

EAMBES 2017: State of the Alliance

Dear Members of EAMBES, and all European Biomedical Engineers and Scientists,

It is both a privilege and a pleasure to be writing my first Presidential address in this newsletter. At the outset of my term of office as President, I must record my thanks to those that have completed their term of office and handed on an organisation which is well placed to face the challenges shone upon us. It is also an opportune time to welcome our new councillors where together with the existing council members will continue their selfless contribution to EAMBES in an effort to bring together and strengthen further the voice of the community that EAMBES represents.

Also, I would like to offer a warm welcome to all our new elected Fellows that have joined us in 2017. We are truly looking forward to a fruitful collaboration where the vast expertise and prestige the EAMBES Fellows have in the field will empower EAMBES to strengthen further its position in Europe and beyond.

As we all know biomedical engineering, bioengineering and medical engineering is a diverse and multidisciplinary field. Despite the diversity we are all driven by the same motivation and passion which is nothing but the creation of new knowledge and technologies contributing in solving some of the most challenging problems in healthcare. It is a fact that Biomedical Engineering contributions to healthcare through research and development, in the university and in the medical devices industries, has brought about a change in how healthcare is delivered.

The dynamic growth in this field is clearly noticeable in all continents. The continuous growth of new University courses in this field, the creation of new National Societies and Institutions, and the huge increase in companies from small and medium enterprises to large industries producing devices for both the healthcare (clinical) and domestic markets is a clear testimonial of the unstoppable positive trajectory of this field and the people that are driving it.

WHAT IS EAMBES?

European Alliance for Medical and Biological Engineering & Science

A nonprofit scientific society to promote Biomedical Engineering (BME) and Biological and Medical Engineering and Sciences (BMES) especially in Europe.

Members are scientific societies, Universities or research institutions in Europe. Today EAMBES represents 26 national & transnational societies and 33 institutions, and through them around 8,000 biomedical engineers and scientists working primarily in research and higher education. It is affiliated to the International Federation of Medical and Biological Engineering (IFMBE).

EAMBES aspires to:

- Support and promote BME and MBES research and development, education, training and accreditation of scientific programmes
- Recognize individual and group achievements and contributions to the field of BME and MBES
- Become a strong one voice for academic/research MBES at EU level
- Position Biomedical Engineering (BME) on the EU research and policy agenda
- Develop a dialogue between EAMBES & key policy makers in biomedical engineering and related fields.

www.eambes.org

EAMBES finds itself as a significant player in this arena, with a focus on Europe. Some might say, what can EAMBES do and what are the challenges? There are a number of key priorities for the Alliance to address over the next few years.

- Primarily we must grow as a community of people with common interests, engaging with colleagues and organisations from many professions and forming a voice which speaks with authority on the status of the profession and its future.
- Continue our efforts to create awareness and “educate” people, that are in key policy making positions within Europe, on the nature and remit of the profession and its contribution to society.
- Bring together professionals from both medicine and life sciences and STEM (Science, Technology, Engineering and Mathematics) subjects to discuss the latest advances and challenges to influence decision and policy making within the EU (i.e. Horizon 2020 funding).
- Enable networking among different academic, industry and policy leaders, and encourage best practice across Europe.
- Engage with governments, academia, healthcare providers, industry and the wider public to build bridges across all sectors.
- Lastly, we have a unique opportunity to truly promote the impact of physics and engineering in Healthcare through the organisation of National, European and International conferences, symposia and other scientific meetings with the collaboration of all our members and other Societies.

I hope this is an agenda we can all embrace. It will only be through our own actions and determination that these opportunities can be grasped.

EAMBES Elections 2018

Volunteers play a crucial role in the success of EAMBES; council members work throughout the year across a range of committees, projects and educational outreach activities, providing invaluable expertise, experience and enthusiasm and at the same time contributing to their own professional development and bringing useful new skills back to the workplace.

We now have a range of exciting vacancies within EAMBES, with opportunities across several roles. There is a common misconception that you have to be a ‘senior’ professional with many years’ experience to apply for these roles - but many of the roles are open to all members, and we would welcome applications from early to senior career professionals.

Watch out for the election call for new councilor positions by 15th of December 2017.

To those who are completing their terms of office and those who will continue - thank you for your on-going support and commitment to the Alliance. And to those considering applying for the vacant roles: please do. We need as wide a cross-section of members as possible to ensure that the Alliance continues to thrive - now and in the future.

Policy Affairs Working Group (PAWG)

In 2017, the EAMBES Policy Affairs Working Group (PAWG) have been very active in supporting WHO and IFMBE to reinforce dialogue with the UN International Labor Organization (ILO). ILO International Standard Classification of Occupations (ISCO) classifies biomedical engineering under the Group 'Engineering Professionals Not Elsewhere Classified (Unit Group 2149), together with 'explosive ordnance engineer' and 'marine salvage engineer'. ILO Classification is the one that is then propagated at European Union and National levels. The ILO ISCO is updated every 10 years and the next revision is expected in 2018.

During the last WHO Global Forum on Medical Devices, working sessions with members from ILO, WHO, IFMBE and EAMBES PAWG were organized and decided to launch a survey aiming to help ILO revising ISCO in 2018. This survey, aims to estimate the total number of biomedical engineers and technicians that are actively working in the world and have been educated in the last 30 years. This is crucial as ILO ISCO properly classifies only those occupations which achieve significant numbers of workers in the world. Moreover, ILO classes aggregate professional engineers (i.e. educated for at least 4 years in a University), technologists (engineers educated in Universities for less than 4 years) and technicians (non-university colleges). Accordingly, the survey will aim to estimate the total number of engineers, technicians and technologists and will include in biomedical engineering all those branches of our profession that IFMBE recognizes as BME (e.g. clinical engineering).

Dr Pecchia (EAMBES PAWG Chair) met representatives from IFMBE CED and WHO during the International Clinical Engineering and Health Technology Management event in September 2017 in San Paulo, Brazil. WHO volunteered to prepare the survey, which will be administered online using the WHO website and EAMBES PAWG will do their best to promote this survey among EAMBES members and fellows aiming to capture relevant information that may help finalize ILO ISCO revision in 2018.

To raise awareness of the PAWG and EAMBES work, and collaboration with IFMBE, EAMBES past-president Prof. Jari Hyttinen organized a workshop on BME policy issues at EMBEC meeting in Tampere June 2017. The workshop speakers included EAMBES council members Jari Hyttinen, Leandro Pecchia, Karin Wårdel and Eleni Kaldoudi. The workshop attracted a good audience including IFMBE and EMBEC society representatives, and based on the active discussion after the talks the work of PAWG and EAMBES in general was well received and appreciated.

Prof. Jämsä, President-Elect of EAMBES, is also Chair of the IFMBE Council of Societies Europe-Africa Regional Group. In 2017, EAMBES co-organized with the IFMBE Council of Societies two events for the European BME societies. In March 13th, there was a successful IFMBE European CoS Meeting in Brussels with active discussions on joint efforts of EAMBES and IFMBE in promoting BME in Europe and worldwide. Another European CoS meeting was held in Tampere during the EMBEC/NBC2017 Conference discussing amongst other subjects the scheduling of future regional conferences.

EAMBES and EMBEC 2017

EAMBES endorsed and go-organized with IFMBE the **Joint EMBEC and Nordic –Baltic meeting on BME** in June 11th-15th Tampere, Finland www.embec2017.org. The meeting was locally organized by the BioMediTech Institute – a joint biomedical technology and engineering institute of University of Tampere and Tampere University of Technology (www.biomeditech.fi) and the Finnish Society of Medical Physics and Biomedical Engineering (www.lfty.fi). The meeting gathered altogether over 700 participants from over 50 different countries with 450 oral and 150 poster presentations.

The program included seven plenary and two keynote addresses by Nobel Laureate Professor Stephan W. Hell and Australian Research Council Laureate Fellow Professor Gordon Wallace (<http://embec2017.org/keynote-speakers/>). The core of the scientific program was the 40 special sessions organized by active participants. These contributed 50% of all oral sessions. The activity of the organization of special sessions with each one invited talk was clearly one key reason for the high scientific quality of the meeting. EMBEC included also EMBEC Young Investigator prize, as well as poster and best health technology assessment paper competitions. The Austrian EMBEC society, IFMBE and IFMBE HTA division, respectively, donated the prizes. The EMBEC young investigator competition winner was Fabian Bartel, VU University Medical Center, Amsterdam, Netherlands and the poster competition was Sarah Tonello, University of Brescia, Brescia, Italy (<http://embec2017.org/young-investigators-competition>).

Young Investigator program included also a Sauna Evening, workshop on publishing with editors and publishers, lunch meeting with the keynote and prominent speakers, and a career-building event.

In addition, EMBEC included networking events, commercial exhibition, a pitching event for Finnish BME startups with 32 companies participating. *EAMBES organized, in addition to Council and Fellows meetings, a special session on European BME Policy Issues*. The abstract book of the meeting is available at <http://embec2017.org/abstracts/> and the proceeding with selected 4 page papers are published in IFMBE proceedings series: <https://link.springer.com/book/10.1007/978-981-10-5122-7>

The next EMBEC meeting (EMBEC 2020) will take place in Portoroz, Piran, Slovenia, in June 14-18, 2020.



EMBEC2017 and NBC meeting: TOP: Professor Stefan W. Hell opening keynote. Evening at Lake. EAMBES organized special session on European BME policy issues, Prof Jari Hyttinen opening (At back in audience professor Hutten who also gave opening words on behalf of the EMBEC society). BOTTOM: EMBEC Young Investigator competition finalists- Prof. Jari Viik presenting

EAMBES New website

EAMBES new web site has been launched with better service to the community, including profiling various relevant events endorsed by EAMBES. Also, the website creates a forum where all members can inform BME educational programs across Europe. If you have any relevant programmes (Undergraduate or Postgraduate) that you wish them to feature in our website please let us know.

Get in touch with our Secretary General Prof. Eleni Kaldoudi.

Upcoming EAMBES activities:

- EAMBES annual meetings and EAMBES Fellows Seminar 12-13 March 2018 (City, University of London, London, UK)
- EMBEC meeting, **Portoroz, Piran, Slovenia, June 14-18, 2020**
- World Congress on Medical Physics and Biomedical Engineering, **June 3-8, 2018, Prague, Czech Republic**

EAMBES has had a very active year and we are continuously preparing new activities to promote BME. Our aim is to continue to strengthen EAMBES policy work and collaboration with the European Parliament, the European Economic and Social Council, Scientific Panel for Health and other stakeholders on European BME schemes including EUCOMED. Another goal is to strengthen the scientific scene by reinforcing the European conference series on BME and now with IFMBE we are achieving this status. We are convinced that our council with members from nine European countries and thirteen organizations has the expertise and energy to successfully tackle these goals. I would like to thank all our Council Members, especially our chair of the PAWG Dr Leandro Pecchia, for their great contribution on EAMBES activities. Also, we would like to encourage and welcome new people to join us, as very soon we will be launching a call for candidates for 2018-19 EAMBES council.

We would like to stress that our work depends on the continuing support and the resources provided by you - our members! We hope that our work is serving your needs as an EAMBES member. We will warmly welcome all feedback and suggestions in order to improve our work further. We are looking forward to your continued support to strengthen the Biomedical Engineering Community in Europe!



Panayiotis Kyriacou, President



Jari Hyttinen, Past President