



INTERNATIONAL SOCIETY FOR STRUCTURAL HEALTH MONITORING OF INTELLIGENT INFRASTRUCTURE

December 2011 ISHMII Membership Notes

President's Letter



Dear ISHMII Members and Friends,

2011 has been an exciting year for [ISHMII](#), one of expansion of our *Journal*, opportunities for communications with members, and sharing our knowledge of civil structural health monitoring. I am grateful for your participation.

Many of us have just returned from SHMII-5, our Society's biennial conference. Held in Cancun, Mexico, and well-organized by Dr. Sergio M. Alcocer from the Instituto de Ingenieria, UNAM, the conference was a great success. The attendance, quality of lectures and the technical papers all point to the importance of SHM in civil engineering, historic preservation and related fields.



President's Letter, continued



SHMII-5, an international conference, provided an atmosphere for collegial networking and the exchange of knowledge



Communications matters.

Our ability to reach you with a monthly message through *Membership Notes* is leading to a growth in membership and readership. *Membership Notes* and *The Monitor*, our biannual e-magazine, reach over 850 individuals, companies, and libraries.

I invite you to share the names of any colleagues or students who will benefit from reading our communications, with their permission, or to pass the messages that you receive on to them.

On behalf of Editor-in-Chief [Sreenivas Alampalli](#), we invite your contributions to [The Monitor](#).

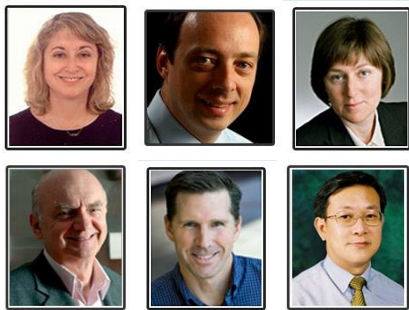
*Historic Tulum, one of many sites on the Yucatan
Peninsular of interest to ISHMII members*

I extend my thanks to Dr. Alcocer, co-chairs Dr. Francisco Carrion and Dr. Roberto Gomez-Martinez, and the head of the International Steering Committee, Dr. Alexis Mendez. They were supported by a great team of eight colleagues on the Local Organizing Committee. We thank Dr. Gerardo Aguilar Ramos for coordinating many organizational details for us. Many more senior colleagues served on the International Organizing Committee, and many doubled their efforts as chairs for the component parts of SHMII-5. We appreciate their efforts and energy.

Let me present some highlights of the Conference.



A short course on SHM set the tone for SHMII-5 as it introduced SHM and explained the available FOS technologies and SHM methods based on those technologies. The instructional workshop component was the hands-on, experimental portion of the short course, focusing on optical FBG sensing technology.



*The Keynote Lectures tapped into the knowledge
of six leaders in SHM sciences*



Carmen Andrade presented on *Interpretation of Corrosion Monitoring from Embedded Sensors*. Daniele Inaudi addressed the practical topic of *Cost Benefit Analysis in SHM Projects*. Katerina Krebber spoke on *SHM by Smart Technical Textiles Based on Fiber Optic*

The Council is committed to involving young members and building a strong membership. I invite you to write to me about means by which we can build our membership and bring members who are early in their career into active participation.

One suggestion that the Council has taken action on is the election of four Associate Editors for *The Monitor* to represent regions of the world and assist in recruiting authors of the brief papers reported in *The Monitor*. Please [submit your nominations](#) of ISHMII members for this post to me by January 20, 2012. The regions represent Southeast Asia (China, Japan, and Korea), India and Middle East (North Africa), Europe, and Americas. Associate Editors will serve a 2-year term.



Keeping our Web site vital is important to the Council.

As members, you may post Case Studies by submitting them to the ISHMII staff. We have also called into action a task force on SHM References, which is wrapping up its assignment. If you are interested in submitting references to the project leaders, please contact [Dr. James Brownjohn](#), University of Sheffield, UK, during January 2012.



You, our members, are the foundation of ISHMII.

We hope that you will visit the [ISHMII Web site](#) during the next weeks to renew your membership for 2012. Most participants at SHMII-5 will receive a complimentary membership for 2012.


I send you my warmest wishes to you and join the entire ISHMII Council and our staff members, Charleen Choboter and Nancy Cohen, in wishing you a most Prosperous New Year.

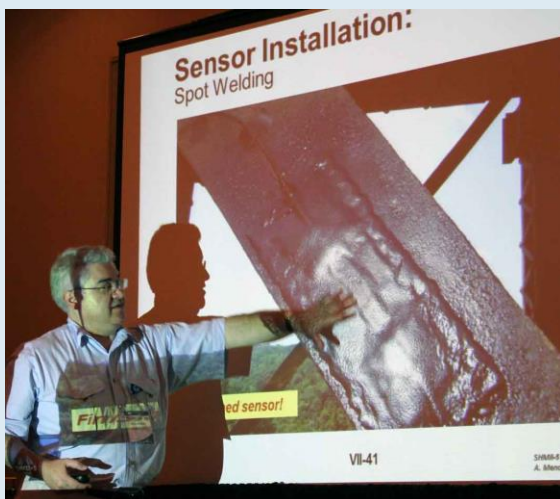
[Farhad Ansari](#)
President


**Aftab Mufti Medals Presented to
Jan-Ming Ko and Urs Meier**

Sensors. Appropriate to the conference setting in the Yucatan Peninsula and monitoring of heritage sites, Roberto Meli introduced us to *Research and Practice on Structural Health Evaluation of Ancient Stone Masonry Buildings in Mexico*. David Potter took us *Out of the Lab, Into the Field*, speaking on *Integrating Modern SHM Systems on Real-World Structures*. Hwayaw Tam discussed *The Imaging Versatility of FBG Sensors for Infrastructure Monitoring*. Each talk was excellent and informative.



 Centered on eight topics of interest, SHMII-5 captured our profession. The [program](#) topics were sensors and instrumentation, signal processing and data management, structural identification and model calibration, SHM and evaluation, structural safety and prognosis, vibration control and damping, practical applications, and damage control, repair and strengthening. They were about how to use the technology to solve real civil structural problems.



 The approximately 125 technical papers reflected the increasing sophistication of our field and the enthusiasm with which we all share knowledge and explore the science of SHM. The content of the papers and the quality of the whole conference proved that SHM is the point at which many important fields of engineering and data



Professors Urs Meier, Farhad Ansari, Aftab Mufti, Jinping Ou, and You-Lin Xu at the ceremony at which the inaugural Aftab Mufti Medal was presented to Professor Meier and Professor Ko and Dr. Ou was elevated to ISHMII Fellow

Like [Aftab Mufti](#), the first president of ISHMII, Jan-Ming Ko and Urs Meier foresaw the need for an international organization that would combine and share the knowledge of materials, structures, sensing and monitoring, and the hands-on experience of many practitioners. It is from this vision that ISHMII was built.

[Dr. Jan-Ming Ko](#) is an Emeritus Professor of Structural Engineering of The Hong Kong Polytechnic University. Internationally renowned for his research on structural health monitoring systems. Dr. Ko was represented at SHMII-5 and the Mufti Medal Award Ceremony by his colleague Professor You-Lin Xu, who accepted the medal on his behalf.



Dr. Ko has had a profound impact on engineering education and research for over 40 years. During 31 years with The Hong Kong Polytechnic University, he served as the head of the department for 8 years, Dean of Faculty of Construction and Land Use for four years and Vice President of the University for 7 years.

Professor Ko and his colleagues developed a structural health monitoring system for the Tsing Ma Bridge in the 1990s. This far-sighted development was a precursor of things to come. Over the past 15 years, they pushed this design further, creating a Mega-Structure Diagnostic and Prognostic System that is now widely applied to newly-built bridges and skyscrapers in the China Mainland, including the new Guangzhou TV

management meet. Many of these important papers will be published in the upcoming issues of the [*Journal of Civil Structural Health Monitoring*](#) in 2012.



In the midst of a technical conference, we paused to celebrate our roots and the accomplishments of four of our original members.

Join me in welcoming Dr. Jinping Ou, President of Dalian University of Technology, China, as the newest ISHMII Fellow. Dr. Ou received a plaque in recognition of his elevation. Our congratulations and thanks for his contributions!



We also inaugurated our first global award, the Aftab Mufti Medal. Anonymous members provided the Society with a generous gift to establish the Aftab Mufti Medal in honor of ISHMII's first president and co-founder of the Society.



The Aftab Mufti Medal recognizes innovation and achievements in Civil Structural Health Monitoring. It is presented to ISHMII members in public acknowledgement of their accomplishments. Those may be

a single technical achievement, life-time achievements, or the authorship of a Best Paper for the [*Journal of Civil Structural Health Monitoring*](#).

As President, I was proud to present these medals.

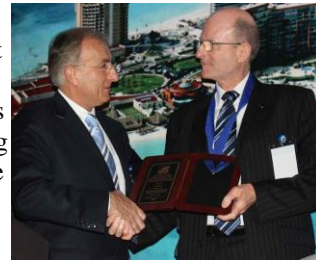
The first recipients are Professors Jan-Ming Ko and Urs Meier, two co-founders of the International Society for Structural Health Monitoring of Intelligent Infrastructure. Each was honored for his life-time achievements, visionary approach to SHM and influence on the direction of growth of the field.

Tower. As an international benchmark for structural health monitoring, it won the Gold Prize at the 2009 China International Fair in Shanghai as well as the Special Prize and Gold Medal at the International Exhibition of Inventions, New Techniques and Products, in Geneva, also in 2009.

Professor Jan-Ming Ko is a leader in our field, and as an academic his name is found on many honors and award, and among the editors of the finest, most competitive journals.

Our congratulations to Professor Ko as a 2011 recipient of the Aftab Mufti Medal.

[Dr. Urs Meier](#) has built a long career at EMPA, the Swiss Federal Laboratories for Materials Testing and Research, where he has been the Managing Director at Dübendorf, and subsequently the Deputy Director General of all of EMPA. It is a career filled with international honors, patents, and publications.



Above all of this, Dr. Meier is a structural health monitoring visionary and a materials trailblazer who is renowned for his pioneering efforts in the use of carbon fiber reinforced polymers in civil engineering structures. Urs Meier has brought together the understanding of unique design concepts with the practical need for monitoring structures.

Two early, oft-repeated examples of his innovations reflect the role of innovation in his career: In 1996, Dr. Meier and his scientific staff, including doctoral students, replaced several steel cables on the Stork Bridge in Winterthur, Switzerland with carbon fiber reinforced polymer composites. This was a new application. Since these cables were being used for the first time, Dr. Meier had to simultaneously provide a method of monitoring them in order to receive the approval from the community to install the cables. They succeeded by creating a novel monitoring system using his idea of inserting single optical fibers into the carbon bundle to act as sensors, laying the groundwork for many techniques that we use today.



Honoree Dr. Mufti was awarded a commemorative medal



A [Council](#) comprised of senior leaders organizes and directs ISHMII. We convene twice a year to make decisions that reflect both the mission and activities of ISHMII. On the closing day of the conference, we held our Annual Membership Meeting, to which all were welcome. There, I reported on the discussions and decisions at our December 12, 2011 Council meeting.

I am pleased to summarize these points, which reflect the expansion of ISHMII, its visibility and reputation.

We welcomed three new Council members.

[Dr. Hui Li](#) is a Professor of Civil Engineering and the Vice-Director of Structural Monitoring and Control Center at the Harbin Institute of Technology, China.

[Dr. Saeed Mahini](#) is a Lecturer in Civil Engineering on the Faculty of Arts and Sciences of the School of Environmental and Rural Sciences at The University of New England, Australia.

[Dr. Yi Qing Ni](#) is a Professor in the Department of Civil and Structural Engineering of the The Hong Kong Polytechnic University. Council membership requires time and thought.

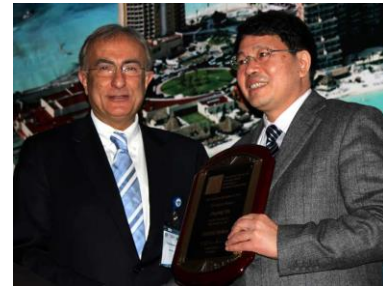
We appreciate their dedication and involvement.

Earlier, in 1987, Urs Meier captured our imagination when he presented a paper on the possibilities for a bridge across the 8.4 km Strait of Gibraltar. While the engineering world thought that this was theoretically impossible, Professor Meier showed that replacing the steel with CFRP would double or triple the limiting span of such a bridge, making it possible. He caught our attention.

We are pleased to honor Dr. Urs Meier as a 2011 recipient of the Aftab Mufti Medal.

The ISHMII Fellows Welcome Dr. Jinping Ou to Their Membership

Dr. Jinping Ou, the President of Dalian University of Technology and a Professor of Civil Engineering and Engineering Mechanics since



2006, obtained his Ph.D. at Harbin Institute of Technology, China in 1987. He served as the vice president of Harbin Institute of Technology from 1999-2006. Dr. Ou has been a member of the prestigious Chinese Academy of Engineering since 2003.

Professor Ou is known for having started the field of CSHM in China. He has instrumented and monitored more than 20 innovative structures, such as large-span cable stayed bridges, suspension bridges, sports arenas and off-shore platforms. He has expanded SHM technology to monitoring for disasters including hurricane and earthquakes and is well-respected for his work in the integrated life-cycle performance-based design approaches for infrastructures in which the durability, fatigue damage, earthquake damage, hurricane hazards and other emergent events are synthetically considered. As an educator, he has been responsible for the education of more than 500 individuals in CSHM at the PH.D., Masters, Bachelors, or technology levels.

Among our earliest members, Dr. Ou joined the



Cancun - a perfect setting for SHMII-5



Our *Journal of Civil Structural Health Monitoring*, launched in 2011, is a source of pride.

Volume 3-4 is now available to ISHMII members through the Journal portal on the ISHMII.org Web site. The [Editorial Board](#) met during the conference as well and invites ISHMII members to submit papers through the [Editorial Manager](#).



Conferences and Workshops are the life-blood by which we share knowledge and promote the Society. During the Council meeting, we heard reports on the plans for our next conference, [SHMII-6](#), to be held in Hong Kong in 2013.

Italy was chosen as the site of [SHMII-7](#) in 2015.



Thank You to the many vendors and sponsors of SHMII-5

In even numbered years, ISHMII sponsors one or more workshops. [CSHM-4](#) will be held from November 6-8, 2012 in Berlin, Germany. The theme is Integrity of SHM Systems for Deficient Structures. [CSHM-5](#) will be held in India in 2014. That workshop will address SHM for rail way and highway bridges. An additional [CSHM](#) workshop will be held in Ube, Yamaguchi, Japan in

ISHMII Council on its founding in 2003 and later organized the second ISHMII Conference in 2005.



CSHM-4 Workshop Integrity of SHM Systems for Deficient Structures

November 6-8, 2012 - Berlin, Germany

The 2012 Civil Structural Health Monitoring Workshop ([CSHM-4](#)) will be held at the [Bundesanstalt für Materialforschung und-prüfung](#) (BAM), the Federal Institute for Materials Research and Testing.

For additional information contact
[Wolfgang R. Habel, Ph.D.](#)

**Membership Renewals for 2012
and New Memberships are Now
Available.**

**Renew by January 12, 2012 at
the 2011 Membership rates.**

**Please join ISHMII as an individual,
corporate or student member and
share our mission of building
knowledge about Civil Structural
Health Monitoring.**

2012 Membership Dues

**Individual membership is \$125
Corporate membership is \$350 for
four individuals
Students receive a free membership
with verification of student status**

September 2013 on Short and Medium Span Bridge Monitoring.

As ISHMII's reputation grows, organizations invite ISHMII to [co-sponsor workshops and conferences](#). We gladly do this as our collegial responsibility. Please contact me to discuss how ISHMII can co-sponsor and promote your scholarly events.

Our current sponsorships include:

EMI/PMC 2012: This ASCE Joint Conference of the Engineering Mechanics Institute and 11th ASCE Joint Specialty Conference on Probabilistic Mechanics and Structural Reliability will be held in June 2012 at the College of Engineering at the University of Notre Dame, Indiana, USA.

SMT 2012: **NDT/NDE for Highways and Bridges.** To be held in August 2012 in New York City, this will include a workshop of special interest: "Use of Remote Sensing for Infrastructure Management" on the last day of the conference.

PLSE 2012: Organized by the Faculty of Construction and Environment of The Hong Kong Polytechnic University to be held in December 2012, this is the First International Conference on Performance-based and Life-cycle Structural Engineering.

SMAR 2013: To be held in September 2013 in Istanbul, Turkey, this is the Second Conference on Smart Monitoring, Assessment and Rehabilitation of Civil Structures. ISHMII is proud to continue its sponsorship growing out of SMAR 2011 in Dubai.

Throughout 2012, we will report on official and co-sponsored events in *Membership Notes* and *The Monitor*.

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Your corporate or institutional presence on ISHMII.org and in our e-communications brings your name, services, proprietary products and programs directly to ISHMII members and CSHM professionals.

Professional advertisements may be placed on the **ISHMII.org Web site** and in our e-publications, ***The Monitor*** and ***Membership Notes***.

For additional information on rates, please communicate with Nancy Cohen.

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