sanitation are essential to the realization of all human rights (UN Resolution 64/292, 28 July 2010).
2. Establishing a culture of savings and the efficient and rational use of water in Serbia (population, different organizations / institutions), and thus create social awareness about sustainable use of water at all levels.
3. The knowledge improvement of employees in waterworks organizations using basic postulates, and through them to improve the knowledge of population in local self-governments where the waterworks organizations carry out their activities.
4. Establishing and application of Generalized HACCP System in waterworks organizations in Serbia.
5. Development, preparation and organization of public events

6. Creation of necessary baseline documents for development of modern legislation in area of drinking water quality, harmonization with appropriate EU legislation and World Health Organization Guidelines for Drinking Water Quality.

### **Expected results of the projects:**

1. Standardized documents (Infrastructure Documents; Logistic Support Documents; Documents of Prerequisite Programs; Documents of Generalized HACCP System; Documents for Training of Employees in Waterworks Organizations for Implementation of Generalized HACCP System) of Generalized HACCP Systems for various types of waterworks (water supply) organizations, which would be made available to waterworks organizations in Serbia, in order to implement the Generalized HACCP System.
2. The necessary material for public information (seminars, round tables, symposiums, press conferences, etc), interactive workshops, exhibitions and publishing for the following target groups: educational institutions, chambers of commerce, local self-governments, consumer organizations, professional organizations, government institutions, waterworks organizations.
3. Creating of the environment in which approved information will enable better collaboration and / or coordination of educational institutions, chambers of commerce, professional and non-governmental organizations, the business sector and government institutions in the field of drinking water, as well as promoting public participation in decision-making concerning the supply of population with safe and quality drinking water. This will allow a better understanding of future needs and solving of the problems of supply of the population with drinking water that is safe and of adequate quality.
4. Creation of SERBIAN program on the importance of drinking water ("Water Awareness") modeled on a similar program implemented in the EU.

The above mentioned projects will continue in the coming years. They are supported by Engineering Chamber of Republic Serbia, Center for Promotion of Science of Republic Serbia and waterworks (water supply) organizations in more than 20 municipalities in Serbia. Also, the Generalized HACCP (GHACCP) System is protected in The Intellectual Property Office of Republic Serbia. In our opinion it is more powerful and convenient tool for maintaining drinking-water safety than the WSP (Water Safety Plan) developed by WHO. The GHACCP system could be applied to all risky systems.

Every year the UETS traditionally held international scientific conference "Water and Sewerage". Round table (discussion), which was held in October 2015 at the 36th International Conference "Water and Sewerage", was dedicated to activities related to the implementation of The Protocol on Water and Health in Serbia.

Increase of energy efficiency in Serbia is one of the priority tasks. Sector of electric lighting offers great opportunities for increasing energy efficiency due to the rapid development of LED technology. Nowadays LED lighting is still expensive and has relatively little application in the domain of electric lighting. However, it is anticipated that LED products would soon greatly transform the electric lighting market. In recent years, LED technology has significantly improved, and constantly evolving. It is expected that advanced and future LED bulbs / lamps to be getting cheaper and with a better technical characteristics and that they will soon be dominant on the lighting market. Serbia must prepare for the LED future, creating appropriate legislation and promotion of appropriate incentive measures. The UETS is the driving force of this initiative and in the upcoming period will work on establishing all necessary resources for its implementation.

In order to solve the problems in the field of water quality, the DC UETS has developed seminar Sustainable development and water - how to preserve resources and improve safety and quality of drinking water to improve

the knowledge in the field of safety and quality of drinking water for population and employees in the municipalities in Serbia. Special attention in the seminar is paid to: the Protocol on water and health, national policy and strategy in the water sector, integrated water resources management, and the engineering methodologies for improving safety and quality of drinking water.

In April 2015, the UETS, in collaboration with German Society for International Cooperation (GIZ) GmbH (Deutsche Gesellschaft für Internationale Zusammenarbeit), has conducted the seminar: "Improving the quality and reliability of the work in schools by applying management standards", as support to GIZ Project: "Reform of Vocational Education and Training in Serbia". The participants were managers (directors) and assistant managers (directors) from 12 secondary schools, participating in GIZ Project. Each school participating in the seminar has received one (1) CD with the seminar's lectures. Also each school has received as a gift from The UETS the book COST ENGINEERING (authors: M. Nakićenović, P. Jovanović, Z. Pendić, J. Grahovac).

The UETS is responsible for the introduction of the Engineering Card project in Serbia in accordance with the provisions of the Agreement signed between the representatives of the FEANI and the UETS on October 2013. In order to make possible the implementation of this project in Serbia, on October 31st 2013 the Agreement on Cooperation was signed on the Issuance of the European Professional Card for engineers in the Republic of Serbia between the UETS and the National Council for Higher Education (NCHE) of the Republic of Serbia. The NCHE is an independent body, consisting mainly of university professors proposed by the Conference of Serbian Universities (CSU) and appointed by decision of the National Assembly. In close cooperation with the NCHE and State Universities the UETS started the implementation of the project.

The Serbian Register Committee was set up in accordance with propositions of the FEANI Handbook on Managing the Administration of the Engineering Card. Work on National Rules and Regulations for the Serbian Register Committee was finished in 2014. All Rules and Guidelines are in line with the provisions of FEANI Handbook on Managing the Administration of the Engineering Card. In 2015 first engineering cards were issued to Serbian engineers. Representatives of FEANI, Mr. Gemperle and Mr. Jagodic, came in official visit in July 2015 and they were informed about activities of the Serbian Register Committee on a realization of the project Engineering Card in Serbia. All activities were highly rated by the representatives of FEANI.

The UETS also fostered cooperation with institutions and authorities of local governments, state ministries, Serbian Academy of Sciences and Arts, Serbian Chamber of Engineers, Engineering Academy of Serbia, Chamber of Commerce and Industry of Serbia, and with numerous companies, professional associations, faculties and universities and other institutions, as well as the international cooperation in 2014 and 2015. ■



## REPORT OF THE SLOVAKIAN FEANI NATIONAL COMMITTEE



### Slovak National Committee for FEANI (SNKF)

**Year of Adhesion :** 1995

**Declared engineers:** 19 000

**Number of EUR ING:** 123

**Member associations:** The Association of Slovak Scientific and Technological Societies (ZSVTS) currently embraces 45 member societies active on different fields of science and technology such as transportation, civil or mechanical engineering, industrial chemistry, communication technologies, energetics.

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Our societies are members of as many as 35 international specialized associations and organize yearly more than 500 conferences and events, many of international significance.

ZSVTS with its partners (CVTI SR and SAS) carried out the next edition of the prestigious competition - Scientist of the Year of the Slovak republic, where not only advanced scientific personalities, but also young researchers and technologists were awarded.

From left to right: Mr. Petráž - ZSVTS President; Mr. Turňa - Director of the Slovak Centre of Scientific and Technical Information; Mr. J.E. Andrej Kiska - President of the Slovak Republic; Mr. Šajgalík - Chairman of the Slovak Academy of Sciences



For its members, ZSVTS prepared another foreign professional excursion - visit the Slovak Liaison Office for Research and Development (SLORD) in Brussels, which was established by the Ministry of education, science, research and sport of the Slovak Republic in order to assist in the preparation of projects and consortia, to encourage participation in the framework programs of the European Union. In addition to discussions with Mr. Daniel Straka, the head of this Office, also we had several meetings with the Vice - President of the European Commission, Mr. Maroš Šefčovič, with representatives of the Czech Liaison Office for Research, Development and Innovations and also with the representatives of the European Association of Research and Technology Organizations (EARTO).

In 2015, in the context of participation in the project National System of Occupations, the ZSVTS members participated in the creating of 28 National Standards of Employment. These standards belong to the Sectoral council on science, research, training, education, sports.

After the election in 2015, a new ZSVTS executive bodies were established, which will be responsible for our direction for years 2015-2018. On this occasion, several

meetings have taken place devoted to strategic issues, not only for the above mentioned years, but with a view to the year 2020.

Strategic planning is a never-ending process. Everything is a function of time: our priorities, our people, resources available, business environment, political environment. And making assumptions, we know how risky that is. We need a plan setting a few priorities, key measurable indicators and target values. That can be enough as a motor and navigator for the next activities. How to achieve these strategic aims is a task of the operative management. That was our philosophy when we started recently to talk about ZSVTS 2020.



From left to right: Mr. Plavčan - today's minister of Education, Science, Research and Sport of the Slovak Republic; Mr. Petráš, ZSVTS President; Mr. McGrath, ENAEE Vice-President

Being proud of a tradition is a good thing, to some extent. And we are proud of 25 years of existence of the ZSVTS. We celebrated this anniversary last year (2015) in March. It was a big convention, with the presence of media, high rank officials and a number of interesting speeches. But we have not changed our way of communication, we lack fresh blood among our members, we missed a number of opportunities how to help better cooperation between the academy and business.

We still rely too much on meetings, conferences, lectures. In our annual report we have a long list of those held in 2014 and 2015. Less impressive is that they are attended by a small fraction of our membership and even smaller number

of fans. The world of communication has changed dramatically, and we are obliged to follow new trends. We also would like to see living discussion forums, large numbers of blogs from our members and fans, boosting numbers of website visits, see also foreign contributors. So ZSVTS 2020 must set up new communication channels, find ways how to initiate meaningful discussions and networking, see the impact measured by relevant indicators, contributions, participants.

To achieve the dramatic changes toward ZSVTS 2020 we need a crowd of skilled experts in many areas - which, undoubtedly, we have. The only challenge is to identify them and attract them to help make ZSVTS 2020 happen. There are so many inspiring examples shown by our FEANI friends how an association like us can do things very professionally and efficiently.

Like the rest of Europe, we are also hit by decreasing interest of young people in studying technical subjects. ZSVTS 2020 must find ways what to offer the high school and university students to join us and start a career of an engineer or technician. Quality of education is a widely discussed issue with a big impact in the society. The truth is that the graduates from our technical universities have more comfortable position on the labour market than their friends leaving the schools of social sciences.

The EUR-ACE quality label awarded to engineering study programs can be a new strong impulse how to make our technical studies more systematic, efficient, market oriented, competitive and attractive to young ones. ZSVTS has made the first important steps to take initiative, established the Accreditation Centre (AC ZSVTS), became a full member of ENAEE and now, we are in the middle of the authorization process, which we hope will be completed this year.

Our strategy formulated in the Program Declaration 2015-2018 and Agenda 2020 has already started and outlines the main goals and priorities in FEANI agenda. The year 2016 will bring to us new challenges, new opportunities and new visions. We will see whether we can make a swift change aimed at increased impact of our activities, empowering people in our organization, seeing rising trends in measurable indicators. ■



## REPORT OF THE SLOVENIAN FEANI NATIONAL COMMITTEE



### Slovenian National Committee for FEANI

**Year of Adhesion :** 1996

**Estimated number of engineers:** 10 460

**Number of EUR ING:** 104

**Member associations:** The first interdisciplinary society of engineers was formed in Slovenia in 1911. In 1945, engineers and technicians united into the joint Association of Engineers and Technicians of Slovenia and now is changed in The Slovenian Engineers Association which has been working from then.

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### Activities in FEANI in Brussels:

The EMC (European Monitoring Committee) meet in March, June, October and December. Meetings were attended by the Slovenian representative prof. dr. Marko Jagodič.

From the Slovenian side were under consideration two applications for obtaining the title EUR ING, and applications from the University of Ljubljana, Biotechnical Faculty, for the following programs: Forestry and Renewable Forest Resources, Woodworking, Woodworking Engineering, and Agriculture - Zootechnology, presented for enrolment in the FEANI INDEX. Both applications for the acquisition of the title EUR ING have been returned for completing to the applicants.

The four programs of the Biotechnical Faculty have been enrolled into the FEANI INDEX.

In October 2015, the PMC has prepared the applications for the University of Maribor interdisciplinary programs Mechatronics: first cycle, first cycle vocational and second cycle program, and the University of Ljubljana, Faculty of Civil Engineering and Geodesy, the program Technical Real Estate Management. All four programs will be discussed at

the meeting of the EMC at the end of February 2016 and it is expected to be adopted in the FEANI INDEX.

All the preparation of relevant documents, statistics and analyses for EMC of all the programs and applications for the EUR ING title are processed by the NC-SI FEANI Committee PMC.

### Activities in Slovenia:

ERASMUS projects - since autumn 2015, NC SI FEANI participates in the project with the number: 2015-1-DE02-KA202-002274, entitled "Creation of a system for the documentation and validation of non-formal and informal learning". The project involves: Gotlih Karl (NC SI FEANI, Maribor), Thomas Kiefer (VDI), Krstelj Vjera (HIS), Alfredo Soeiro (U.Porto), Vidovencova Zora (CSVTS), Bochar Dirk (FEANI). The project is managed by VDI in Germany.

Together with officers from Rimini (Italy), we had competed the application for the ARIANNA project entitled "DEVELOP A EUROPEAN AREA OF SKILLS AND PROFESSIONAL Qualifications of Engineers." The project was not approved, but the Italian partners have invited us to participate again in the year 2016.

Establishment of the registration committee for the engineering card at SIZ - in 2015 we have been involved in the preparation of all necessary activities for the establishment of the Registration Board, which is required for quality assurance and transparency in awarding engineering cards in Slovenia. We managed to get members into the registration board from the University of Ljubljana, University of Maribor, the Slovenian Chamber of Commerce and four members of the SIZ. NC SI FEANI has also prepared the Handbook of Procedures for the work of the registration committee.

FEANI INDEX - In accordance with the agreement reached at the meeting of the Central Group FEANI in 2013 in Maribor, we carried out all the activities and managed to enroll into FEANI INDEX all engineering programs from the University of Ljubljana and University of Maribor (missing programs will be appointed at a meeting of the EMC at the end of February 2016). Graduates of the programs which are in the FEANI INDEX have so far the right to obtain the title EUR ING and to obtain the engineering card.

Financing NC SI FEANI - Slovenia has to pay an annual fee for 2016 for FEANI € 4,458.00.

## **NC SI FEANI work plan for 2016**

Indicative work plan is based on the decisions of SIZ and requirements of FEANI in Brussels.

### **Key activities in 2016 can be summarized in the points:**

1. establishment of the Registration Board at the SIZ for the activities required by the PMC,
2. the final establishment of the awarding system for the engineering card,
3. promotion of engineering cards and the Register of engineers in Slovenia,
4. promotion of the title EUR ING in Slovenia,
5. tracking the changes in university engineering programs at the University of Ljubljana and University of Maribor, and their updating in FEANI INDEX,
6. preparation for changes of rules for the assessment of engineering programs. EMC procedures are increasingly converging with the procedures prescribed in ENAEE (European Network for Accreditation of Engineering Education),
7. participation in the bodies of SIZ,
8. participation in the organs of FEANI (ExBo, GA and EMC). ■



## REPORT OF THE SPANISH FEANI NATIONAL COMMITTEE



### Comite Nacional Español de la FEANI

**Year of Adhesion :** 1952

**Estimated number of engineers:** 65 000

**Number of EUR ING:** 3 877

**Member associations:** The FEANI national member for Spain is the Comite Nacional Espanol de la FEANI. It is constituted by eight delegates, belonging to IIE (4) and INITE (4), and represents the Spanish engineering profession, as a whole, in FEANI. Both member bodies have close connections with technical universities, governmental institutions and industry, either directly or through the associations or federations pertaining to each institute.

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For the Spanish National Committee is a priority to promote professionals of Spanish engineering in Europe enabling their mobility and showing the quality of their training, as well as stimulating the development of indicators on the adaptation of the teachings of the various branches of engineering in Spain, in the context of the current situation in Europe, with particular emphasis on continuous professional training (CPD).

A survey on Continuous Professional Development has been sent out in June to the EUR INGs, as well as to small



and medium enterprises, and it had great success and participation.

Since its inception, the committee addresses a large number of activities, ranging from the organization to planning the operation of the various management activities of the respective commissions.

In 2015, the SNC of FEANI has changed its governing board and now it consists of the President José J. Medina, Luis M. Tomas, Ruben Pulido López, Raquel Esteban, Juan Blanco, Fco. Javier Gonzalez, Rafael Monsalve and David Sedano.

In 2015 the NMC has submitted to study and subsequently to approval degrees in aerospace engineering, civil engineering and engineering of telecommunication technologies. A total of 44 universities have been approved, which had been endorsed by the EMC and included in the INDEX. During 2014 - 2015 a total of 57 requests for EUR INGs have been approved.

The INGITE (Graduate Institute and Technical Engineers of Spain) held a conference with the Foundation under the

title Aerospace Engineering in Europe in light of the EHEA. Professional Accreditation was able to count on the participation of Lars FUNK, President of the EMC.

For SNC it is most important to help the engineers coming out of Spain and inform them of how to approach and solve problems they may encounter outside their country.

The Spanish National Committee of FEANI has offered a tribute to one of its experts from the National Accreditation Committee

Jose Maria Ramirez, the head of the National Committee on Accreditation in Spain, which has been developing the work of analysis and recognition of Eur. Ing. Applications for 28 years, has been awarded by the Spanish National Committee. They thanked him for his extensive experience since 1988 in managing the EUR ING records. Also, it has been reminded that, at the same time, the Spanish representation was completed in the FEANI through the 2 associations IIE and INGITE, currently represent the conjunction of engineering in Spain, working under the FEANI umbrella, for advancement, recognition, mobility and global convergence of engineering professionals. ■





## REPORT OF THE SWEDISH FEANI NATIONAL COMMITTEE



Sveriges ingenjörer



### Swedish National Committee for FEANI

**Year of Adhesion :** 1960

**Estimated number of engineers:** 130 000

**Number of EUR ING:** 324

**Member associations:** The Sveriges Ingenjörer is an exclusive service and professional organization for Sweden's graduate engineers and student members at the six technical universities and institutes.

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Our association is organized on three pillars: labor negotiations with collective bargaining, member service and political affairs.

In 2015 the numbers of individual members have increased to approximately 144 000, of which 25 percent are women.

By the end of 2015 we had little over 320 members who hold a Eur Ing title. The headquarters in Stockholm and local offices in Malmö and Gothenburg have about 140 individuals employed. Sveriges Ingenjörer is the only organization in Sweden that organizes individual graduate engineers as members. The organization is divided in regional districts together with a couple of sororities based on sectorial branches and networks for managers, women and so on. Sveriges Ingenjörer has also a student network.

The organization has consolidated around an overarching objective: "Swedish Engineers - we create a future sustainable society" - with a couple of visionary goals for 2014-2015 by which we should:

1. Be a leading actor of engineering topics in the society
2. Promote sustainability and development in the society.
3. We will secure best conditions for individual engineers.
4. Our educational system should produce world class engineers.

In 2014 the organization started to work with our “branding” of engineers in society and has among other things launched a tour in Sweden where we visit 20 cities. This tour is called “Sweden - the country of ideas” where we are promoting engineers predominant role, and the importance of capturing the ideas of engineers for growth and prosperity in our society.

**We continue this work with four priorities in 2016:**

1. A new labor market - the importance of collective bargaining
2. Sustainable innovation and industry - a focus on the predominant role of engineers for growth.
3. Engineers’ revenues - a joint policy for the increase of salaries.
4. Member service strategies - identifying different approaches to our members.
5. Integration - a joint policy for integrating foreign engineers into Swedish society. ■





## REPORT OF THE SWISS FEANI NATIONAL COMMITTEE

SWISS  
ENGINEERING  
STV UTS ATS

sia



### Schweizer Nationalkomitee für FEANI

**Year of Adhesion :** 1951

**Declared engineers:** 127 000

**Number of EUR ING:** 885

**Member associations:** For over 175 years, the SIA (Swiss society of Engineers and Architects) has been Switzerland's leading professional association for qualified construction, technology and environment specialists. With some 14.500 members, Swiss Engineering STV covers above all qualified engineers and architects, graduated at an engineering school, from different branches.

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The members of the National Committee Switzerland (NK-CH) met four times during 2015 under the chairmanship of Dr. Jörg-Martin Hohberg. Prof. Christoph Gemperle continued to represent the NK-CH in the EMC, and Hannes Treier worked intensively on the TF Status of the Engineer where he developed a prototype stakeholder map for FEANI.

The key theme in 2015 was the ongoing discussion on education and its recognition across Europe. To this end we worked with the ECEC, among others, to clarify the development of the FEANI-Index, the role of NMCs, and cooperation for the Common Training Framework (CTF). First meetings took place with AAQ (Swiss Agency of Accreditation and Quality Assurance), Swiss universities (our universities' umbrella organization) and their working group FTAL (for technical, architectural and medical curricula at polytechnical schools).

Another milestone of 2015 was the transcription of the FEANI Chronicle in Switzerland from 1952 through 2014 by Mr. Santiago Schuppisser (photo) documenting the transition

from a lowly taskforce of the SIA into a joint SIA-STV commission in its own right. The Chronicle highlights various feathers in the NK-CH cap, such as the co-development of the FEANI-Index (modelled after the Swiss REG), the EUR-ING title and the Professional Card.

Highlight of the year was the meeting of the Central European member countries in Lucerne. Delegations from Belgium, Germany, Holland, Austria, Slovenia, Slovakia, the Czech Republic and Switzerland came together on the 13th-15th of August in Lucerne to discuss the compatibility of different education systems across the borders. Alongside the various discussions, a tour of the Lucerne University HSLU by their newly appointed Dean of Technical & Architectural Studies and its smart-building project "iHome-Labs", the time was well spent for networking at a dinner in the old part of town. The meeting was topped off with a boat trip across the Lake Lucerne and to the tip of Mount Pilatus, riding the world's steepest cogwheel railway (an ASME heritage landmark!).

On the world's stage, the NK-CH took part in the WECC in Kyoto: "Engineering - Innovation and Society". The core

message the delegates took home was that society's needs and well-being are intrinsically linked to the progress in engineering and technology. Engineers must rise and shoulder this responsibility, and the world's leaders must fully engage the engineering community in addressing the complex challenges of our world.

The year 2016 is destined to be the Year of the Engineer throughout Switzerland due to the opening of the 57 km long Gotthard Railway Base Tunnel (<http://www.gottardo2016.ch/en>). This event in June is grounds for the engineering community in Switzerland to be proud of its accomplishments and a prime occasion to celebrate engineering as a path of study and career for young people. ■





## REPORT OF THE BRITISH FEANI NATIONAL COMMITTEE



### British National FEANI Committee

**Year of Adhesion :** 1965

**Declared engineers:** 235 000

**Number of EUR ING:** 15 932

**Member associations:** The Engineering Council of the United Kingdom was created by Royal Charter in 1981. Its Patron is HRH The Duke of Kent. It supervises the British engineering profession through licensed member institutions

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The Engineering Council is pleased to report good progress in 2015, a year in which we have continued to strengthen our national, European and global relationships and streamline our processes. We also moved offices.

We regularly review and improve the way we do things. Highlights of the year include launching a new website, bringing more processes online and automating several functions that support our Register. We also commissioned three promotional videos, of which the first, about the organization, was completed and published in 2015. The other two will be filmed and released during 2016.

We continue to work closely with and on behalf of the wider engineering community, contributing to a number of external consultations and reviews. In 2015, these included Trailblazer Apprenticeships and engineering conversion courses. We have also worked on several frameworks and agreements to facilitate greater cross-border mobility of professional engineers.

In core business activities, the Engineering Council conducted 16 five year and interim reviews of professional engineering institutions that are licensed to assess their members for inclusion on the Register. We hosted numerous workshops and seminars for institution staff and volunteers to share good practice.

### EU Directive

During 2015 the Engineering Council worked closely with the UK government Department for Business, Innovation and Skills, which is responsible for implementation of the Directive on Recognition of Professional Qualifications. We were widely engaged in the transparency and mutual evaluation exercise leading to the creation of the UK's National Action Plan, submitted to the EU Commission in January 2016. The titles Chartered Engineer, Incorporated Engineer, Engineering Technician and Information and Communications Technology Technician are protected and may only be used in the UK by professionals who are registered with the Engineering Council. An increasing number of European engineers are benefitting from the provisions of the Directive when applying to use these titles.

### Engineering Education Program accreditation

During 2015 the Engineering Council started a major project to replace its database of accredited programs. The first phase is due to launch towards the end of 2016. In the new database, program listings will include information about international recognition, such as inclusion in the FEANI INDEX and whether a EUR-ACE label has been issued. The first UK universities to adopt the EUR-ACE label have renewed

these, following re-accreditation. All bachelor with honours and masters programs are eligible for award of the EUR-ACE label and we will continue to promote take-up in 2016.

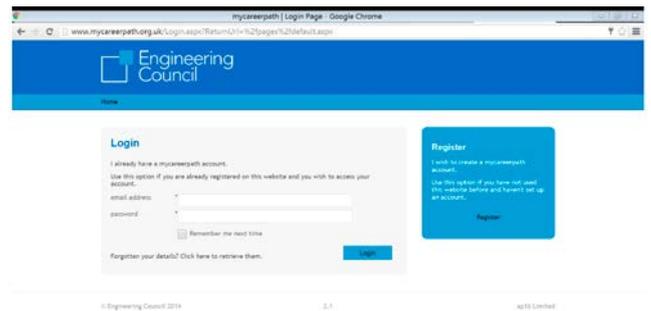
## Engineering Technicians

In addition to professional engineers, the Engineering Council registers professional Engineering Technicians (EngTech) and Information and Communications Technology Technicians (ICTTech). A key strand in our current Strategic Plan focuses on promoting good practice and encouraging more technicians to become professionally registered. During 2015 we published the Approval of Qualifications and Apprenticeships Handbook, which sets out the learning outcomes required to underpin technician competences. This can be downloaded from our website at <http://www.engc.org.uk/aqah>. With the introduction of Trailblazer Apprenticeships by the UK government, we have also been working to ensure that standards set for technician Apprenticeships align with the required standards for registration as an EngTech.

In June 2015 the Engineering Council became a founder member of the Agreement for International Engineering Technicians (AIET). The Agreement will ultimately lead to the creation of an international register of engineering technicians to facilitate their international mobility by recognising their professional competence against an international standard. For the Agreement to come into effect at least four of the six signatories must successfully complete an initial peer review stage. We expect this to happen in June 2016.



(Left to right - Glen Crawley, Engineers Australia; Dave Little, Canadian Council of Technicians and Technologists; Katy Turff, Engineering Council; Dr Keith Jacobs, Engineering Council of South Africa [AIET Chair]; Damien Owens, Engineers Ireland; Brett Williams, Engineers New Zealand.)



## Continuing Professional Development

A key area of work has been providing support to institutions in developing their processes for sampling registrants' continuing professional development (CPD) records, which will become a requirement for institutions from January 2017. To assist this, we have developed monitoring tools on our online professional development recording system, mycareerpath®, and hosted a forum to share good practice. mycareerpath® is designed to help registrants and potential registrants plan and record activities that contribute to their professional competence. These could include mentoring colleagues, learning new techniques, attending training courses, involvement with a professional body, and other activities that contribute to the maintenance or development of knowledge and competence. The user's complete records can be easily sent to their institution or employer.

## Whistleblowing

The Engineering Council published Guidance on whistleblowing, explaining the procedures engineers and technicians should follow when confronted by a potential whistleblowing situation. The first draft of a new document, Guidance on security, was completed and is due to be launched at a high profile event at the House of Commons in 2016. Both were produced with the involvement of professional engineering institutions. ■

ENGINEERING COUNCIL



GUIDANCE ON WHISTLEBLOWING  
for engineers and technicians

## REPORT OF THE UKRAINIAN FEANI NATIONAL COMMITTEE



### Ukrainian National FEANI Committee (USEAU)

**Year of Adhesion :** 2014

**Member associations:** 23

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USEAU was elected as FEANI provisional member in October, 2014. Since that time our team applied our efforts for FEANI products implementation in Ukraine. We concentrated our activities in three directions, namely: (i) to attract more allies; (ii) to realize all formal procedures; (iii) to push the implementation of EUR ACE as the next step after INDEX.



Prof. Vladimir Parkhomenko, Chairman of Ukrainian NMC, presents the concept of certification of engineers in Ukraine

**Below is short description of our activities in these three directions.**

1. Dissemination of information about FEANI product in Ukraine: As we promised on FEANI GA, USEAU returned on its leading position in engineering community of Ukraine. During 2015 we are continuing to attract

technical association under our umbrella. We have agreements for membership/cooperation with all leading technical societies. Total number for today is 23. There the following ones among them: Aerospace society of Ukraine; Nuclear society of Ukraine; Society of drilling engineers of Ukraine; Chamber of civil engineers and others.

We also spread information to the government (Ministry of Education and Science of Ukraine; State Space Agency of Ukraine; National Academy of Sciences of Ukraine and etc.); and to the business (a number of large companies in the following sectors: metallurgy; electric power; gas/oil transportation; airspace and largest association of entrepreneurs in Ukraine).



Letter of Intent signing by (from left to right) Prof. B. Remaud, President of ENAEE, Prof. M. Zgurovsky, Head of ARTU, Mr. D. Bochar, FEANI General Secretary, Dr. N. Kiryukhin, President of USEAU.

We were also seeking for the applicants for future issuing of Engineering Cards. And we see now at least two groups of potential clients. The first one is Masters, who will graduate from technical universities. That is why we organized a number of meetings with rectors of in Kiev; Kharkov; Vinnitsa; Nikolaev; Odessa and other cities. The second group are the 40,000 chartered civil engineers in Ukraine. The majority of them are seeking for future European licenses. That is why we started the negotiations with ECEC and ECCE authorities that Ukrainian Engineering Cards should be the initial step for future European license for civil engineers.

**2. Realization all formal procedures: Ukraine passed all formal procedures during 2015 for starting issuing FEANI products, namely:**

- Prepared formal request of Ukraine for full membership on FEANI GA in Lisbon;
- There was presentation of Ukrainian system of technical education on FEANI EMC meeting in Brussels (June, 2015), which was supplied by 30-pages survey;
- We attracted honorable persons as National Monitoring Committee members. There are following gentlemen among them: Prof. Dmitry Golovko, rector emeritus of Kiev National University of Technology and Design; Prof. Anatoly Dovgopoly, ex-deputy Minister of Defense; Mr. Edward Kuznetsov, adviser of General Director of State Space Agency of Ukraine and others;
- Prof. Vladimir Parkhomenko, rector of University, ex-Minister of education and science of Ukraine, was elected as Chairman of PMC of Ukraine

- Two agreements (with Ministry of education and science of Ukraine and with FEANI) were signed for the formal start of the process.

3. EUR ACE implementation: Ukraine has 56 technical universities. All these universities were joined in the Association of rectors of technical university of Ukraine (ARTU). Cooperation with ARTU is the important part of USEAU activity. Together we organized a seminar "European certification of engineers: Engineering Card and Quality Assurance". We also agreed that accreditation of engineering programs in Ukraine will be realized in two steps: a) INDEX; b) EUR ACE. Independent Center for accreditation of engineering education was created with our support. We already started preparing application for ERASMUS+ project connected with the subject and negotiations with ENAEE/EMC authorized persons for implementation of our ideas. ■

# REPORTS OF ASSOCIATED INTERNATIONAL ENGINEERING ASSOCIATIONS



# EUROPEAN NETWORK FOR ACCREDITATION OF ENGINEERING EDUCATION (ENAE)

## MR. BERNARD REMAUD/ President of the ENAE

ENAE was founded on 8 February 2006, after the successful conclusion of the EUR-ACE® Project which was supported by the EU Socrates and Tempus Programmes and by 14 European associations (including FEANI) concerned with engineering education.

On 21st November 2016, a special session of the ENAE General Assembly will be organised to celebrate the 10th anniversary of ENAE, to analyse the results achieved with respect to its initial objectives and to discuss the perspectives for the next 10 years.

As the easiest measurable result, ENAE is proud to report today that about 2 500 EUR-ACE® labels have been awarded in 32 countries, by 13 authorized European accreditation agencies. The labelled engineering programmes fulfil the highest quality criteria of the EUR-ACE® Framework Standards and Guidelines (EAFSG). When considering the steady request for labels and the number of countries (inside and outside Europe) interested in the ENAE model to establish national QA systems for their engineering education, ENAE has not yet reached its growth limits. A striking example is provided by the QUEECA project (Tempus) within which four countries of Central Asia are building their national accreditation system using EAFSG, with the help of European partners.

During these first ten years, many efforts were made to deepen and strengthen the EUR-ACE system and ENAE management. In 2015-2016, ENAE, through several working groups (ENAE members, Label Committee members), published documents (available at [www.enaee.eu](http://www.enaee.eu)) on various issues as follows:

- A revision of the EUR-ACE Standards and Guidelines to update them, building on 10 years of experience in different national contexts. The new EAFSG (March 2015) describe respectively the Standards and Guidelines for Accreditation of Engineering Programmes, the Standards and Guidelines for Accreditation Agencies and the Guidelines on Programme Self-Assessment Reviews and Accreditation Requirements for Higher Education Institutions.



- A good practice guide on "Transnational Accreditation" for ENAE authorized agencies (June 2016, to be approved by the GA in November 2016); this guide was urgently needed as authorized agencies are engaged in more and more activities outside their national jurisdiction; in accordance with the spirit of the European Higher Education Area (EHEA), it promotes trans-border activities under conditions which avoid conflicts and

preserve the mutual trust between agencies that have signed the EURACE Accord.

- A document “Best Practice in Engineering Programme Accreditation” (November 2015); this was a joint initiative between ENAEE and the International Engineering Alliance (IEA), which comprises the so-called Washington, Sydney and Dublin Accords. This document is highly significant as it represents an agreement and common understanding on best practice in engineering accreditation by countries and agencies all over the world. It is intended for use partly by bodies setting up as accreditation agencies or by existing agencies as they update their policies and procedures.

ENAEE is a lean organization with little requirement for hiring permanent staff at this time. Since its origin, it has been supplied with hosting, secretariat and office services by FEANI; these services and their costings, paid for by ENAEE, are specified in a service agreement signed in 2013. Beyond this technical support, FEANI is the main partner of ENAEE; both have different missions, even if they overlap occasionally, which gives rise to a strong partnership.

During the last year, ENAEE and FEANI have clarified their relationship and have started several common projects as:

- The integration of the two databases that they maintain, respectively the “FEANI Index” and the “EUR-ACE database of accredited programmes”, through the use of shared, more efficient software. The objectives are

to use the more robust software to update and maintain the two databases; this will be exploited independently by the two in accordance with their missions and responsibilities.

- FEANI and ENAEE support the “Engineers Europe” initiative: a common platform to increase the visibility of Engineering in Europe, to share costs of communications and information activities and represent engineers more efficiently with the European institutions. In Europe, several institutions cover all aspects of the engineering domain: Education (BEST and SEFI), Quality Assurance and Accreditation (ENAEE), Professional practice (FEANI, EYE); their missions and activities are quite complementary. Without coordination, their complementarities -and then the possible overlap of their activities- can be a source of duplication of activities and misunderstandings.

We have to thank the founding partners, all the ENAEE members and individuals who have invested during 10 years their time and experience to develop ENAEE. It has been a collective endeavour, where people from different cultures and backgrounds have worked together to build a common reference framework for engineering education. Beyond their diversity, they have fulfilled the ENAEE initial mission “to enhance and promote the quality of the education of engineering graduates in order to facilitate their professional mobility and to enhance their individual and collective ability to fulfil the needs of economies and of society”. ■

# BOARD OF EUROPEAN STUDENTS OF TECHNOLOGY (BEST)

**ADRIEN MERLIER/ President of BEST 2016-2017**



BEST (Board of European Students of Technology) is a student non-governmental organization striving to empower diversity by developing students of technology all around Europe. The foundation of BEST happened in 1989, when a group of students decided to gather in Berlin to promote and support the mobility for the European students.

Since then, we strive to develop the engineers of tomorrow and more specifically their ability to work in culturally diverse environments and to achieve an international mindset. Through our 95 local groups based in 33 countries, we seek to help 1.7 million students of technology to reach their full potential.

For 28 years now, we kept following our core values, and we have been innovating constantly to achieve our vision. Every year since 1992, we offer seminars on technology and soft skills to students in order to complement the formal education that they receive at universities and prepare them for the future. We also organize the biggest engineering competition in Europe, where 6000 students

compete and challenge themselves to find solutions for today's trending problems.

In addition to that, BEST raises the awareness of students on engineering education issues and seeks to improve engineering education through different events and scientific papers disseminated in our network. Finally, we connect talented students and business leaders through our online tools and various job fairs happening all around Europe.

For 10 years now, BEST and FEANI have been working together in order to connect present and future engineers and thus improve the collaboration between the two organizations. This collaboration has taken different form throughout the past years, from the exchange of representatives in events and general meetings to the introduction of the BEST Office under FEANI's headquarters. In addition to that, many experts from FEANI and its members participate in our Events on Education, members of FEANI support our engineering competition in several countries and BEST disseminates the outcomes of many projects from FEANI, such as the engineering card.

Overall, BEST highly values the collaboration with FEANI and looks forward to increase the cooperation during the next years. We hope to improve the connection between the two organizations, both at the local, national and European level and henceforth enhance the alliances between the professional engineers of today and the students that will work together with them in the following years. ■

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