



SPOTLIGHT ON
LATIN AMERICA

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Content

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- The 4th International Conference on the Development of Biomedical Medical Engineering in Vietnam(1/8-1/12,2012)
- World Congress on Medical Physics and Biomedical Engineering(5/25-5/31,2012)



EDITORIAL

Collaboration Makes Good

As planned, we highlight the theme of Biomedical Engineering and Medical Physics development in Latin America in this issue of IFMBE News. Special thanks to Professors Susana Llanusa Ruiz (Cuba) and Martha Zequera Diaz (Columbia) for providing abundant information on V CLAIB held this May 2011 in Havana, Cuba.

We, who are working on the IFMBE News, are very encouraged by the amount of information we received with regard to the latest news in the field of biomedical engineering from different regions of the world. We are very thankful to Dr. Kim Dremstrup who, while on vacation, kept working with us on preparing the report of the 15th Nordic – Baltic Conference on Biomedical Engineering and Medical Physics in Aalborg, Denmark. Dr. Hua Nong Ting provided the report and great photos of BioMed2011 and the 8th Asian Pacific Conference on Medical and Biological Engineering (APCMBE 2011) held in Kuala Lumpur, Malaysia. We also received a report from Dr. Olof Lindahl, who is an IFMBE Administrative Council member, on the Swedish Annual Biomedical Engineering Conference in Umeå, Sweden.

We also received a report from Dr. Colin Roberts describing a new organization called Health & Wellbeing Innovation Centre (HWIC) in the United Kingdom.

Miss Chieny Kao has left her position as IFMBE News Assistant Editor to pursue her career. We sincerely thank her for her outstanding support in re-starting IFMBE News. Miss Brenda Chang is the new Assistant Editor. She has taken over the work of editing the IFMBE News. We want to collaborate with you to make the IFMBE News good in the future.



Kang-Ping, Lin
Editor, IFMBE News



IFMBE EXPRESS

Future Vision of IFMBE

Words from President Herbert Voigt

The work of the IFMBE is very important. We represent the future of the fastest growing engineering profession in the world. We are an important advisor to WHO, whose mission is to safeguard the health of the global population. I am tremendously proud of the work our volunteers are doing to advance Medical and Biomedical Engineering and to promote the profession for the good of humanity. Everywhere I go, from Havana, Cuba to Aalborg, Denmark; from Bangkok, Thailand to Washington, DC and Umea, Sweden, I see the future of the profession filled with bright, intelligent people of all ages and both genders working for the common good – making a healthier world through engineering advances. It is a hopeful future and I am grateful to be a small part of this scenario. Thank you for this wonderful opportunity.

Up coming IFMBE-endorsed Conferences

We have some important conferences on the horizon. Just around the corner, at the end of August, is the IEEE/EMBC in Boston, MA. I hope to see many of you there.

The European Conference of the International Federation for Medical and Biological Engineering will be on September 14-18, 2011 in Budapest, Hungary

<http://www.embec2011.com/> There are IFMBE AC and Officer meetings as well as many IFMBE committee/Working Group/Division meetings. Please make every effort to participate in these meetings as well in the scientific/engineering sessions.

Work is well under way preparing for the WC 2012 -World Congress on Medical Physics and Biomedical Engineering- on 25 - 31 May 2012 in Beijing, China www.wc2012.org The conference themes and tracks are now set and Theme and Session Chairs are being contacted now – if you are interested in serving in such a capacity, please contact the Congress Organizers as soon as possible.

Two special WC 2012 programs

There are two special programs I have been working on for the WC 2012. The first involves creating Special Sessions on Undergraduate Student Projects regarding the development/deployment of low-cost medical devices in resource-poor nations. So far I have secured funding for 8 students to attend the WC 2012 to report on their undergraduate projects – 4 from the IFMBE, 2 from the Biomedical Engineering Society, 1 from the IEEE/EMBS and 1 from Engineering World Health. I am hoping to get additional funding for this special program from sources outside of the United States. If you have any ideas for funding, please contact me immediately!

The second WC 2012 Program I am pushing is based on the highly successful Young Faculty Traveling Fellowships Program stated by the Asian/Pacific Rim countries working group of IFMBE. 4-5 Young Faculty members from these countries were identified as rising stars and provided travel support to visit the research homes of the other participants prior to attending the World Congress.



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Inaugurated for the WC 2006 in Seoul, Korea, this program was also successful for the WC 2009 in Munich, Germany. My goal is to establish three additional regional Young Faculty Traveling Fellow Programs – in addition to the continuing Asian-Pacific Rim Program, these will include:

- a new CORAL Program for Central and South America,
- a new North American Program,
- and a new European Program.

The IFMBE is committed to providing substantial funding for these programs as long as the procedures for selecting the Fellows is acceptable, but we are seeking additional funds. We are very likely to have the CORAL and North American Programs in place for WC 2012. Discussions in Budapest may help move the European Program forward. I have reason to expect funding for the North American Program; we are looking for additional funding for the CORAL and European Programs. Any ideas for additional support, please contact me immediately (hfv@bu.edu).

Engineering World Health (EWH):

My main message to WHO at the First Global Forum on Medical Devices was that the Medical and Biological Engineering profession can have a major impact on providing technological solutions to many health care problems in resource-poor nations. Enormously talented engineering students working in resource-poor nations have already contributed greatly in a few locations. The non-profit organization, Engineering World Health, has been placing students in Central America and Tanzania for the past 10 years.

IFMBE and EWH have recently begun discussions regarding a mutually beneficial association. On the EWH website we find:

“ Helping the world's poorest with healthcare technology

We (EWH) are a non-profit organization that mobilizes the biomedical engineering community to improve the quality of health care in hospitals that serve resource-poor communities of the developing world. With this professional expertise, we install donated and newly-designed medical equipment, carry out repairs and build local capacity to manage and maintain the equipment. We also harness the resources of collegiate engineering programs through a network of university-based chapters and contract with Duke University to manage a summer program that sends student biomedical engineers to developing country hospitals where they repair broken equipment. ”

This year, for the first time, IFMBE sent Mario Secca (Portugal), Chair of the IFMBE Developing Countries Working Group and the Chair of the IFMBE Societies Committee to Engineering World Health's 2011 Summer Institute Summer Conferences in Central America.



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IFMBE also sent Andrei Linnenback (Netherlands) and Kenneth N'kuma-Udah (Nigeria), Vice-Chair of the Developing Countries Working Group to the EWH's 2011 Summer Institute Summer Conferences in Tanzania.

Melissa Driver Beard, M.P.A., Executive Director and CEO of EWH has already indicated that she will be attending the WC 2012 in Beijing. I am looking forward to a long and mutually beneficial relationship between EWH and the IFMBE.

Future Leadership

Elections for new IFMBE officers and AC members will take place at the WC 2012 in Beijing next May. The IFMBE Nominating Committee is actively seeking dedicated volunteers for the Medical and Biological Communities to stand for these positions. Please nominate outstanding, active and dedicated individuals for consideration for the office of Vice-President (President-elect), Secretary General, Treasurer and AC member (4 to be elected). Thank you for your thoughtful consideration.

Best wishes,
Herb



Herbert F. Voigt, Ph.D.
President, IFMBE

Call for Nominations for IFMBE Officers and AC Members

At the World Congress in Beijing, China in May 2012, elections will be held to fill several IFMBE leadership positions, including President-Elect, Secretary-General, Treasurer and 4 Administrative Committee members. Please forward all nominations to the Chair of the Nominating Committee, Makoto Kikuchi, Japan mkikuchi@ndmc.ac.jp by 1 January 2012.

Nominating Committee :

Makoto Kikuchi, Japan mkikuchi@ndmc.ac.jp
(Chair)

Marc Nyssen, Belgium marc@minf.vub.ac.be
(Vice-Chair)

Heikki Terio, Sweden
heikki.terio@karolinska.se

Monique Frize, Canada
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Susana Llanusa, Cuba susy@infomed.sld.cu

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Fred Hosea
Fred.W.Hosea@kp.org

Azman Hamid azman@healthtronics.com.my



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Gates Foundation Grant Opportunities - New Grand Challenges Explorations Topics

Dear colleagues:

The Bill & Melinda Gates Foundation is now accepting grant proposals for Round 8 of Grand Challenges Explorations, an initiative to encourage innovative and unconventional global health and development solutions. Applicants can be at any experience level; in any discipline; and from any organization, including colleges and universities, government laboratories, research institutions, non-profit organizations and for profit companies.

Grant proposals are being accepted online until November 17, 2011 on the following topics:

NEW - Protect Crop Plants from Biotic Stresses
From Field to Market

NEW - Design new approaches to optimize
Immunization systems

NEW - Explore New Solutions in Global Health
Priority Areas

Explore Nutrition for Healthy Growth of Infants
and Children

Apply Synthetic Biology to Global Health
Challenges

Initial grants will be US \$100,000 each, and projects showing promise will have the opportunity to receive additional funding of up to US \$1 million. Full descriptions of the new topics and application instructions are available at: www.grandchallenges.org/r8_gce

We are looking forward to receiving innovative ideas from around the world and from all disciplines. If you have a great idea, apply. If you know someone else who may have a great idea, please forward this message.

Thank you for your commitment to solving the world's greatest health challenges.



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Whitaker International Award For Bioengineers and Biomedical Engineers

Dear Colleagues,

The Institute of International Education (IIE) is pleased to announce the opening of the 2012-2013 Whitaker International Fellows and Scholars Program competition, with a January 23, 2012 deadline.

Program Overview

The Whitaker International Program provides funding to emerging U.S.-based leaders in biomedical engineering/bioengineering to conduct a study and/or research project abroad, with the underlying objective of increasing international collaboration in the field of Biomedical Engineering (BME). Grant projects – including lab research, coursework, public policy work – are intended to enhance both the recipient's career and the field. Founded in 2005 by the Whitaker Foundation (now closed), the program is administered by the Institute of International Education.

Whitaker International Program grants are awarded based on an activity/project proposal that is relevant to biomedical engineering. Note that not all aspects of the project have to be strictly BME related, but the applicant should showcase how the award will enhance his/her future goals in the bioengineering field. The program also allows for non-BME majors to apply as long as the candidate has relevant experience and interest in BME.

We anticipate offering about 50 grants, but only the highest-quality applicants are offered awards. In the last three competitions, 20, 35 and 40 grants were awarded.

We are seeking to increase our pool of qualified applicants, so all eligible students who are exploring the idea of going abroad for a post-graduate/post-doctoral project are encouraged to apply. Aside from the personal and professional benefits to the individual grantee, benefits to the home institution also accrue, as new university partnerships have developed with hosting institutions overseas; collaborations have developed between U.S. bioengineers and their academic counterparts worldwide; and U.S. labs have benefited from having their students learn and bring back new and, sometimes, cutting-edge technologies and procedures.

Awards have included research in heart blood flow, improved prosthetic leg design, development of affordable oral cancer screening tools, and investment in BME research. Projects occur worldwide, and have taken place in many European countries, as well as in such places as China, South Africa, Vietnam, Australia, Singapore and many more.



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Types of Grants

The Whitaker International Program has two categories

1. Fellows - Graduate-level applicants, from graduating seniors through current PhD students. Fellows receive a stipend for one year, and are eligible for tuition reimbursement.

2. Scholars - Post-doctoral applicants, who recently received their PhD. Scholar awards can be for as little as one academic semester or as long as two years of funding, depending on their needs. Second year funding is contingent upon demonstration of progress made during the first year.

Website & Online Application

<http://www.whitaker.org/>

<http://whitaker.usapplications.org/>

The online application is now open with a January 23, 2012 deadline. The website listed above has all the information pertaining to the program, including eligibility requirements, examples of potential host institutions, and former grantee profiles.

Whitaker Program On-line Forum

<http://www.whitaker.org/forum/>

A new Whitaker on-line forum has been created for applicants to interact with former grantees and ask them questions about grant projects, tips on the application, securing host affiliations, and the general grant experience. Additionally, the forum has answers to many Frequently Asked Questions on the Whitaker Program.

Publicity Materials

Please feel free to circulate this email to your colleagues or to students who you think would be eligible for the program. Program brochures are available upon request.

Please feel free to contact me should you have any questions about the Whitaker International Program.

Thanks & Best Regards,

Sabeen Altaf
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IFMBE EXPRESS

Report of Asian Pacific Working Group Meeting

Venue: Berjaya Times Square Hotel, Kuala Lumpur

Date: Wednesday, 22nd June 2011

Time: 17:00-19:00

Many renowned Biomedical Engineering researchers in Asia Pacific region attended in this meeting. During the IFMBE Asia-Pacific Working Group meeting, Prof James Goh conveyed greetings from Prof Herb Voigt, President of IFMBE to the APWG members as he could not attend in person.

During the meeting, future conferences and information were announced below:

1. WC2012 Beijing:

Prof. Fan Yubo confirmed the following items with regard to the WC2012:

Venue: Beijing International Convention Centre

Date: 26-31 May 2012

Important dates to note:

11 Nov 2011 – Deadline for Submission of Abstracts

15 March 2012 - Deadline for Early Bird Registration

30 April 2012 – Deadline for hotel reservation

Registration fee for early bird is 5000RMB (approx. \$785 as at the point of writing this article).

2. BioMed 2011/APCMBE 2011:

Prof. Wan Abu Bakar Wan Abbas reported that there were 250 registered delegates from 15 countries out of which about 50% were from outside Malaysia. In total, there were 211 technical papers.

Prof. WAB Wan Abbas also announced that the next Biomed2013 would be held on 26-29 June 2013.

3. APCMBE 2014:

Prof Fong-Chin Su reported that the Taiwanese Society of Biomedical Engineering will host the 9th Asian Pacific Conference on Medical & Biological Engineering (APCMBE 2014) during the third week of April 2014 in Tainan, Taiwan. He had requested for feedback regarding the suitability of the proposed dates. Some members preferred to have the conference at the end of May 2014. In view of this, Prof Su will report back to his committee on the members' input. The meeting dates will be confirmed at a later date.

4. Mega-conference on Biomedical Engineering:

Prof. Vo Van Toi informed the meeting that there will be a mega-conference comprising of three conferences held from 10 -12 Jan 2012 in Ho Chi Minh City, Vietnam. The details of the conferences are as follows:

a. Building a face “ Using a Regenerative Medicine Approach ” : 8-10 Jan 2012, Registration Fees – US\$450

b. Computational Surgery: 10-12 Jan 2012, Registration Fees – US\$250

c. General Biomedical Engineering: 10-12 Jan 2012, Registration Fees – US\$250



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Report of IFMBE Publications & Publicity Committee Meeting

Most of the members of IFMBE's Publications & Publicity Committee (PPC) were present at the 5th Latin American Congress on Biomedical Engineering (CLAIB2011) which was held on 16th ~ 20 of May in Havana, Cuba. Those present for the PPC meeting were Prof. Herbert Voigt (President of IFMBE), Prof. Ratko Magjarevic (President-Elect of IFMBE), Prof. Mario Forjaz Secca (Portugal), Prof. Ichiro Sakuma (Japan), Prof. Shyh-Hau Wang (Taiwan), and Dr. Christoph Baumann (Springer).

During the meeting, members agreed to keep on promoting the IFMBE academic journal, Medical and Biological Engineering and Computing (MBEC). It was agreed that we need to cooperate to achieve better Impact Factor of MBEC. We need to encourage members at large to submit top quality papers for publication in MBEC. Those present agreed that close cooperation with the publisher Springer is important. Dr. Bauman (Springer's representative) mentioned that it is also in Springer's interest that MBEC do well, therefore Springer will whatever it can to support the promotion of MBEC. Furthermore, Springer will link the IFMBE News on Springer website for free. The newsletter will also be freely available on IFMBE website. The re-launch of IFMBE News this year is significant, to make it better we need everyone's endorsement and contribution.

Since IFMBE doesn't have an academic journal on Clinical Engineering (CE), PPC has decided to create a column in IFMBE News dedicated to reporting news and events on CE. Yadin David, Chair of CED has agreed to provide interesting news and events as well as engaging information on CE from around the world.

Furthermore we would like to focus on the development of woman biomedical engineers. IFMBE News continues to have a column to report on WiMBE activities. It is hope that through the inspiring story of woman biomedical engineers, more women will consider a career in biomedical engineering. Prof. Ichiro Sakuma has agreed to provide information on the development of woman biomedical engineers in Japan for future IFMBE News.

We would like to challenge every IFMBE affiliate member to use the IFMBE News to communicate, report and share news and events that would inspire and promote the field of biomedical engineering.

Finally, we hope that you can play a part in making the IFMBE News better, livelier and meaningful. Send us photographs of events and other worthy materials of activities for historical archiving. We would like to build a database to archive meeting minutes and allow easy retrieval of information for publication. The PPC will initiate the process by inviting senior professors, researchers and biomedical engineers to provide information and/or write up the important events of IFMBE in the past 50 years.

From the Society

CED-Committee : Should I Become A “ Maker ” ?

I would like to thank all of those who responded to the Clinical Engineering Division (CED) column published in the last issue. In that article we discussed the theme of working Together We Can Make It Better. It is always gratifying to know that colleagues do read the newsletter and to receive comments and feedback about its content from all over around the world. Today, I would like to focus on the function of making that is an integral part of the Together We Can Make It Better.

In preparing ourselves today for tomorrow's challenges the Clinical Engineering Division (CED) took the bold step of update our division's charter. The new Charter has been approved by IFMBE Administrative Council and is posted in both IFMBE and the CED websites (<http://health.groups.yahoo.com/group/CEDGlobal/>). The main change between the old and the new Charters is how the CED is able to work together with volunteers. The new charter replaces the previously limited ability CED had to invite what was called co-opted members to work with elected CED Board members. The new charter, on the other hand, provides the ability for CED to invite larger number of collaborators. Individuals who would like to make things happen by joining CED Working Groups and work side by side with elected CED Board members on the various projects they are responsible for. Examples for projects presently undertaken by CED include:

- 1) Working Group #1 - project on updating the directory of clinical engineering societies, teaching units and individuals practitioners around the globe. This project is managed by Prof. Saide George Calil (calil.saide@gmail.com) and you are invited to connect with him and volunteer to help with this project, or if you are more interested in helping
- 2) Working Group #2 - on core curriculum and professional standards, you are invited to connect with Prof. Albert Poon (akfpoon@emsd.gov.hk), or yet to connect with Prof. Mario Medvedec (mmedvede@kbc-zagreb.hr) if you are interested in helping with the survey of global clinical engineering certification programs. Furthermore, if your interest is in helping
- 3) Working Group #3 - about healthcare technology management disaster preparedness programs you are welcome to connect with Yadin David (David@BiomedEng.com).

Regardless of where your interest may be, you have much to select from. Not participating, or just reading, is not sufficient and not an option with the Together we can make it better. It is that function of Making that will bring about and causes better conditions and better care outcomes for the communities we live in. As you read this column and think about making that first commitment, about taking your first professional step, I would like to share with you that everyone who made this commitment previously and decided to become a "Maker" says that it made them feel good and created rewarding satisfaction in knowing that they became part of the team that works together to make it better. The knowledge that you became part of a group of colleagues from around the world, who just like you have busy work schedule, family responsibilities and life activities, and yet they elected to make that first step - that commitment to become a "Maker". The work we involve with and committed to accomplish is important and its scope is large and will take many volunteers, many "makers" to move the ball down the field closer to the goal post.



From the Society

But I am convinced that together we can Make it, together our team will pass the goal line and score success for the communities we live in. I am sure you will want to be a "Maker" and become part of the great team.

During its last year's meeting at Medicon 2010 in Greece, the CED board seeing in the picture below (L-R, Calil, Paolo, Mario, IFMBE President - Herbert, and Yadin) embarked on projects that strengthening global clinical engineering exchange and collaboration. In addition to the projects mentioned above, major effort was put into the working relationship with the World Health organization (WHO) where together with IFMBE liaison Marc Nyssen (marc@minf.vub.ac.be) major accomplishments were achieved. Included the planning for and participation in the First Global Forum on Medical Devices http://www.who.int/mediacentre/events/meetings/2010/medical_devices/en/ and the interesting procedures on the development of medical devices policies series, http://www.who.int/medical_devices/policies/en/.



At the 5th European IFMBE conference in Budapest, Hungary, the CED Board will hold its meeting and will update and prioritize its strategy for the coming year. I hope to see you becoming part of the working team.

Respectfully,
Yadin David

News from the Women in Medical and Biological Engineering Committee

At the EMBEC 2011 Conference in Budapest, September 14-18, there will be a session on women in biomedical engineering scheduled at this time for Saturday the 17th just before lunch. The session is chaired by Monique Frize. The moderator of the panel is Herbert Voigt (USA), President of the IFMBE. Panelists are: Maria Siebes (Netherlands), Kathleen Geraedts (Belgium), Eleni Kaldoudi (Greece), and Monique Frize (Canada). We hope many of you will join us as well as a networking lunch just following the session.

Below are two articles written by members of WiMBE. Good reading!

Increasing the number of senior women in Biomedical Engineering: a view from Australia
Laura Poole-Warren, Professor Biomaterials and Tissue Engineering, Graduate School of Biomedical Engineering, The University of New South Wales; Vice-Chair, WiMBE

The issue of under-representation of women in science and technology careers is one that reverberates across almost all sectors of employment in these fields. In Australia, a recent opinion article written by the Chief Executive of Science & Technology Australia, Anna-Maria Arabia, summarised selected facts:

"In CSIRO, 39 per cent of employees are female but only 8 per cent are at Level 8 (on a scale of 1 to 9) - representing a 4.5 per cent increase in the past decade. At this rate of increase it will take about 60 years until the number of women at Level 8 is equal to the level of female representation at CSIRO."



From the Society

Female engineers make up about 10 per cent of the workforce but 77.8 per cent of them are in lower responsibility positions (Levels 1 to 3 on a scale of 5). The Learned Academies offer no good news: their fellows, among the most eminent and respected scientists in the country, are overwhelmingly men. Six and half per cent of the Fellows of the Academy of Technological Sciences and Engineering are women" [1]

However, despite lower levels of representation in senior positions, it is interesting to note that women are currently well represented at the top of some of our big S&T organisations. For example, the Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia's national science agency has approximately 30% female representation on both the Board and the Executive Team with Dr Megan Clark being the current Chief Executive. Dr Cathy Foley is the President of Science & Technology Australia. The latter body represents more than 68,000 scientists and engineers throughout Australia and is notable also for the high level of female representation on the executive and board.

One of the advantages of having women in these leadership positions is their input into strategies for further increasing representation of women in the S&T workforce. Professor Susan Pond is among the three women making up almost 30% of the Board of The Australian Academy of Technological Sciences and Engineering (ATSE). Underpinning a recent policy decision by the Board of ATSE, Professor Pond will be leading an initiative that commits to a target of one-third women in its annual election of new Fellows from 2012 [2]. This echoes global sentiment on increasing the number of women on company boards. The reasons underpinning this need are nicely summarised in a recent report coming out of the UK that stated:

"The issues debated here are as much about improving business performance as about promoting equal opportunities for women. There is a strong business case for balanced boards. Inclusive and diverse boards are more likely to be effective boards, better able to understand their customers and stakeholders and to benefit from fresh perspectives, new ideas, vigorous challenge and broad experience. This in turn leads to better decision making." [3]

However, to continue and indeed expand this cohort of female leaders, the pipeline must be similarly increased. Some key solutions to increasing female representation on boards that were proposed in the aforementioned report included:

"more training opportunities for women, more open and transparent recruiting processes and flexible working options, together with the introduction of quotas." [3]

Universities in Australia often have similar demographic issues, with lower levels of representation of females at senior levels and slightly higher relative representation in senior management. At my own institution, the University of New South Wales (UNSW), women now comprise about 30% of the Vice Chancellors Advisory Committee. This percentage has grown significantly over the past five years and has been supported by initiatives such as the Academic Women in Leadership Program that was introduced in 2006 combined with the growing representation of women at Associate Professor and Professor levels.

The clear message coming from all quarters is that women have the leadership skills and attributes to contribute significantly at the highest levels, but that the pool of senior women from which they are drawn is simply not growing fast enough.



From the Society

There are great initiatives being developed to manage this problem and in the biomedical engineering field, we need to keep pace with the development of such programs. We also need to work towards more women in leadership positions, which means engaging in the debate on developing firm targets for female representation of our representative bodies.

References

1. Anna-Maria Arabia. It costs more to lose women in science than keep them. Opinion. In: National Times. April 15, 2011
2. <http://www.atse.org.au/> [accessed July 11, 2011]
3. Lord Davies Review of UK FTSE Boards. Women on Boards February 2011. <http://www.womenonboards.org.au/pubs/reports/> [accessed July 11, 2011]

A workshop on Women in Engineering (Canada), organised by the INWES Education and Research Institute¹ (ERI)

Monique Frize, Distinguished Professor, Carleton University and Professor Emerita, University of Ottawa; Chair WiMBE

The Canadian Committee of Women in Engineering (CCWE), a 19 member committee created in 1990 and chaired by Monique Frize, launched a report in 1992, Women in Engineering: More Than Just Numbers, containing 29 recommendations to increase the number of women in this profession. In April 2011, the CCWE⁺²⁰ workshop was held in Ottawa, (the ⁺²⁰ referring to a meeting some 20 years after the initial cross-Canada endeavour). This was a most successful national event organized by the INWES Education and Research Institute¹(ERI), championed by a nine-member steering committee chaired by Monique Frize.

This national workshop brought together key stakeholders from national and international organizations and associations, and decision-makers from industry, academia, and granting councils, to develop strategic recommendations to shape the future role/participation of women in the engineering profession. Over seventy individuals attended the workshop and participated in discussions focussed on CCWE's original report: What has happened in the past 20 years? What has worked and not worked to increase the participation of women in the engineering profession? The discussions then moved to what needs to be done in the next 5 to 10 years to reverse the recent decline in women's participation in engineering study programs. Twenty-five new recommendations aimed at youth, universities, associations, workplaces and granting agencies were formulated during two days of group discussions. The participants voted and reached a consensus on the three top priority recommendations. Each recommendation comes with a "how to" achieve the proposed goal, and with a list of governing bodies and individuals most apt to bring these goals into reality.

1. Communicate a clear and exciting brand image of engineering that appeals to students from pre-school to high school, and their parents, through contests, social media, films, television, and books. The goal is to raise girls' interest in engineering from 2.6% to 25% by 2016 and to 30% by 2020.

2. Enhance the knowledge of engineering amongst teachers, counselors, parents, on the nature of engineering careers, outlining the steps required to get into an engineering program and providing activities and tips on how parents can encourage their daughters to consider such a career.

BME around the World

3. Enhance the image and the structure of engineering programs to attract a more diverse group of students, with the aim of achieving 25% in undergraduate enrolment of women students by 2016 and 30% by 2020.

As I look back at this exciting project, I must say that I felt for the first time in many years a real optimism for the future. I also noticed this optimism around the table. The next step is for the CCWE to become an intrinsic part of Canadian organisations, which will be leaders in creating women-friendly environments. The hope is also that other countries will carry-out a similar project. The ERI will be pleased to share its knowledge and expertise with all interested organisations and individuals wishing to organise such an event. ERI is also planning a competition with partners from industry to create new and exciting products to present engineering to the new generation of young people. We invite everyone to read the CCWE⁺²⁰ report on ERI's website: www.inweseri.org. The original 1992 CCWE report is also on the website.

¹ INWES is a non-profit organisation with members from many countries around the world, whose focus is on professional development, international conferences and events, and sharing good practices; see www.inwes.org. The ERI is a Charity Organisation whose objective is to advance education in the fields of science, technology, engineering and mathematics. Both are incorporated in Canada but are global in scope.



Fig. the members of the original committee in 1992 ; Back Row, left to right: Val Davidson, Guelph University; Danielle Plouffe, coordinator of CCWE project; Terry Peach, GE Canada; Janis Peleshok, Medtronic (was a student rep in 1992 from U of Toronto)

Report on the V Latin American Congress on Biomedical Engineering

This past May 16th to 21st the V Latin American Congress on Biomedical Engineering (CLAIB2011) was held in Havana, Cuba in the International Convention Center (Palacio de las Convenciones), the main international convention center in Cuba. The Congress was organized by the Regional Council for Biomedical Engineering in Latin-America (CORAL) and the Cuban Society of Bioengineering. During the CLAIB2011, XXII Administrative Committee of CORAL was held and it was attended by all the members of the national societies and IEEE/EMBS chapter chairs, all of them are CORAL members and distinguished authorities of IFMBE represented by Professor Herbert Voigt, its President, and President-elect Professor Ratko Magjarević and Dr Christoph Baumann from SPRINGER Verlag



BME around the World

and IEEE/EMBS represented by Professor Andrew Laine, V.P. Publications, Professor Metin Akay, Editorial Board and Professor Martha Zequera, IEEE/EMBS Representative Region 9, in order to strengthen the scientific and collaboration links between CORAL, IFMBE and IEEE/EMBS societies in Latin América. Agreements were established. Besides this meeting, IFMBE officers and IEEE/EMBS Region 9 chapter chairs had their official meetings, which were followed by integrating social events enjoying the Cuban atmosphere.

On May 16th and 17th, 15 courses and workshops were held with the participation of 24 well-known lecturers from Brazil, Chile, Colombia, Cuba, Spain and the USA and 365 attendees. The Congress was honored with the participation of 562 delegates from 27 countries. The most represented nations were: Mexico 57, Brazil 47, Colombia 41, Venezuela 20 and Cuba, with almost 300.

The Scientific Program included 16 lectures, 13 panels and one symposium. There were 512 papers submitted to the peer review process and 364 accepted papers (145 as oral presentations and 219 as posters). During those days, the attendees had the possibility of visiting different scientific research institutions in Havana; more than 150 delegates participated.

The Organizing Committee granted three awards. The granting commission, integrated by seven highly recognized personalities from Argentina, Brazil, Cuba and Mexico, analyzed 45 papers with the following results:

1. The IFMBE Young Investigator Award, granted to: "WLAN interface for an EEG/PSG Holter monitor" by Ernesto Velarde Reyes, Cuba Honorable mentions:
"TissueSim a tool for simulating the dynamics of immune cell populations"

by Adrian Alfredo Hernández Méndez, Kalet León Monzón and Luis Ariel Diago Marquez, Cuba-Japan

"Differential diagnosis of glaucoma using logical a combinatorial pattern recognition approach" by Ximena Estefanía Olvera Rocha and Martha Refugio Ortiz Posadas, México

2. The Ángel Zapata Ferrer Award, granted to: "Design and implementation of a system to detect people with fever in public places" by Alberto Rolando Rodríguez Gómez, Gemma María Rodríguez Benítez and René Iván González Fernández, Cuba

Honorable mention:

"Design and implementation of an insole for plantar pressure measurement aimed at the prevention of ulcers in the diabetic foot" by Adriana María Alarcón Cuentas, Natali Deysi Cucho Condor, and Benjamín Castañeda Aphan, Peru

3. The Clinical Engineering Robert Morris Award, granted to "Applying the Cox model for estimating the performance of maintenance service providers" by Sandra Usaquen Perilla, Antonio Miguel Cruz and Nidia Nelly Vanegas Pabón, Colombia

CLAIB2011 also had a Technical-Commercial Exhibition that incorporated 35 companies: 25 Cuban and 10 overseas ones; among them, Germany was the most represented country. About 1200 people visited the Exhibition.

During the XXII Administrative Committee of CORAL annual meeting 17 delegates from 19 national societies and IEEE / EMBS chapters that are members of the organization. The represented countries were Argentina, Brazil, Costa Rica, Colombia, Cuba, Ecuador, Mexico, Panama and Peru.

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At the meeting 13 persons were invited, and members of IFMBE and IEEE/EEE were also present.

Importantly, the CORAL Administrative Committee selected Argentina to organize the next Regional Congress, in 2014. The city and dates of CORAL-CLAIB 2014 will be decided at the meeting of the Sociedad Argentina de Bioingeniería (SABI) next September in Mar del Plata.

The Congress represented a unique opportunity to share experiences between CORAL directive and IFMBE officers. Remarkably, for the first time ever, the IFMBE Secretaries Meeting was held in Latin America. CLAIB2011 provided space for specialized meetings of organizations, projects, EMBS chapters, IFMBE Publication and Publicity Committee and the Industry Working Group with CORAL. A session devoted to Women Labor on BME was also held.

A wide social program was offered to the attendees. For each congress day, a different activity was organized. This allowed delegates to get acquainted with the Cuban culture and identity and also it offered the opportunity of sharing and gathering together in pleasant environments.

The Congress was attended by important personalities and executives of national and international organizations and institutions, including PAHO/WHO. The opening ceremony was attended by the Cuban Minister of Higher Education and the Minister of Science, Technology and Environment was presented in the closing ceremony. This outstanding participation of Cuban and foreign authorities during the Congress showed the increasing development of Biomedical Engineering in Latin America and its social recognition.

The Scientific Program, supported by the updated content of the lectures and papers presented have made this Congress a memorable landmark for the Latin American BME community and started a new development stage acquainting the attendees with advances and results among colleagues from Latin America and all the world regions that were represented.



BME around the World

Activity in Central America: Engineering World Health (EWH) Summer Institute Conference in Tegucigalpa, July 29-31, 2011



Fig. students attended during one of the sessions

Engineering World Health (EWH) is an organization established in 2001 by Bob Malkin and Mohammad Kiani with the mission of “inspiring and mobilizing the biomedical engineering community to improve the quality of health care in vulnerable communities of the developing world”. With the help of a grant from the Wallace H. Coulter Foundation it went from being a volunteer-based organization to becoming a professional NGO. Nowadays they also receive a substantial support from GE Foundation.

They have two major programs: the BMET and the Summer Institute. The BMET provides “entry-level instruction to developing world technicians responsible for maintaining and repairing essential hospital equipment” and the Summer Institute provides an “opportunity for math, science,

and engineering students to gain hands on repair and design experience while positively impacting the level of patient care provided in the developing country”.

In the Summer Institute program a group of around 20 to 30 students spends one first month on one local town, living with a host family, learning the language and acquiring technical training in the operation and repair of medical equipment; after that, for a second month, they are split into groups of two and are distributed around the country to a EWH partner hospital in order “to work repairing and installing badly needed equipment”. This year the Summer Institute program took place in Central America (Costa Rica, Honduras and Nicaragua) and in Tanzania.

The EWH Summer Institute conference is a meeting that takes place in the countries where the students have been, at the end of their two month stay, where the students present what they did during their field work. And the meeting in Tegucigalpa, Honduras, gathered the students that had been in Honduras and Nicaragua. The meeting is a small event, attended by the EWH board, staff and a few guests (three in this case: Shirin Karsan and Margaret Wheatley from Drexel University and Mario Secca representing IFMBE), lasting two and a half days.

For the first day of the meeting the board and guests were taken on a visit of two of the main hospitals in Tegucigalpa, which was a great opportunity to have an idea of the local hospital conditions and how the local Biomedical Engineering departments work, even though they were in the capital, which sets up a higher standard than the smaller town hospitals where the students stayed.



BME around the World

For the last two days of the meeting, the students are first distributed by the members of EWH board and the guests and de-briefed with the help of a short questionnaire to gather information on the program and what they felt of the experience. Then, for the rest of the time, they make short presentations in groups of two, either orally or through posters, of their experiences in the towns and hospitals where they were stationed.

For this years Summer Institute program in Central America about 25 students were stationed in Nicaragua and Honduras, in several small hospital around the two countries, after having spent 4 weeks in Costa Rica for the initial training.

Some of the students' stories were very moving, particularly those concerning hospitals where they managed to repair badly needed equipment which made the local staff in the hospital very happy and grateful! One of the most striking stories concerned the repair of a badly needed infant incubator that had been inactive for a year.

All the students were also told to develop a secondary project from their own choosing, which as adapted to the local situation and could benefit the local hospital. These projects involved the construction, using locally available materials, of things like an otoscope, a water distiller, a safety chain support for local gas bottles, and benches for the patients to sit. Although not all the students managed to accomplish their secondary projects, the ones that did felt very enthusiastic about them.

The work done by EWH fits very well within the aims of the IFMBE Working Group on Developing Countries and should be supported and publicized by us. However, it should be emphasized that this is not research work, but practical field work with a direct impact in the health communities of the developing countries where the program functions.

EWH encourages the creation of local chapters to "raise awareness among students of health care challenges that characterize the developing world as well as the medical technology issues unique to resource-poor settings, and also provide ways for members to contribute to solutions". At present most of the chapters are in the United States, but there chapters also in Canada, Denmark, Mexico, United Kingdom and Yemen. More chapters around the world should be encouraged.

The two guests from Drexel University that attended the meeting also have a program of collaboration with some developing countries, with Mozambique in particular under the supervision of Shirin Karsan, but it works on a more individual approach, rather than an organized group activity. Some of these programs should also be encouraged by IFMBE and their existence publicized and their experiences shared.

Mario Forjaz Secca



BME around the World

Swedish Annual Biomedical Engineering Conference in Umeå Sweden attracted more than 300 participants

The Swedish annual biomedical conference MTD2010 was held in Umeå, Sweden in October 6-7, 2010. It was arranged by the Swedish Society for Medical and Biological Engineering (MTF) together with the local host, Centre for Biomedical Engineering and Physics (CMTF) in Umeå. It was co-sponsored e.g. internationally by EU Objective 2 and IFMBE, nationally by the Swedish Scientific Research Council, Swedish foundation for strategic research and Vinnova, and locally by the County Council of Västerbotten, Umeå University, Umeå City and Biotech Umeå.

The conference was very successful with about 330 participants from all over Sweden and more than 200 abstracts. It had both national and international plenary speakers and parallel sessions during the two days. The conference was completed with a medical technology fair that attracted close to 30 companies and organisations. The conference venue was the Folkets Hus in the centre of Umeå City where also the conference dinner with entertainment was held. Among the high lights, it is worth mentioning the real time sending of a thorax heart surgery that was displayed at a large screen and could be viewed by the participants at the conference. It was sent directly from the operating room at the University hospital in Umeå in a video conference arrangement.

In the parallel sessions new frontiers in biomedical engineering were presented like in biomedical signal processing for ECG, telemedicine and distant spanning health care, biomedical sensors, robot assisted surgery, smart prostheses, biomaterials and biomechanics. A short course in medical physics instrumentation was also presented.

Among the invited lecturers the following can be mentioned: Professor Herbert Voigt that talked about biomedical engineering ethics, MSc Nils-Erik Pettersson that talked about the history of biomedical engineering and its future, Dr Jörg Habetha with a talk about one of the largest European projects in biomedical engineering called MyHeart and finally Dr Johanna Adami, Vinnova, and Professor Olof Lindahl that together talked about biomedical innovation development in health care.

At the end of the conference, three IFMBE awards were handed out by IFMBE President Herbert Voigt during the ceremonial closure of the conference. An award committee consisting of Professor Åke Öberg (Chairman), MSc Nils-Erik Pettersson (IFMBE Clinical Engineering Division member) and Dr Britt Andersson (CMTF) selected the winners. The awards were for best research paper, best clinical paper and best poster and the winners were Kennet Andersson, Umeå, Karin Runström, Stockholm and Pernilla Abrahamsson, Umeå. They got an IFMBE award diploma and a check for 1000 SEK each.

The conference was organised by an organisation committee elected by the Swedish Society for Medical Engineering and Physics (MTF) and chaired by Professor Ronnie Lundström. A scientific committee was chaired by associate professor Anders Eklund and the project manager for the conference from CMTF was professor Olof Lindahl. The next annual meeting will be held in Linköping Sweden in October 2011.



BME around the World

15th Nordic – Baltic Conference on Biomedical Engineering and Medical Physics in Aalborg, Denmark

The 15th Nordic – Baltic Conference on Biomedical Engineering and Medical Physics – NBC15 took place in Denmark in June 2011. More precisely the conference was held from June 14 - 17 in Aalborg, a middle size university town in the northern part of Denmark where the waterway Limfjord runs through Jutland from the North Sea to the inbound sea named Kattegat. Aalborg may be known for its cement industry, its university or its “Snaps”, a 90 proof aqua vitae produced here for a couple of centuries.

The NBC Conference is held every third year in one of the Nordic – Baltic countries under the auspices of IFMBE - the International Federation for Medical and Biological Engineering.

In 2002 the conference was held in Reykjavik, Iceland, in 2005 in Umeå, Sweden, in 2008 in Riga, Latvia and this year NBC15 took place in Aalborg, Denmark.

The conference was organized as a Swiss-army-knife-event as it took place together with the 29th annual meeting for the Danish Society for Biomedical Engineering and a third event named Windows of Opportunity.

The annual meeting for the Danish Society for Biomedical Engineering was held in parallel from Wednesday to Friday. And on Thursday the innovation event Windows of Opportunity was organized together with the local Biomed Community organization. This event gathered entrepreneurs, inventors and investors.

The conference also incorporated a “Students Day” where young future colleagues could participate in the scientific events and visit the exhibitions. Also an important contribution to the conference was the fact that 45 companies had an exhibition at the conference site, showing their newest devices and equipment.

Around 100 visitors was registered for the NBC15 alone, but in total more than 500 people participated in one or more of the events at the conference.

Sessions with topics from neural engineering to biomechanics, sports science and cardiovascular dynamics to medical informatics, ultrasound and medical image analysis was held, and the selected conference papers have been published in the IFMBE proceeding series as volume 34 and is now available both in printed form and on the internet from Springer.

Also a Young Investigator Competition was held cordially sponsored by the IFMBE. The purpose of the IFMBE Young Investigator Competition is to recognize excellence in conference contributions whose primary authors are young investigators; based on originality, clarity, and potential impact on practical applications or theoretical foundations. In total 29 papers was submitted for the conference and the committee headed by Professor Helge B. Sørensen had to choose three papers from the oral presentations and one paper from the poster presentations for the awards.

The first prize of the Young Investigators Award in the oral category went to S. Meijs MSc, a PhD-student from the company Neurodan A/S Aalborg. The paper title is: “In vivo impedance characterization of monopolar extra-neural electrode”.

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The paper is an excellent example of in vivo measurements in a technical project, and study of events as a function of time.

The second prize of the Young Investigators Award went to S.F. Eskilsen MSc, PhD, from Department of Health Science and Technology, Aalborg University for the paper: "Prediction of Alzheimer's disease in subjects with mild cognitive impairment using structural patterns of cortical thinning". The paper demonstrates promising results for the prediction of patients with early Alzheimer's Disease progressing to clinically definite Alzheimer's Disease.

The third prize of the Young Investigators Award went to Joachim Rasmussen MSc from Center for Fast Ultrasound Imaging, Department of Electrical Engineering, Technical University of Denmark. The paper title is: "Non-linear imaging using an experimental synthetic aperture real time ultrasound scanner". The technical level in the paper is very high and presented in a very transparent way supported by good measurements.

The second prize category was Poster presentations. The winner of the Young Investigators Poster Award was K. Pilt, a PhD-student from Tallinn University of Technology, Department of Biomedical Engineering, Tallinn, Estonia. The paper title is: "Possibility to use Finapres signal for augmentation index estimation. The poster presentation was excellent and the research performed has high clinical relevance".

The social dimension is an important one at all conferences. The welcome reception at NBC15 was held at the contemporary art museum "Kunsten". Here the participants could see three different exhibitions at one time in the fine white marble surroundings designed by the Finnish architect Alvar Alto.

At the conference dinner nice tunes were played on strings by Royal Musicus Kim Sjøgren and his Little Mermaids.

The aim of the conference in Aalborg was: "To bring together science, education and business in Cooperation for health". As 500 participants from more than 20 countries, from academia, hospitals and industry gathered in Aalborg combined with the fact that more than 60 oral presentations including 10 keynote lectures plus posters was presented and adding exhibition from 45 participating BME-companies, it is fair to say that the aim was well met.

NBC2011 was scientifically and socially a success according to the evaluations. We wish the successors good luck with the next NBC arrangement in three years from now.



Fig. The local organizing committee at NBC15 shot in the exhibition area of the conference. Chairman Kim Dremstrup is 2nd from left, and Per Overgaard Rasmussen, the secretary of the conference is seen at the right with the ball.

On behalf of the NBC15 Organizing Committee
Kim Dremstrup, professor, phd
Chairman of the Danish Society for Biomedical Engineering
Head of Department
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BME around the World

Biomed 2011 was held in Kuala Lumpur

The 5th Kuala Lumpur International Conference on Biomedical Engineering (Biomed 2011) was successfully held at Berjaya Times Square Hotel, Kuala Lumpur on 21-23 June 2011. Also was held in conjunction with the 8th Asian Pacific Conference on Medical and Biological Engineering (APCMBE 2011) this time.

In the conference, a total of about 200 papers were presented with about 250 delegates from Malaysia, Taiwan, Japan, Taiwan, Iran, Korea, Czech, Vietnam, India, Australia, Thailand, New Zealand and so on. The presentations were divided into ten topics below (which were organized into four parallel tracks):

- 1) Biomedical Instrumentation (7 sessions)
- 2) Biomechanics (7 sessions)
- 3) Medical Imaging (6 sessions)
- 4) Biomedical Signal Processing (5 sessions)
- 5) Biomedical and Physiological Modelling (4 sessions)
- 6) Biomaterial (3 sessions)
- 7) Prothetics and Orthotics (3 sessions)
- 8) Tissue Engineering (2 sessions)
- 9) Rehabilitation Engineering (1 session)
- 10) Bioinformatics (1 session)

In the conference, five plenary talks were delivered, shown in the table below:

Theme	Speaker
Sensors and Instrumentation to Meet Clinical Needs	Prof. Michael R. Neuman, Michigan Technological University, Michigan, USA
Deep Tissue Injuries from Epidermal Loadings in Rehabilitation	Prof. Arthur F.T. Mak, The Hong Kong Polytechnic University, Hong Kong
In-vivo Cartilage Mechano-Biology: How to Make Progress in Osteoarthritis Research	Prof. Walter Herzog, University of Calgary, Canada
Cardiovascular Modeling: Physiological Concepts and Simulation	Prof. Alberto Avolio, Macquarie University, Sydney, Australia
Effect of Pain Perception on the Heartbeat Evoked Potential	Prof. Xiao-Ping Li, National University of Singapore, Singapore

Table1. Plenary Speeches given in Biomed2011

Furthermore, three invited talks were presented, shown in the table below:

Theme	Speaker
Tissue Engineering Approaches to the Treatment of Spinal Disorders	Prof. James Goh, National University of Singapore, Singapore
Computer Aided Surgery for Minimally Invasive Therapy	Prof. Ichiro Sakuma, University of Tokyo, Japan
Role of Mechanical Loading in the Aetiology of Deep Tissue Injury	Prof. Dan Bader, University of Southampton, UK

Table2. Invited Talks given in Biomed2011

Also, pre-conference tutorials were held at Department of Biomedical Engineering, University of Malaya on 20th June 2011. The topics included "Measurement of Biopotentials" by Prof. Michael R. Neuman, "The Electrical Field of the Brain, EEG Source, Localization, and Neural Stimulation" by Prof. Dr. Xiao-Ping Li and "Biomechanics of Body Support Interfaces" by Prof. Arthur F.T. Mak.

In addition to the conference, a KL Night tour was organized on 21st June 2011 by Tourism Malaysia to bring the Biomed 2011 delegates to visit various interesting places in Kuala Lumpur such as Kuala Lumpur City Center (KLCC), Petronas Twin Towers, National Mosque, Mederka Square, Sultan Abdul Samad Building and China town.

BME around the World

WACBE in Taiwan

The World Association for Chinese Biomedical Engineers (WACBE) was held its 5th WACBE Congress on Bioengineering 2011 in Tainan, Taiwan, from August 18-21, 2011, hosted by National Cheng Kung University with supports from many other institutions and professional societies. The conference venue was in College of Medicine, Cheng-Hsing Campus, National Cheng Kung University, Tainan, Taiwan.

Many professional all came a long way to attend this conference. Dr. Michael M.C. Lai has given the Congress Lecture, which focused on Virus-Cell Interactions: Implications for Bioengineering. Besides, Dr. Shu Chien, Dr. Arthur F.T. Mak, Dr. Savio L-Y. Woo, Dr. Chien Ho, Dr. Yubo Fan, Dr. Tin-Kan Hung, Dr. K. Kirk Shung were all invited as Plenary Speakers.

Dr. K. Kirk Shung said upon WACBE many orient researchers of bioengineering can have discuss on recent research and newly development to exchange their ideas and pass down their experiences to naïves and make it bloom in Taiwan even though in Asia.

Moreover, Young Investigator's Oral Session and Poster Session were also held parallel during the conference period. To provide young researchers to present researches and also seniors can instruct them with experiences.

Especially, there was a forum held titled: Bioengineering Education Forum. 8 speakers presented the current bioengineering education development situation of their belonging institutes or nations to provide suggestions or ideas to discuss the solutions towards problems of Biomedical Engineering in Taiwan. Dr. Shu Chien shared maybe Taiwan is now in the same situation as USA before, such as undergraduates can't find suited work after graduating and only 10% of students will go to industry directly. He believed Taiwan will find their solution to this dilemma and don't be so pessimistic towards current situation.



Fig.1. Dr. Arthur F.T. Mak shared the experiences of HK in Bioengineering Education Development

Fig2. The poster session was held during the Congress





Feature Column

New Health & Wellbeing Innovation Centre for the UK



A multi-million pound international innovation centre specialising in the health and wellbeing sector is to be built in Cornwall in the west of the UK. The landmark centre will be constructed at the heart of a group of internationally leading health institutions in Truro. The Innovation Centre will take advantage of joint working between the organisations already on site - the Peninsula College of Medicine and Dentistry (PCMD) which is fast becoming the most popular medical school in the UK, the new European Centre for Environment and Human Health (ECEHH) and the Royal Cornwall Hospital, a teaching hospital which provides services for the whole of the county of Cornwall. Further afield, it will also work closely with the EU-funded Academy for Innovation & Research being built in Falmouth.

The £13m Health and Wellbeing Innovation Centre (HWIC) will provide top quality laboratory and office space and the perfect environment for new and growing companies in this sector. It will have access to superfast broadband connection to the internet and to the UK's joint academic communications network (JANET).

With its own conference and exhibition facilities it will also act as a hub for health-related businesses across the southwest of the UK. Several businesses have already booked space in the building which is expected to open in early 2013.

Cornwall Council is leading the project, which will receive almost £10 million of European Regional Development Fund (ERDF) Convergence investment and more than £3.3 million from Cornwall Council. The 4,260sqm of high quality space will create more than 80 new jobs and will be built to BREEAM Excellent standard (Building Research Establishment Environmental Assessment Method).

With increasingly aged populations across the world, ever more costly healthcare provision and a rising incidence of mental health problems, maintaining people in a healthy state in their home environments has become a goal for many countries. At the same time it is also becoming more widely accepted that health and wellbeing are inextricably related. But it is not just the elderly and infirm for whom health and wellbeing are important and increasing numbers of employers are aware of the benefits that paying attention to health and wellbeing can bring to their staff and their businesses. Nowhere in the field of applied science and technology is innovation more needed.

Apart from stimulating the creation of new businesses, Cornwall also provides an ideal location for companies in the health and wellbeing sector who may wish to relocate or set up business in the UK. With its relatively stable indigenous population and unrivalled working and holidaying environment (the population triples during the summer months with a visitor influx), it provides an ideal testbed for health technologies.



Feature Column

TAs an example, Cornwall was recently one of three centres in the UK's national evaluation of technologies for home healthcare. The Whole System Demonstrator (WSD) programme, which has just come to its conclusion, was a two year research project funded by the UK's Department of Health to find out how technology can help people manage their own health while maintaining their independence. The WSD programme is believed to be the largest randomised control trial of telecare and telehealth in the world to date and the results of this trial will be published in the near future.

Professor Colin Roberts, Chairman of the Innovation Centre's Strategy Board, which is overseeing the development of the project said: " This exciting initiative will provide the UK with a much needed focus for the identification and development of health and wellbeing technologies. The centre will bring together knowledge-sharing multidisciplinary groups including clinicians, engineers, designers and computer and environmental scientists, all working together on technologies and methods which will improve the health and wellbeing of the people of Cornwall and beyond ". Professor Roberts, former Director of Medical Engineering at King's College in London, is well known to many people within the IFMBE having for many years been Editor of the Federation's journal MBEC and also President of the UK's national affiliated society.

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Events

Europe

European Medical Physics and Engineering Conference, and UK's Institute of Physics and Engineering in Medicine (IPEM) Annual Conference; September 1st-3rd, 2011, Trinity College Dublin, Ireland

The expansion and consolidation of the union of countries across Europe has increased our opportunities for new knowledge in the field of medical physics & engineering. Consequently the aims of the 2011 conference are:

To represent the diverse activities in medical physics and engineering of all countries in the expanded Europe.

To unite professionals from different countries so that research programs and themes can be developed as collaborations and in unison.

To present state of the art research to a wider Medical Physics & Engineering audience in a convivial environment in one of Europe's most interesting and lively cities.

To provide equal access to medical physics & engineering professionals across all EU countries to attend a landmark conference in Ireland.

Please find the further information at: <http://www.empec.ie/index.html>

The 5th European Conference of the IFMBE; September 14th-18th, 2011, Budapest, Hungary

The 5th European Conference of the International Federation for Medical and Biological Engineering, to be held in Budapest, 14-18 September, 2011.

The objective of the conference is to demonstrate that joint R & D activity of medical doctors and engineers greatly increases the effectiveness of healthcare. In the 21st century engineers offer to medical doctors a "Cooperation for Effective Healthcare".

Please find the further information at: <http://www.embec2011.com/?mod=content&cla=content&fun=access&id=84&mid=1&temp=base>

Pacific Asia

The 4th International Conference on the Development of Biomedical Medical Engineering in Vietnam; January 8th-12th, 2012, Ho Chi Minh City, Vietnam

The Fourth International Conference on the Development of Biomedical Engineering in Vietnam will be held from January 8-12, 2012 in Ho Chi Minh City.

Many renowned researchers in the fields have graciously accepted our invitation to be the keynote or guest speakers. You are invited to join us either as organizers of special interest sessions or individual presenters or auditors. We accept both oral and poster presentations. Please check the Call for papers, the deadlines, format for submission of one of the 3 conferences you want to submit your works.

Please find the further information at: <http://125.234.238.106/BME2012/>



Events

World Congress on Medical Physics and Biomedical Engineering; May 26th- 31st, Beijing, China

The World Congress on Medical Physics and Biomedical Engineering in Beijing, China will be held from May 26 to 31, 2012.

During the World Congress 2012, participants will share the latest information on global health challenges, advanced technologies and innovative applications. It will be a window to show case up-to-date representation of research, education development and industrial contribution in the field of medical physics and biomedical engineering.

For further information, please log on:
<http://www.wc2012.org/index.htm>