



European Society for Engineering Education
Europäische Gesellschaft für Ingenieur-Ausbildung
Société Européenne pour la Formation des Ingénieurs

News@SEFI

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TAMPERE UNIVERSITY OF TECHNOLOGY

**44th SEFI Annual Conference
Engineering Education on Top of the World:
Industry University Cooperation**

***12-15 September 2016, Tampere, Finland
Organised by the Tampere University of Technology***

Subthemes include but are not limited to:

- University-Business cooperation
- Engineering Skills
- Sustainability and Engineering Education
- Quality Assurance and Accreditation
- Continuing Engineering Education and Lifelong Learning
- Open and Online Engineering Education
- Ethics in Engineering Education
- Curriculum Development
- Attractiveness of Engineering Education
- Physics and Engineering Education
- Engineering Education Research
- Gender and Diversity
- "I feel brilliant"

www.sefi2016.com

Contact: sefi2016@tut.fi

Keynotes Speakers



Dr. Mervyn Jones



Dr. Gary Downey



Dr. Aldert Kamp



Mrs. Marianne Vikkula

More on keynotes speakers and programme on www.sefi2016.com

Special SEFI Meetings

Mon 12 September 2016

Board of Directors Lunch (by invitation) 13:00-14:00

Welcome Event to SEFI Conference Newcomers 14:00-15:00

Tue 13 September 2016

ECED Lunch Meeting (by invitation) 13:00-14:00

Wed 14 September 2016

Lunch SEFI Corporate Partners (by invitation) 13:00-14:00

Coordination meeting of all SEFI WGs 14:00-15:00

Workshops, Project/Consortium Meetings (see list and descriptions below)

SEFI General Assembly (by invitation) 15:00-17:30

Thu 15 September 2016

Extended Lunch for Board of Directors with newly elected members (by invitation) 13:00-15:00

ReadyStemGo EU Project Meeting (by invitation) 14:00-17:00

SEFI 2016 - Satellite Events**Online Learning in Engineering Education Hands On Workshop**

A recent publication of MIT: "Online Education: A Catalyst for Higher Education Reforms" by Willcox, et al. (2016) , confirms that online education is a driving force for innovation in Engineering Education.

It is an important motivation for the organization of this pre-conference hands-on workshop for those who are interested in using online learning in their education. The goal is to give the participants an overview of how to develop and run an online course (MOOC, ProfEd or accredited online course) and to get them started with the design of their own course. By the end of the day each will have produced a rough course plan with 1 week outlined in detail including the development planning of the course. Participants will meet fellow lecturers and be able to steal brilliant ideas to save time for later on!

The workshop is prepared and given by a team of experienced online learning developers, teachers and researchers from the Delft University of Technology (Netherlands) and the Massachusetts Institute of Technology (US).

Full version on www.sefi.be or www.tut.fi/en/sefi-annual-conference-2016/

SEFI 2016 - Workshops

Titles and descriptions of some of the listed workshops are not available at the time of the publication. Details and timing we will be available shortly on www.sefi.be

Transfer of Engineering Education to Academic Curriculum.**Joint Workshop WG Curriculum Development/Open and Online Engineering Education**

The workshop is open to a forum for people interested in the development of Engineering Education in Europe. It consists of people highly involved in all aspects of modern engineering education. Through sharing our experiences we all gain in insight and knowledge. The Working Group promotes discussion and involvement on diverse themes through various activities.

Full version on www.sefi.be

Exploring Pedagogic Frailty in Engineering Education: What's holding us back? What are some tangible actions?**Workshop WG Ethics in Engineering Education**

Pedagogic frailty is a concept that describes the factors that may inhibit teaching development within a university environment. With reference to Figure 1, a tentative model of such frailty has been proposed by Kinchin (2015) and is based around four major dimensions: (i) The nature of regulative and instructional discourse (i.e. the consideration / review of the values and philosophy that underpin the curriculum as well as content selection, sequencing, pacing and assessment).

(ii) The connection between pedagogy and the discipline to support e.g. employer, job role and graduate skills needs.

(iii) The research-teaching nexus affecting e.g. motivation, recognition, rewards and status.

(iv) The locus of control, i.e. the perceived control of e.g. quality assurance, regulation and decisions / guidance on best practice.

Full version on www.sefi.be

Can autonomous vehicles change traditional gender stereotypes?**WG Gender and Diversity in Engineering Education**

Full description will be made available soon on www.sefi.be

Workshop on Education for sustainable development

WG Sustainability in Engineering Education

The scope of this workshop is to plan comparative research on engineering education for sustainable development. We encourage you to bring your ideas and present them in a 5 minutes elevator pitch. It can be a wish to compare particular pedagogical strategies on the institutional level, to compare curricula design processes and outcomes, or to compare every day practices in order to enable engineering students to address the sustainability challenge.

If you do not have formulated a concrete idea, but still is interesting in collaborating across universities to improve engineering education for sustainability – please join in. The ambition is to provide concrete plans and commitment for cross-institutional papers on education for sustainable development to be presented at the SEFI conference 2017.

For any questions please contact [Jette Egelund Holgaard \(jeh@plan.aau.dk\)](mailto:jeh@plan.aau.dk)

Workshop Epices - Development of a platform for helping teachers / tutors / coaches involved in problem- and project-based learning

European Funded Project under Erasmus +

This workshop is designed to be an interactive session that aims to demonstrating and testing the developed educational platform and tools. This workshop is therefore an essential part of the interaction of the EPICES project with its stakeholders (students, academic institutions and the industry) and will help to optimise and finalise the platform to be available at the end of the project in January 2017.

Full version on www.sefi.be

Workshop ReadySTEMgo - The identification of at-risk students

European Funded Project under Erasmus +

In this workshop the participants will be challenged to think how at-risk populations are identified at their respective institution. How different risk factors? (e.g., problematic conceptual understanding, weak prior performance, social integration issues, lack of essential academic skills, poor attitudes,...) They are related to the National educational context. Finally, there will be a discussion: (1) how these at-risk populations are targeted by specific interventions and (2) what a university can do to help those students to perform at their maximum capacities.

Full version on www.sefi.be

Working Group on Engineering Skills Workshop

Full description will be made available soon on www.sefi.be



FROM SEFI

The SEFI community remains united despite Brexit

If SEFI can only be saddened by the results of the Referendum in the UK, we would like to express our support to all our UK members, and assure them that our cooperation is far from over. British Universities and Academics have campaigned strongly in the last months to remain part of the European Union, and even though the final results are worrying, SEFI believes that UK Higher Education Stakeholders are still full European Stakeholders.

If the situation is worrisome in terms of UK Universities participating in EU funded Projects in the future, it is our belief that for at least the upcoming two years no major changes in funding will happen, what has started will be brought to completion. We also believe that for as long as there is no finalized exit scheme or notification by the EU instances, our members should not be afraid to launch new cooperation projects with UK members. Funding insecurity might occur in the future, but let us not forget that SEFI goes well beyond the 27 members of the EU, and cooperates without borders, as it is the case for ERASMUS+ or HORIZON2020.

The cooperation in Engineering Education will prevail, SEFI will continue to work with and for its UK members. We all remain part of the same European Engineering Education Community.

SEFI at the 2016 ASEE Annual Conference



Opening Ceremony

On the invitation of our colleagues from the American Society for Engineering Education, I have had the great pleasure to participate in their **2016 Annual Conference** held in New Orleans on 25-29 June and to represent our President, Prof. Martin Vigild, to this major engineering education event. I was accompanied in this task by two SEFI Board of Directors members, namely Profs. Joao Rocha, President of ISEL (P) and Manfred Hampe, TU Darmstadt/former President of 4Ing.



X. Fougier (left) and J-C. Quadrado (right)

Other SEFI Board of Directors members were also present in New Orleans, LA (NOLA), on the person of Xavier Fougier representing Dassault Systemes (sponsor of ASEE conference) and, as incoming President of LACCEI and organizer (ISEP) of the ASEE Global Colloquium to be held in the Azores Islands (Terceira) prior to the SEFI 2017 Annual Conference, José Carlos Quadrado.

The conference brought together around 5000 delegates and featured more than 400 technical sessions, with peer-reviewed papers spanning all disciplines of engineering education.

Plenary sessions on Monday and Tuesday sees the distinguished lectures given by Lisa Jackson (Apple's vice president of Environment, Policy and Social Initiatives) and Joseph Bradley (President for business ventures at Uptake, a Chicago-based data analytics start-up). The Exhibit Hall where numerous corporates had booths was as always extremely impressive.



ASEE President Rencis with SEFI Secretary General Françoise Côme.

It was also an occasion for me to have a meeting with our colleagues of ASEE, in the persons of Dr. Joseph Rencis (President 2015-2016), Dr. Catherine Skokan (Vice President of External Affairs) and Dr. Norman Fortenberry (Executive Director). It was the occasion for us to sign the new **SEFI ASEE Memorandum of Understanding** fixing the terms of our mutual collaboration for the next five years.

A very nice dinner was also organized for ASEE international partners on June 27 and this represented another opportunity to exchange with ASEE international division representatives. I hereby would like to thank our colleagues from ASEE for the invitation to attend the conference in that splendid NOLA's environment as it represents for SEFI an excellent networking opportunity to exchange about engineering education and about what SEFI is doing with several US and Canadian professors and deans, as well as to reinforce our cooperation with some of our corporate partners.

present in NOLA as well as a few possible new ones.

The conference was preceded (June 25) by the **International Forum** that brought together engineering professionals from academia and industry from around the globe, engaged in novel engineering education initiatives and who shared information on their successful models, experiences and best practices. This year (NB: *SEFI had co-organised the 2014 Forum in Indianapolis together with LACCEI*), the Forum welcomed presentations of the following ASEE partners:



*President Rencis (left) and his successor
President Louis Martin-Vega (right)*

Accreditation Board for Engineering and Technology (ABET), United Nations Education, Scientific and Cultural Organization (UNESCO), Student Platform for Engineering Education Development (SPEED), International Federation of Engineering Education Societies (IFEES) and Global Engineering Dean's Council (GEDC).

As from July 2016, **President Rencis** (Tennessee TU) will be succeeded by the new ASEE President in the person of **President Louis Martin-Vega** (North Carolina State University in Raleigh).

The 2017 ASEE Conference will be held in Columbus (OH) on June 25-28 and we are looking forward to welcome the ASEE representative in Tampere next September in the person of **Sheryl Sorby** (VP of the ASEE Professional Interest Council).

*Françoise Côme
Secretary General*



FROM OUR PARTNERS

NEW President of BEST

SEFI is pleased to announce that the new president of BEST is Adrien Merlier, from Lyon (France). We congratulate him for his election and hope for fruitful cooperation in the future, and we look forward to welcoming him in Tampere for our Annual Conference 2016.

We would also like to address our thanks to the now past President, João Clemente (Portugal) for this year of cooperation between our two associations, and the strengthened relationship that has been built with the signature of the SEFI-BEST Memorandum of Understanding. We wish him all the best for the future.



IFEES Election 2016 Executive Committee Call for Candidates



During the next IFEES Member Assembly in Seoul, IFEES will elect five members to the Executive Committee who will serve for two years. The Secretary General of IFEES, Hans Hoyer, has broadcasted a call to nominate IFEES members to be candidate to the IFEES Executive Committee.

Several IFEES members have already expressed interest to serve in this position. It is important to remember that a candidate will need to be endorsed in writing by the appropriate IFEES member organization.

Presumptive candidates should express their interest in writing until the 31 July (auer@cti.ac.at and h.hoyer.ifees@gedc.info) together with a brief bio, a photo and brief statement of rationale for the candidacy.

For questions please contact Prof. Hans J. Hoyer

Extended deadlines for Nominations for the 2016 IFEES Duncan Fraser Global Award

The IFEES Duncan Fraser Global Award for Excellence in Engineering Education recognizes individuals who have made innovative and meritorious contributions having a significant impact on the advancement of engineering education. The nominations deadline has been extended to ????

More information on www.ifees.net/nominations

CALENDAR

JULY 2016

11-15 Broadway, SYD

AAEE Winter School - UTS ([link](#))

11-13 Irkutsk, RU

AEER Network International Conference "Interdisciplinarity in Engineering Education: Global Trends and Management Concepts – SYNERGY" ([link](#))

Prof. L. Musilek member of the Board of Directors will represent SEFI

12-13 Beijing, PRC

IIDEA Workshop with two topics: "Engineering Pedagogical Education for Teacher development" and "Global Competencies, Integrating Ethics in the engineering in the Engineering Curriculum" ([link](#))

Organised by SEFI and IFEEES

29-31 Santo Domingo, DO

13th LACCEI Conference ([link](#))

SEFI will be represented at this event

September 2016

12-15 Tampere, FI

44th SEFI Annual Conference

Organised by the Tampere University of Technology ([link](#))

13-16 Liverpool, UK

28th EAIE Annual Conference ([link](#))

21-23 Belfast, UK

IGIP Annual Conference ([link](#))

SEFI will be represented by Secretary General Françoise Côme

October 2016

6-7 Porto, PT

EUA is organising its 3rd Funding Forum hosted by the University of Porto in ([link](#))

12-14 Geneva, CH

G3 Francophone Symposium on Quality in Higher Education Institutions ([link](#))

November 2016

6-10 Seoul, KR

WEEF & GEDC 2016 ([link](#))

Korean Society for Engineering Education (KSEE)

Korean Engineering Deans Council (KEDC)

17-19 Ljubljana, SK

11th European Quality Assurance Forum

Hosted by Slovenian Student Union/

University of Ljubljana

20-22 Budapest, HU

ACA's (Academic Cooperation Association)

Annual Conference 2016 ([link](#))



Please find the complete list of our upcoming events on www.sefi.be

SEFI's event or SEFI related event

SEFI's partners events

INTERNATIONAL PRESS REVIEW

NEWS FROM THE EU

New Skills Agenda for Europe



The new Skills Agenda for Europe launches a number of actions to ensure that the right training, the right skills and the right support is available to people in the European Union. It will aim at making better use of the skills that are available; equip people with the new skills that are needed - to help them find quality jobs and improve their life chances. The Commission invites Member States, social partners, the industry and other stakeholders to work together to

- improve the quality and relevance of skills formation
- make skills more visible and comparable
- improve skills intelligence and information for better career choices

This is set out in the Communication: A New Skills Agenda for Europe - Working together to strengthen human capital, employability and competitiveness. The Commission proposes 10 actions to be taken forward over the next two years. A number are announced with the adoption of the new Skills Agenda for Europe on 10 June 2016:

- A Skills Guarantee to help low-skilled adults acquire a minimum level of literacy, numeracy and digital skills and progress towards an upper secondary qualification.
- A review of the European Qualifications Framework and the related annexes for a better understanding of qualifications and to make better use of all available skills in the European labour market.
- The 'Digital Skills and Jobs Coalition' to support co-operation among education, employment and industry stakeholders.
- The 'Blueprint for Sectoral Cooperation on Skills' to improve skills intelligence and address skills shortages in specific economic sectors. Other actions will be launched later in 2016 and in 2017: A 'Skills Profile Tool Kit for Third Country Nationals' to support early identification and profiling of skills and qualifications of asylum seekers, refugees and other migrants.
- A revision of the Europass Framework, offering people better and easier-to-use tools to present their skills and get useful real-time information on skills needs and trends which can help with career and learning choices.
- Making Vocational Education and Training (VET) a first choice by enhancing opportunities for VET learners to undertake a work based learning experience and promoting greater visibility of good labour market outcomes of VET.
- A review of the Recommendation on Key Competences to help more people acquire the core set of skills necessary to work and live in the 21st century with a special focus on promoting entrepreneurial and innovation-oriented mindsets and skills.

More information on ec.europa.eu

Erasmus+: second round of applications for international credit mobility



Universities from certain regions will have another chance to apply for funding for international credit mobility in 2016 under the Erasmus+ programme.

National Agencies in some programme countries will open a second round of applications with funds left over from the first round. Applications will be limited to those regions for which funds are still available. According to the European Commission these are likely to include: South Mediterranean, Western Balkans, Eastern Partnership, Central Asia and Russia.

Potential applicants are encouraged to consult their National Agency's website in the coming weeks to find out whether their country will participate in this second round, and with which regions of the world they can apply for mobility projects.

The deadline for applications is 15 September 2016 at 12.00 (CEST).

More information on www.eua.be

Delivering the European Agenda on Migration



The European Commission is presenting an Action Plan to support Member States in the integration of third-country nationals and their economic and social contribution to the EU, as well as a legal proposal to reform the rules on highly skilled migrants coming to the EU to work, which will support European businesses in attracting qualified and talented people from around the world. These initiatives follow up on the commitment in President Juncker's Political Guidelines, which set legal migration as a priority for this Commission. (...)

The Action Plan provides a common policy framework and supporting measures which should help Member States as they further develop and strengthen their national integration policies for third-country nationals. Member States – at national,

regional and local level – are at the forefront when it comes to integration. The Action Plan sets out the concrete policy, operational and financial support to be delivered at EU level to support them in their efforts.

Ensuring that third-country nationals can contribute economically and socially to their host communities is key to the future well-being, prosperity and cohesion of European societies. A study published by the Commission services confirms that, if well and quickly integrated, third-country nationals can contribute to a better performance of the labour market, help address demographic challenges and improve fiscal sustainability. There is a clear risk that the cost of non-integration will be higher than the cost of investment in integration policies. Despite efforts by Member States, migrants and recognised refugees from third countries who are legally resident in the EU continue to face an increased risk of poverty or social exclusion. Whilst integration policies remain very much a national competence, in the current context many EU Member States are facing similar challenges, and the EU level can add value through the structural and financial support it provides.

Actions are proposed in key-areas such as: pre-departure and pre-arrival integration measures, in particular for people in clear need of international protection who are being resettled; education, employment and vocational training; access to basic services; and active participation and social inclusion. A more strategic and coordinated approach is also proposed for the use of EU funds to support national integration measures.

Under the New Skills Agenda for Europe, the Commission will also support labour market integration with various tools to improve migrants' skills and to recognise and benefit from their existing qualifications.

Actions to support the integration of third-country nationals need not, and should not, be at the expense of measures to benefit other vulnerable or disadvantaged groups or minorities.

More information on europa.eu/rapid/

Member states to receive recommendations on key priorities for education



Under the European Semester the European Commission has selected 14 member states that are to receive country-specific recommendations, to address key education challenges and build reform in their respective education systems.

Countries selected include: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, Germany, Hungary, Lithuania, Poland, Portugal, Romania, Slovakia, Spain.

The education reforms currently being introduced are particularly designed to: Tackle early school leaving, a key education 2020 target, and improve basic skills; Improve relevance and quality of the vocational system; Effectively facilitate a transition to a knowledge-intensive and service oriented economy; Decrease skills mismatches as well as shortages of human capacity in particular occupations. Also allowing for more flexibility in available learning paths ; Shape inclusive education, particularly looking to young people from disadvantaged backgrounds; Promote University-business sector cooperation.

Many of the proposed areas are designed to bridge Educational inequalities linked to socio-economic background, that are amongst the highest in the EU.

Belgium thus is to progress its education and vocational training reforms and provide training support particularly for people from migrant communities. Austria faces similar recommendations with high drop out rates of foreign-born pupils and Inter-generational mobility in education being amongst the lowest of all OECD countries. Denmark faces a challenge in the employability of young people from non-EU backgrounds. Germany is encouraged to continue investment in education, research and innovation to preserve competitiveness, investments having fallen short of the national target of 10 % of the GDP. Poland is recommended to increase transversal skills, improve the standing of higher education and science that affects quality provision, as well as increasing internationalisation efforts in terms of incoming students and scientific collaboration. Romania's tertiary attainment rate is increasing, but quality and labour market relevance are lacking behind, obstacles to accessing education faced by Roma and disadvantaged young people, particularly in rural areas, should be reduced.

More information on www.aca-secretariat.be

Slovak EU Presidency announces its priorities



On 1 July, Slovakia officially took over the Presidency of the Council of the EU for the second semester of 2016. The Presidency programme includes four priorities: an economically strong Europe, a modern single market, sustainable asylum and migration policies and a globally engaged Europe. The consequences of the UK referendum and the discussion on the future of the EU represent additional challenges for the Presidency.

Among the important issues on [the agenda](#) that are relevant to universities are the review of the Multiannual Financial Framework (the EU's long-term financial planning), the review of EU funding programmes such as Horizon 2020 and Erasmus+ and the negotiations on the 2017 EU budget, which EUA is following closely on behalf of the sector.

The Presidency of the Council of the EU rotates every six months between the member states. During this period the Presidency organises and chairs meetings at every level of the Council. In order to ensure the continuity of their work, member

states holding the Presidency work closely together in groups of three comprised of the previous, current and future presidencies. For the second semester of 2016, the so-called “trio” is formed by the Netherlands, Slovakia and Malta, which will take over on 1 January 2017.

For more information about the Slovak EU Presidency, www.eu2016.sk/en

More information on www.eua.be

SKILLS AND EMPLOYABILITY

New Skills Agenda: the role of universities



The European Commission (EC) presented the New Skills Agenda on 20 June 2016 in Brussels.

EUA looks forward to supporting any European-level dialogue on the issue and calls for a sector-specific strategy focusing on flexible learning, career paths and social inclusion which would also foster intersectoral mobility – as EUA stated in March 2016 in its response to the EC’s consultation. The New Skills Agenda intends to ensure that people in Europe are equipped with the right skills for a changing society, whatever the educational level. The EC has invited major stakeholders, including European universities, to work together to take forward 10 actions set out in the EC Communication: “A New Skills Agenda for Europe - Working together to strengthen human capital, employability and competitiveness”.

The New Skills Agenda is directed mainly at the vocational education and training sector and it also addresses higher education. EUA upholds the emphasis on the need for high-level skills in the future and the importance of higher education institutions further developing such skills. Academic study prepares graduates for a wide range of careers in a rapidly evolving work market and tertiary education graduates are much more likely to find jobs in general. In addition to educating young professionals, it is also the role of universities to reach out to learners who do not have formal entry requirements and to offer continued professional development for those who seek to acquire extra skills.

In order to better understand the complex relationship between skills demand and employment needs, EUA supports the EC’s call for more study, more cooperation and sharing, and better information on the impact of higher education on the careers of graduates. More specifically, and given the disparate labour market and employment situation across Europe, it will be important to know more about reported skills mismatches.

The Communication underlines both the importance of inclusion and the acquisition of employability skills. However, it focuses mostly on the needs of industry, and not sufficiently on the skills that are more broadly relevant for society. Skills are also for the wider benefit of individuals and society. Social inclusiveness and integration should be strong elements. EUA would like to underline the importance of professional and disciplinary skills being taught alongside social and civic skills, essential for universities whose role it is to educate future citizens.

Read full article on www.eua.be

Germany's applied universities succeed in boosting post-graduation prospects

After ending their studies, nine out of ten master graduates sign an employment contract during the first 18 months, according to the newest study of the German Centre for Higher Education and Science Studies (DZHW). The “Graduate survey” is performed since 1989, funded by the Federal Ministry of Education and Research (BMBF), and is supported by research inputs from the International Centre for Higher Education Research (INCHER).

Graduates coming from a university of applied sciences were found to have especially good prospects in finding permanent employment post-graduation. For their first job, every second graduate of a university of applied sciences will enter into a permanent employment contract, while university graduates also find a job quickly but more frequently first pursue temporary work arrangements or third cycle studies. Results have to be considered in a nuanced perspective- while graduates of applied universities quickly find permanent employment and tend to have higher starting salaries; university graduates catch up on these indicators in the long run. Long term employment emerges with a delay due to the pursuit of continued study and/or an intermediary phase between studies, later on achieving higher income results in comparison to their peers who graduated from an applied institution. Due to the close knit connection between practice based learning, graduates of a applied university early on forge industry connections which positively impacts their employment prospects. An increasing number of students are found to preference universities of applied sciences, which offer a broad spectrum of subjects, practice based training and are conveniently found in close proximity to students’ home base.

The research which examines perceptions of graduates, from the academic examination-year 2013, probing into their study experience, their job market entry and career achievements– for the first time allows subject differentiated conclusions on the impact of the new Bachelor-Master system. With those graduates studying in the Bachelor-Master framework outperforming their peers of foregone years, moving into an employment relation swiftly post-graduation and rating their studies positively - Federal Minister of Education and Research, Johanna Wanka commends higher education institutions for

“successfully transiting into the new Degrees “ structure.

Considering that employment perspectives are moving to the forefront of student motivations and study choices particularly in the international context (see ACA newsletter Education Europe, June 2016), vocationally integrated learning, accompanied by private sector contacts, can be inferred to gain increasing relevance for a broad spectrum of students.

More info on www.aca-secretariat.be

FUNDING

One year of EFSI: What's in it for universities?



On 16 June 2016, EUA released a review of the European Fund for Strategic Investments (EFSI) and found that there seems to be no benefit for universities – even though the scheme was created with funds taken from Horizon 2020.

One year ago, the European Commission (EC) set up EFSI with the aim to mobilise private investment, ensure that investments reach the real economy and to improve the investment environment at European and national levels. In order to establish EFSI, 2.2 billion euros were taken from Horizon 2020, the EU's current framework programme for research and innovation. While EUA warned against a shift of money from the highly successful grant funding programme (see EUA policy brief, March 2015), the European Commission justified the cuts by arguing that EFSI would also benefit universities and research. EUA analysed to what extent EFSI has done this and found out that universities do not seem to be benefitting at all from the funding scheme. The analysis shows that 77% of EFSI financing has gone to infrastructure development in different sectors and to SME support. Meanwhile, only 23% was awarded to research, development and innovation – but seemingly not to universities. “Appropriate infrastructure is undoubtedly an important key condition also for academic research, but public investment is needed for both and should not be taken away from one to fund the other,” explained Thomas Estermann, Director for Governance, Funding & Public Policy Development at EUA. “Horizon 2020 is a highly successful programme but is in danger of losing attractiveness if not sufficiently and sustainably funded.”

In its statement, EUA points out three reasons why EFSI as a loan scheme is not suited to support collaborative university research while such research is highly needed to address current societal challenges, foster sustainable economic recovery and find innovative solutions to the problems Europe is facing. In the review, EUA also calls upon the European Commission, the European Parliament and the Council to avoid taking any more money from Horizon 2020, to increase highly successful grant funding programmes to fund academic research and education and to continue the EFSI initiative only if it really delivers the desired leverage effect. EUA published the EFSI review ahead of the European Council summit on 28 and 29 June 2016, where heads of states and governments are scheduled to discuss the first results and possible future of EFSI. The review is part of EUA's new campaign for sufficient, sustainable and simple EU funding for universities. Through this campaign EUA works to raise awareness about the important links between EU and national funding and develops a series of activities in parallel to important EU-level policy processes.

More information on www.eua.be

NEW INITIATIVES

Arab-Euro Conference on Higher Education addresses societal mission and refugees



The Third Arab-Euro Conference on Higher Education (AECHE) took place from 25 to 27 May 2016 at the University of Barcelona in Spain. Under the theme, “Opportunities and Challenges for Arab and European universities in fulfilling their societal mission,” it brought together more than 200 rectors and other academic representatives, mainly from Arab countries and Europe. Education ministers from Egypt and Morocco addressed the audience and participation was high-level.

The response of universities to refugees was one of the focuses of the conference. Participants discussed various initiatives on providing refugees access to education, including traditional, online and blended programmes. A former Syrian Deputy Minister for Higher Education, now based in France, presented an approach for providing online access to education. Another example came from the NGO Kiron and the University of Kassel, who collaborate to enrol students in online courses that are free of charge. The Technical University of Berlin emphasised the need to turn refugees as rapidly as possible into regular students, which the university does with the support of strong public funding. The Central European University in Hungary reported on its efforts to assist young people in obtaining the language and transversal skills necessary for employment and education.

How universities can better integrate students and scholars from migrant backgrounds was the topic of several presentations, among them from the University of Antwerp in Belgium and St Joseph University in Lebanon, which called for more interuniversity cooperation. The European Municipalities Network in Cyprus stressed the need for coordination at both na-

tional and local levels, in which higher education institutions can play an important role.

Representatives from the European Commission's Directorates General on Education and Research presented concrete measures for refugees that the EU has in place or is preparing, including funding mechanisms as a way to develop partnerships and networks for research collaboration. An 11.5 million euro call is scheduled to be launched in July on topical issues such as migration drivers, skills for refugees, integration policies and measures. Funding is also available under the Science for Society call, which provides small budgets for university projects for refugees.

"For us, this is direct follow-up to the Paris Declaration and the 2015 Bologna Yerevan Communiqué that European ministers have agreed upon," explained Lesley Wilson, Secretary General of EUA. "Addressing these issues is not always easy in a European, or even EU context. In this regard we were very pleased that our colleagues from the Association of Arab Universities agreed to join forces for a conference on this important issue."

Academic freedom was another major topic of discussion. A representative of Scholars at Risk emphasised that the university should be a safe place to learn and discuss, and referred to the UNESCO recommendations, as well as to the examples of Tunisia and Norway which have made specific provisions for academic freedom in their legislation. Meanwhile, other presentations showed different realities. Two EUA university members from Ukraine reported on experiences of being displaced and the resulting challenges for students and staff. The permanent presence of an Israeli military compound on the Palestinian Technical University campus is not only disturbing the daily routine, but poses health and safety risks.

The Fourth Arab-Euro Conference on Higher Education (AECHE 4) will take place in the spring of 2017 and will be hosted by University Mohammed V in Rabat, Morocco. It will address Arab-European research collaboration with a thematic focus on natural resources and environmental issues. EUA will provide more information to members this autumn.

AECHE, launched in 2013, is a platform for Arab-European higher education cooperation and exchange. The Conference was organised by the AECHE Consortium, which comprises the Association of Arab Universities (AARU), EUA and the University of Barcelona, which hosts the Secretariat of the initiative, with the collaboration of AECHE's enlarged Steering Committee, where the Union for the Mediterranean (UFM), UNICA and UNIMED also participate.

For more information on the AECHE 3 conference, please [click here](#).

More information on www.eua.be



OECD launches new higher education activities

The Organisation for Economic Co-operation and Development (OECD) is launching two new areas of work in the field of higher education: benchmarking system performance and in-depth analysis of higher education issues. The first topic chosen for examination is labour market relevance and outcomes of higher education. In this context, the OECD seeks to collaborate with stakeholders and organised the 1st Higher Education Stakeholder Forum on 17 June 2016. The OECD's work on higher education is made up of two separate but interrelated strands of work: benchmarking higher education system performance and the in-depth analysis of higher education topics. Countries may choose to participate in one or both of these strands of work, according to their national priorities

Benchmarking higher education systems performance: The OECD will collect data and information across different performance dimensions in higher education within a policy relevant framework to: compare performance across higher education systems to identify which higher education systems are performing well, in which areas, and why; and identify strengths and weaknesses within national higher education systems.

In-depth analysis of higher education topics: The OECD will analyse a higher education topic in-depth to provide countries with: An analytical framework for approaching the topic; A self-assessment tool for countries to use; Tailored policy advice to specific countries (country reviews); Peer-learning opportunities; New evidence and insights to feed back into and strengthen the benchmarking performance framework;

Stakeholder dialogue: It is important to maintain and strengthen the engagement of higher education institutions and other stakeholders with OECD work on higher education. This will not only provide opportunities for the OECD to gain valuable feedback on the higher education work but also enable the OECD to get the sector's perspectives on emerging trends and policy concerns in higher education.

Why is OECD doing this work now?: Higher education is at the heart of the knowledge society – it contributes to the development of high-level skills, creates new knowledge, carries out research that underpins our understanding of the world we live in and beyond and spurs innovation.

Click [here](#) for an overview of the Higher Education team.

More information on www.oecd.org/edu/skills-beyond-school/higher-education.htm



New Initiative for Universities of Applied Sciences (UAS) Launched: UAS4EUROPE

UAS4EUROPE aims to strengthen the role of universities of applied sciences at the European level. Europe needs greater and stronger involvement of its universities of applied sciences (UAS). This assertion is unavoidable if we look at European policy objectives in the area of innovation and growth. The European challenge-based approach to research and innovation must generate more impact power. However, the potential impact of the UAS within this process has not yet been fully utilised.

On the other hand, many UAS strive for increased engagement: the prospect of fruitful international collaboration, promising cross-border partnerships, and well-resourced European funding programmes are all strong incentives for them to play a more important role at the European level. However, adequate opportunities to do so have been missing so far. Therefore, a group of representatives for UAS from different European countries has teamed up and started a joint initiative to increase UAS's presence and visibility on the European stage. UAS4EUROPE aims at providing a central platform for European UAS, allowing them to join forces and speak with one voice. This main asset for UAS is also an asset for the European Commission, as Robert-Jan Smits confirmed yesterday: "It's great to see that the universities of applied sciences are increasingly claiming their role to help regions, Member States and the EU realise their ambitions in the field of science and innovation. With their close relations with SMEs, knowledge and experience to bring research results to the market and international networks, the universities of applied sciences have much to offer. The creation of UAS4EUROPE will definitely facilitate and enhance the cooperation and contacts with the European Commission." Joint position paper on the role of UAS in Europe

As one of its first activities, UAS4EUROPE handed over a joint position paper to Robert-Jan Smits which outlined the further role of UAS within the European Research Area (ERA) in general and, more specifically, within Horizon 2020. The position paper highlights the strengths that UAS have to offer: As regional connectors; As key international players; As competent project leaders and evaluators of European projects; As consulting bodies; As contributors to European entrepreneurship. During the event, these core competencies were presented by representatives of the five organisations launching the UAS4EUROPE initiative: Stéphane Lauwick, President of EURASHE; Tim Creedon, Chairman of UASnet; Walter Schober, Vice President of Hochschule Bayern e.V., Germany; Luciana Vaccaro, Rector of the University of Applied Sciences and the Arts Western Switzerland, speaking on behalf of Swiss universities; Kurt Koleznik, Secretary General of the Association of Austrian Universities of Applied Sciences FHK.

Read full article on www.eurashe.eu

Guild of European Research Intensive Universities in the works

On 1 June 2016 a group of leading universities met in Brussels to found the Guild of European Research Intensive Universities. The Guild brings together universities from across Europe that have demonstrable excellence in teaching, research and policy formation to collaborate on the creation of innovative solutions to some of Europe's most intractable scientific and social challenges. The founding members are the universities of Bologna, Glasgow, Göttingen, Groningen, Krakow (Jagiellonian), Oslo, Tübingen, Uppsala and Warwick. Other members will be announced when the Guild is formally launched on 21 November 2016.

More information on www.eua.be

BREXIT

UK researchers fear Brexit will cut them out of bids for EU collaborative funding



There is no dossier, but anecdotal evidence that British researchers are being sidelined in putting together proposals for Horizon 2020 grants is growing. Scientists in Britain are worried about being sidelined from EU research projects before formal Brexit negotiations have even begun. The European Commission has stressed that the UK remains a member of the EU and enjoys all the same rights and privileges it did before with regard to participation in European science programmes. But there is already some evidence that the vote to leave the EU in the June 23 referendum is hindering research.

As one case in point, the result has torpedoed several proposals made by Leeds University, according to Ben Williams, head of European funding. "It's hard to quantify exactly, but four examples are known here already," he said.

Similarly, Ali Mobasheri, professor of musculoskeletal physiology at Surrey University, says Dutch and Belgian partners have told him they consider it risky to include UK partners in an upcoming EU bid. "They don't really want us to be involved," said

Mobasheri. "They told me that Brexit has caused them concerns and confusion, and are worried it could jeopardise the proposal's chances." Mobasheri, who relies on EU funding for most of his research, is himself concerned about how British proposals will be viewed by evaluators in Brussels. "Have all the evaluators had training against unconscious bias? Because we have all this noise around us and sometimes it can be very difficult to block it out," he said.

"It is business as usual for Horizon 2020," said UK Science Minister Jo Johnson. "I would be concerned about any discrimination against UK participants and am in close touch with Commissioner Moedas on these issues," Johnson told an audience including university vice chancellors, research funders and scientists, in a speech in London last Thursday (30 June).

EU officials have also issued several statements since the referendum encouraging researchers to carry on seeking British partners. But the Brexit vote has left behind "a perception" that could be harmful to UK researchers' chances, says Anne Glover, former EU chief science adviser and vice principal for external affairs and dean for Europe at Aberdeen University. "It's hard to pin down specific examples," said Glover. "[But] when I was in the University of East Anglia a couple of days ago they told me they had been asked by collaborators to step aside as the leader [in a project]."

Johnson said he is aware of the reports of discrimination but, "Has not been given a dossier of evidence that says it is happening in concrete terms." Researchers should communicate any instances of discrimination, he said. "If I see any specific evidence that it is happening, I will bring it to the attention of the team [in his government department] and they will make the relevant authorities and the Commissioner aware of it."

Julia Goodfellow, vice chancellor of Kent University and president of Universities UK, said she is gathering evidence, "to find out if there is a significant problem." Scientists for EU, a campaign group led by Mike Galsworthy, has its own investigation underway as well.

British researchers are pessimistic about where the vote and the uncertainty it has generated will leave them in the pecking order for applications to Horizon 2020. It is "almost impossible" to see how the UK can coordinate future projects in Horizon 2020, said Kevin O'Rourke, professor of economic history at Oxford University. "We don't know what the UK's status will be in two years' time, so why take a risk?" Echoing this sentiment, Philip Cowley, professor of politics at the Queen Mary University of London said, "Why invest in building up relationships with people that are leaving?"

Similarly, Paul Quinn, a UK national at the Centre for Law, Science, Technology and Society at Brussels Free University, said, "There seems no point in a consortium applying for project money now with a UK partner. If you look at the Horizon 2020 process, the chance of success is already low (maybe 10-12 per cent) and the application process can take up to a year."

"Given the uncertainty you would have to be mad wasting time trying to make proposals with a UK partner now. Nobody knows how the UK will be treated officially, let alone unofficially," Quinn said.

Antonino Rotolo, vice-rector for research at the University of Bologna, told Science|Business that the vote is bad news for anyone looking to build research consortia with UK partners. He could not say for sure yet whether attitudes towards British researchers have changed in Italy but "researchers are starting to ask whether it could be a risk to include a UK partner in an EU proposal." His colleagues are currently preparing a proposal for an upcoming funding round and are weighing up the merits of a UK partner leading it. "This issue was actually raised by the UK partner, which offered not to coordinate," Rotolo said. Ramon Wyss, vice president of international affairs at KTH Royal Institute of Technology, Stockholm, said he cannot see UK partners being chosen for future EU projects. "For the next European Institute of Innovation & Technology cluster call, urban mobility in 2018, one can be rather sure that the consortia that are going to be set up will be rather careful over selecting their UK counterpart, if any," he said.

"Similarly, any kind of flagship or more strategic initiative will certainly not push to have a UK partner," said Wyss, implying the recently-announced EU quantum flagship may not include anyone from the UK.

Even though the UK government could choose to reimburse the lost funds, Wyss said, "The uncertainty will dampen EU-UK collaborations." Stéphane Boissel, CEO of biotech company TxCell in France, said he would now be "very hesitant" to go into a Horizon 2020 application with a UK partner.

There are those who say they do not detect anything has changed since the vote. "In general, I do not have the impression that our researchers have the intent to reduce their relationship with UK peers," said Paul van Dun, general manager of KU Leuven's research and development department. "We have quite some collaborations with what you could call the 'Ivy league from the UK', and I see no signs of our researchers wanting to end these collaborations."

Anna Sachinopoulou, coordinator of EU projects at the University of Oulu, Finland, said her institute would also continue to seek British partners. "Of course we should include the UK in our proposals. An exit from the EU [will] take a really long time and the country has already provided the budget money for this era. They have the [same] right to participate as all of us," she said. The timetable for the UK's exit from the EU remains unclear. Once Article 50 of the EU Lisbon treaty is activated, which some leading politicians say will happen before the end of 2017, it will sound a starting pistol on a process of negotiation that must conclude within two years.

More information on www.sciencebusiness.net

Brexit: growing numbers of UK academics face EU funding worries

Growing numbers of UK researchers say that their applications for European Union research funding are in doubt after the Brexit vote, while there are also reports of foreign scientists opting not to take up jobs in the UK owing to the post-referendum outlook.

Several researchers spoken to by Times Higher Education said that the vote had thrown into doubt funding applications to Horizon 2020, the EU's current research programme, as continental partners expressed worries about whether UK participation could harm their projects' chances of success.

UK universities currently benefit from EU research funding by about £1.2 billion a year, as well as gaining access to international networks of researchers.

Meanwhile, a survey on the impact of the Brexit vote circulated on social media by the lobbying group Scientists for EU has spotlighted worries for science.

According to the group, among the 167 scientists to respond, 51 said they had general concerns about the future of science in the UK, 33 said they were planning to leave the country, 20 cited worries about xenophobia, 16 said they had encountered disruption in Horizon 2020 applications and nine were foreign scientists who had decided not to take up UK job offers. Three respondents said they had encountered no problems raised by the referendum result.

For standard projects funded by Horizon 2020, three participants from different member states or associated countries must be involved (this rule does not apply to European Research Council funding, which is part of the programme).

Some EU researchers may be deterred from bidding for multi-year funding alongside UK partners, given the uncertainty over how long the nation will remain inside the EU.(...)

Tim Blackman, vice-chancellor of Middlesex University, one of the UK universities most reliant on EU research funding, said: "Leaving the EU risks losing more than half of our research income, many of our best researchers and students, and crucial opportunities for collaboration and exercising leadership and influence in the world."

In a speech on 30 June, universities and science minister Jo Johnson tried to reassure UK researchers, saying that "in legal terms...nothing has yet changed" and that it was "business as usual for Horizon 2020". He added: "I would be very concerned and I'd be grateful if you could bring to my attention any examples of discrimination against UK participants in these programmes."

Carlos Moedas, European Commissioner for science, innovation and research, writing on THE's website, also reassured UK researchers that "the referendum as such doesn't change anything regarding their eligibility for funding under Horizon 2020". (...)

More information on www.timeshighereducation.com

ENGINEERING GRADUATES

Engineers: More and more women graduating

Almost 30% of French Engineering graduates last year were women. The insertion in the job market of this cohort has been "faster and there was a higher value in the jobs obtained than in the previous two years". These are two of the important bullet points from the edition 2016 of the study by IESF (Engineers and Scientists in France). Every year, this association that brings together almost 1 million engineers publishes a broad study on employment conditions of engineers in France. Some of the notable points are:

29 % - It is the percentage of women amongst the Engineering graduates in 2015, 11000 in total. IESF underlines a "spectacular growth in the number of women engineers". The study recalls that in 1973 only 600 women became engineers, equivalent to less than 5% of the cohort. In 1980, the proportion was about 10%. Today, on 34 women, 1 will become an engineer, whereas among the generation ready to be pensioned the ratio was 1 for 500 women. (...) All industries considered, today in France 20,5% of engineers are women.

38 000 – is the number of freshly graduated engineers in 2015, replacing 8000 to 9000 engineers reaching the age of pension. Today France counts almost 1 million engineers, when they were only 680 000 in 2009, a growth of 4% per year. (...)

16 % - is the percentage of French engineers who settled abroad. This represents roughly 1 out of 6, a number that is similar to previous year. French engineers settle mostly in Switzerland (16 150), USA (14 520), Germany (14 300) and UK (11 050). (...)

18 % - is the percentage of engineers who have started their own firm, showing an increase in entrepreneurship. 11% of them are considering creating their own company in the next 5 years. This can be explained by the fact that entrepreneurship courses has been part of the curricula for 26% of the engineers that are 30 or below. (...)

16 % - is the percentage of new graduates who decided to continue their studies, mostly by a PhD. Whereas only 5% of graduates from business schools follow the same path. There is an increase of 17% between 2014 and 2015. Most of them stay into research positions with few responsibility and a lower income than young engineers in the private or public sector.

36 % - is the percentage of engineers with another diploma at a level Master or higher in management, human sciences, sciences. However, the study does not show a correlation between wages and a second diploma. (...)

This shortened article is a free translation from French.

More information on www.lemonde.fr

PUBLICATION

The knowledge future

Intelligent policy choices for Europe 2050 : report by an expert group on foresight on key long-term transformations of European systems - research, innovation and higher education (KT2050). We live in a world of increasing and systemic unpredictability. Accelerating technological change empowers individuals and organizations to be far more productive and destructive than ever before. National and other boundaries are eroded as links between individuals, between collectives and between countries multiply at an unprecedented pace. And whilst physical distance becomes less and less significant, vast and rapidly expanding populations are located in parts of the planet that are challenged for resources, food and energy. In this context, Europe's research, innovation and higher education system lies at the core of its economic and social prospects. The report 'The knowledge future: intelligent policy choices for Europe 2050' elaborates on challenges and opportunities that three 'megatrends' — globalization, demographic change and technological change — represent for Europe's research, innovation and higher education system, and suggests a number of ideas that could find a place in EU policy for research and innovation.

More information on bookshop.europa.eu



SEFI is the largest network of higher engineering education institutions (HEIs) and educators in Europe.

It is an international non-profit organisation created in 1973 to contribute to the development and improvement of HEE in Europe, to reinforce the position of the engineering professionals in society, to promote information about HEE and improve communication between teachers, researchers and students, to reinforce the university-business cooperation and to encourage the European dimension in higher engineering education.

Through its membership composed of HEIs, academic staff, students, related associations and companies, SEFI connects over 1 million students and 158000 academic staff members in 48 countries.

To reach its goals, SEFI implements diverse activities such as Annual Conferences, Ad hoc seminars/workshops/councils organised by its thematic working groups and committees, SEFI organises European Engineering Deans Conventions, publishes a series of Scientific publications (European Journal of Engineering Education) and Position Papers, is involved in European projects, cooperates with other major European and international associations and international bodies (European Commission, UNESCO, Council of Europe, OECD).

SEFI also participated in the creation of numerous international organisations such as [ENAAE](#), [IFEES](#), [EuroPace](#), [IACEE](#), [IIDEA](#), or [EEDC](#).

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Please send your contributions for the next issue to info@sefi.be before 15 August 2016

SEFI's corporate partners



The SEFI newsletter contains information about SEFI's recent activities as well as a summary of the latest stories in higher engineering education in Europe and worldwide. **News@sefi is sent for free to SEFI members.** All previous issues are available on www.sefi.be "members only".

All staff and students of an institution, an association or a company member of SEFI are entitled to receive free copies of the newsletter. So, in case you know somebody that is interested in a free copy, feel free to contact us.

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