To:
WFEO Members

Our sign: 70/2012/VOD-ČR
Date: 9.1.2012

Subject: **World Engineering Forum 2012: "Sustainable Construction for People"**
Ljubljana, Slovenia, 17 to 21 September 2012
- Call for Speakers

Dear Sir or Madam,

In approximately 8 months' time – from 17 to 21 September 2012 – the World Engineering Forum 2012: »Sustainable Construction for People« will be taking place in Ljubljana, Slovenia (http://www.wef2012.si/).

It will be accompanied by the annual meeting of the World Federation of Engineering Organisations (WFEO) Executive Council, meetings of WFEO committees and a combined meeting of seven major engineering organisations: the World Federation of Engineering Organisations (WFEO), the European Council of Engineers Chambers (ECEC), the European Council of Civil Engineers (ECCE), the European Federation of Engineering Consultancy Associations (EFCA), the European Construction Industry Federation (FIEC), the European Federation of National Engineering Associations (FEANI) and the European Society for Engineering Education (SEFI).

The Organising Committee is currently working on the programme and events of the forum. It has expressed its wish for those giving lectures to come from all over the world and not just part of it. This intention was strongly supported at the last meeting of the WFEO International Advisory Board of this forum.

We are now turning to you, WFEO members, with a Call for Speakers.

We kindly ask you to propose one or more speakers for the World Engineering Forum 2012.

The topics of the forum and their key points are listed in the enclosure to this letter.

The programme of the forum will be divided into sections. Each speaker will be given 10 to 15 minutes. Each section will prepare a closing statement that will be presented by the chair of the section when the section comes to the end.

By 10 March 2012 the Organising Committee will decide which proposed speakers will be given the opportunity to speak at the forum. The decision will be based on the relevance of the proposed theme, the speaker's references and the regional representation of speakers.

Papers of all other proposed speakers will be presented in the forum materials and summarised in the closing statements of sections. Their authors will be able to take part in the section discussions.

Please send us your proposals for speakers (name, biography, title of the speech, abstract (100 words)) by Monday 6 February 2012 to the e-mail address wfeo.slovenia2012@gmail.com

Important dates:
Deadline for submitting papers: 30 April 2012
Deadline for submitting PowerPoint presentations (ppt format): 31 August 2012

Please let us know if you would like any more details about the forum. The contact person is Ms. Barbara Škraba Flis, the Secretary General of the Slovenian Chamber of Engineers (+386-1-547-33-40, barbara.skraba@izs.si).

We thank you in advance for your proposals.

Yours faithfully,

mag. Barbara Škraba Flis
Secretary General

mag. Črtomir Remec
President

TOPICS of the lectures:

- Energy Efficient Buildings
- Renewable Energy Systems
- Environmentally Friendly Construction
- Living and Working Comfort
- Sustainable Architecture Inspired by Nature
- Green Building
- Recycling, reusing, rethinking
- Advanced technologies in construction industry with BIM

KEY POINT OF TOPICS:

Energy Efficient Buildings

The environmental crisis is bringing new challenges to the building and construction industry. It is "responsible" for one-third of global carbon emissions and is the least-cost carbon mitigation opportunity. It is estimated that buildings consume 30% to 40% of global energy and in some countries like the United Kingdom even over 50% of energy use. Reducing these numbers is a real challenge that calls for an urgent and quick response. We must immediately start building nothing but energy efficient buildings! Yet are we going to build nearly carbon neutral buildings or even carbon neutral ones? What about carbon negative buildings? How will we refurbish the existing building stock, especially when we consider that most of it is completely inadequate for modern standards?

Renewable Energy Systems

We have already exploited most non-renewable energy sources, yet our needs continue to rise since the human population keeps growing, the same as our living standards. Renewables are our sole choice, whereas the earth, sun, wind together with the power of the oceans and rivers are available everywhere and all we have to do is to cut our consumption and, on the other side, reduce the losses that occur in networks and buildings. This is the only feasible solution to keep our lifestyles at the level we are used to – renewable energies are the sole choice we have. Which are the most efficient systems for renewable energy nowadays? Which criteria are applied when choosing a particular one? Which energy source holds the greatest potential? What are the projections for the future?

Environmentally Friendly Construction

The building sector consumes 3 billion tonnes of raw materials annually, roughly 40% to 50% of total world resource consumption. We are taking all of these materials out from our environment. When we exaggerate, the environment often responds with a disaster or catastrophe. How shall we control the amount of materials we take? How can we achieve the goal that every tree and natural habitat is simultaneously replaced by another? What is the potential of reusing materials from destroyed or defunct buildings?

Living and Working Comfort

With contemporary building we often forget that we build homes and offices for their users and their comfort. These buildings boast high-tech equipment and lots of automation throughout, yet the actual living comfort of their occupants is sometimes quite low: they may be too hot in summer or too cold in winter, indoor air often circulates too quickly, their quality is low etc. Such factors contribute to poor working and living conditions for their users, low productivity, all manner of diseases etc. How can we change this? How can we build, construct and design buildings that are friendly to their users, pleasant to live in and, in particular, healthy?

Sustainable Architecture Inspired by Nature

No, we are not speaking about houses shaped like flowers or trees. Nature's great inspiration is its perfect technical efficiency – processes like osmosis, photosynthesis etc. How do trees manage to bring water up to their branches without any energy? This is just one "miracle" nature has been performing faultlessly for thousands of years. When we seek out sustainable, low or no-energy solutions we can always go back to nature and learn from its millennia-long experience – all we need to do is open our eyes and ears…

Green building

We sometimes also call it "green construction" or "sustainable building", but it means any design work, irrespective of whether it is architectural or industrial, engineering or spatial, which uses a process that is environmentally responsible and resource-efficient throughout its life-cycle and in all stages – from siting to design, construction, operation, maintenance, renovation and demolition. The expression "green building" refers to a building designed to reduce the overall impact of the built environment on human health and the natural environment by efficiently using energy, water and other resources, protecting occupants' health and improving employee productivity and reducing waste, pollution and environmental degradation. This is a simple definition, allowing thousands of little innovations, all with the same goal: to protect our planet from scarcity of energy and resources and all catastrophes that global warming is bringing to us.

Recycling, reusing, rethinking

The building industry is the biggest producer of landfill waste: it contributes about one-half of it. The lack of raw materials, the high cost of leaving such waste in landfills and especially demands to conserve the environment, require us to think again about these problems. Do we really have to destroy buildings without thinking of how to reuse some parts of them? What is the amount of waste we can salvage from landfills? What savings can this bring to the cost of a final building?

Advanced technologies in the construction industry with BIM

The BIM (building information modelling) technology is introducing many revolutionary changes to the traditional work scheme and building site organisation. Besides rationalising processes which can cut building site costs by up to 20%, we are encountering some new challenges like the social side of work on a building site, teamwork etc. But this is not the end of revolutionary changes – completely new possibilities for planning and organising work and processes are offered by digital tablet computers like the iPad or Samsung Galaxy. Once regarded by experts as "unserious appliances", these small gadgets have demonstrated a wide range of features suitable for organising building work much more effectively and resolving questions much more quickly than before. What are the benefits of contemporary technologies? How much will they bring us by way of savings? Where are their limits, if any?