American Association for Wind Engineering

WWW.AAWE.ORG JANUARY, 2011

THE WIND ENGINEER

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

2011 DUES CAN NOW BE PAID ON THE WEBSITE

In This Issue

Vortices generated via CFD simulation by Dr. Daniele Wei of NatHaz, Notre Dame University. Video may be seen at http://www.youtube.com/watch?v=SH_WYy-t6D8

A New Year and New AAWE leadership - by Ahsan Kareem

The AAWE Nominating Committee consisting of Ahsan Kareem (Chair), Mike Gaus and Marc Levitan deliberated, in consultation with the immediate past President Leighton Cochran, to prepare a slate of candidates for the election of AAWE President, AAWE President Elect and AAWE Board Members. After numerous e-mail exchanges and interactions with the potential candidates we arrived at the following slate of candidates:

President:
Partha Sarkar (ISU)

President Elect:
Gregory Kopp (UWO)

Treasurer/Secretary:
Steve Cai (LSU)

AAWE Board Members

Steve Camposano (HV)

Hector Cruzado (PR)

Anne Cope (IBHS)

David O. Prevatt (UF)

Dorothy Reed (UW)

John Schroeder (TTU)

These names were forwarded to the president of AAWE, Nick Jones, with the recommendation that for this election cycle we proceed with simply appointing these candidates to the respective positions. The Committee strongly felt that in light of missed mid-term elections in 2009, size of the group and a small pool of available candidates it would be best to bypass the elections and appoint these candidates who have expressed their enthusiasm to contribute, as office holders, to the activities of AAWE. Once we have all members in place, we anticipate that future business will be held according to the bylaws and appropriate modifications to the old bylaws, if needed, will be made. Lastly, the position of Secretary/Treasurer is not a time-limited position in our Bylaws and Steve Cai has graciously agreed to continue in that role. The Committee thanks the candidates for their willingness to take this challenge and we wish them success!

International Association for Wind Engineering

Partha Sarkar, ISU, AAWE President (2011 and 2012)

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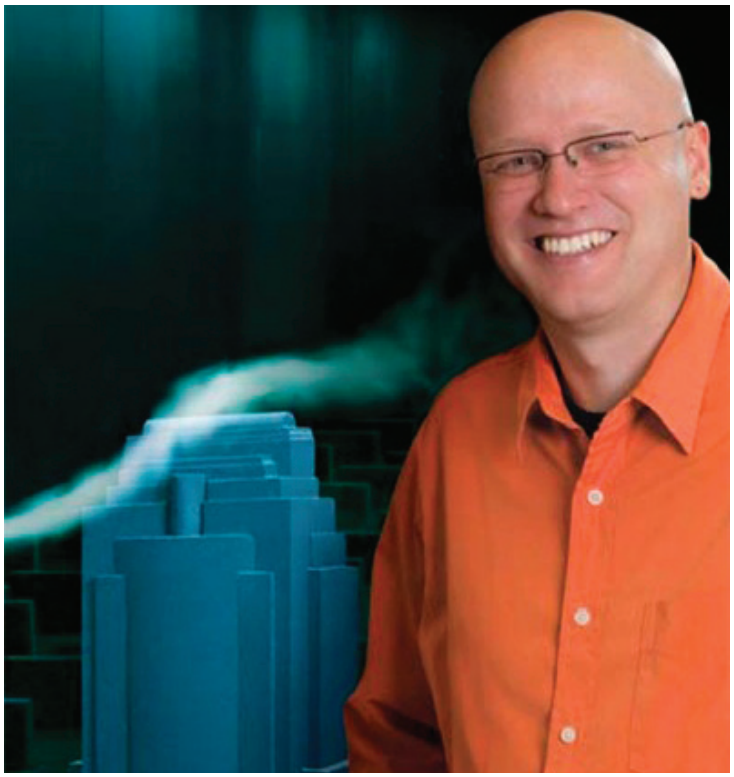
Partha Sarkar is a professor in the Departments of Aerospace Engineering and Civil, Construction and Environmental Engineering at Iowa State University (ISU). He is the Director of the Wind Simulation and Testing Laboratory and Wind Engineering and Experimental Aerodynamics Program, both of which he helped to establish at ISU. He has held the prestigious T.A. Wilson endowed chair from 2000-2008. Before joining ISU in 2000, he taught for eight years in the Department of Civil Engineering at Texas Tech University where he was associated with its Wind Science and Engineering Research Center. Dr. Sarkar earned a Ph.D. degree in structural engineering at Johns Hopkins University in 1992, M.S. in structural engineering from Washington State University in 1986, and B.Tech in civil engineering from Indian Institute of Technology, Kanpur in 1985. His research interests are in structural/wind engineering, mainly in the assessment of wind loads and their damaging effects on buildings and flexible structures such as long-span bridges using wind tunnel modeling. He is credited for the design and construction of two unique facilities—the aerodynamic-atmospheric boundary-layer wind and gust tunnel, as well as the tornado/microburst simulator that was completed at ISU in 2005. In the past ten years, he has led a team that has focused on studying the wind load effects of tornado and microburst winds on various structures. This research on tornado effects have featured on many national and international TV channels, NSF archive, ASCE magazine, and Museum of Science and Industry at Chicago. His research has resulted in more than 100 published articles, four US patents and international collaborations. He has served on ASCE national committees related to wind engineering. He has also been a member of the AAWE Board and Secretary/Treasurer of AAWE for several years. He is enthusiastically looking forward to leading AAWE as its next President.



Gregory Kopp, UWO AAWE President Elect

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Gregory Kopp obtained a BSc in Mechanical Engineering from University of Manitoba in 1989, MEng from McMaster University in 1991 and PhD in Mechanical Engineering from University of Toronto in 1995. Between 1995 and 1997 he held an NSERC Post-doctoral Fellowship in the Chemical Engineering Department at the Universitat Rovira i Virgili in Tarragona, Spain. He returned to Canada in the summer of 1997 to an appointment of Assistant Professor at the University of Western Ontario and as a Senior Research Engineer at the Boundary Layer Wind Tunnel Laboratory. He was promoted to Professor in the Department of Civil & Environmental Engineering at UWO in July 2007. He has held a Canada Research Chair in Wind Engineering since 2001. Dr. Kopp is currently a Director of the Boundary Layer Wind Tunnel Laboratory and Chair of the ASCE Environmental Wind Engineering Committee. Greg's interests include wind loads on low-rise buildings, wind tunnel and full-scale testing of structures, bluff body aerodynamics, and the nature of turbulence.

Steve Cai, LSU,
AAWE Secretary/Treasurer

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Steve Cai, P.E., FASCE, is currently a Professor and Edwin B. and Norma S. McNeil Distinguished Professor at Louisiana State University. He is serving as the coordinator of Structures Group at LSU. Dr. Cai had his Ph.D. in 1993 from University of Maryland and has been a registered professional engineer since 1995. He worked three years (1993-1996) at Michael Baker Jr. Inc. as a project engineer and four years (1996-2000) at Florida Department of Transportation as a senior engineer. He joined Kansas State University in 2000 and then moved to LSU in 2001. He has served as PI and co-PI for more than 30 funded projects. He has published over 190 papers in journals and conference proceedings and has received a few national and campus-wide awards, including the Best Paper Award, American Society of Civil Engineers (ASCE) Earth and Space Conference, Long Beach, 2008, CA, and co-authored a journal paper for the Journal of Bridge Engineering with "Collingwood Prize" from ASCE, 2009. He was elected Fellow of ASCE in 2010. Particularly, Dr. Cai's research interests include coastal bridges under wind/flooding loads, bridge vibration control, bridge performance evaluation and new materials applications in bridges. He is also active in professional service. He served as Associate Editor for the Journal of Bridge Engineering (ASCE) from 2005-2010, Associate Editor for the Journal of Engineering Mechanics (ASCE) since Oct. 2010 and a board member for a few other journals, chair/vice chair for the Experimental Analysis and Instrumentation Committee (ASCE), and member of numerous national and international committees. Lastly, Steve has served as the AAWE Treasurer/Secretary for many years and we are all delighted that he can stay on to continue his fine work for our professional association.

Anne Cope, IBHS,
AAWE Board Member (4 Years)

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Anne Cope became interested in the field of wind engineering as an undergraduate at Clemson University, and worked for Tim Reinhold in the wind tunnel as master's student studying peak pressures on low rise structures. From there she took a diversion and served in the U.S. Army for a few years where she enjoyed jumping out of planes. Upon leaving the military, Anne pursued her doctorate under the direction of Kurt Gurley at the University of Florida, working on damage prediction modeling. For the next several years she worked for Reynolds, Smith, & Hills as a project manager and structural engineer, designing and analyzing launch and launch support facilities for NASA. Now Dr. Cope has circled back into the research arena and is again working for Tim Reinhold, as the Director of Research for the Institute for Business & Home Safety. The IBHS Research Center is located in Chester County, SC. Anne and her husband, Brian, have a 2 year old son. In our spare time they enjoy talking family trips in their Piper Archer.

David O. Prevatt, UF, AAWE Board Member (2 Years)

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Clemson's Wind Load Test Facility. Here he was able to interact with most of the notable wind engineers who visited the Clemson faculty of Drs. Ben Sill, Peter Sparks, Tim Reinhold and Scott Schiff. David's research at Clemson was concentrated on the wind resistance of structural systems and understanding of structural load paths in commercial roofing systems. He continues to advance these concepts in today's research at UF.

The power of the wind has always fascinated David, perhaps exemplified by his lifelong interest in sailing and windsurfing. Dr. Prevatt first became interested in wind engineering around 1990, as a Research Assistant at the University of the West Indies in Trinidad. At that time, Hurricane Hugo in 1988 and Gilbert in 1989 were fresh on everyone's mind, and leading Caribbean engineers (Steven Hodges, Jim McDonald (Jamaica), Tony Gibbs (Barbados), Robin Osborne and Prof. I.D.C. Imbert (Trinidad)) resolved to improve the resilience of the fragile built infrastructure. Prof Imbert was the PI for the project called the Cyclone-Resistant Housing (Caribbean) Project that tested the wind uplift resistance of corrugated metal sheeting roofs, supported wind tunnel testing of uniquely Caribbean house shapes, and constructed demonstration buildings (bus shelters) on three islands. Of tremendous benefit to the team was the knowledge we were able to gain from existing wind research programs. For example, the Cyclone-Testing Station, Queensland Australia, the Texas Tech University Building work in Lubbock, the British Research Establishment, and from the University of Western Ontario and Concordia University on their wind-tunnel testing at the time. That Prof. Davenport actually visited David's laboratory in Trinidad was particularly special and illustrated the collegiality of wind engineering fraternity. Dr. Prevatt knew he had found his calling after attending the first annual conference of the UK Wind Engineering Society, held in 1992, at Downing College Cambridge University, England. By 1993 (a year after Hurricane Andrew devastated housing in south Florida and Louisiana) he entered Clemson University where he completed his MS and PhD degrees in Civil Engineering, while working as a Research Assistant at

Dorothy Reed, UW, AAWE Board Member (4 Years)

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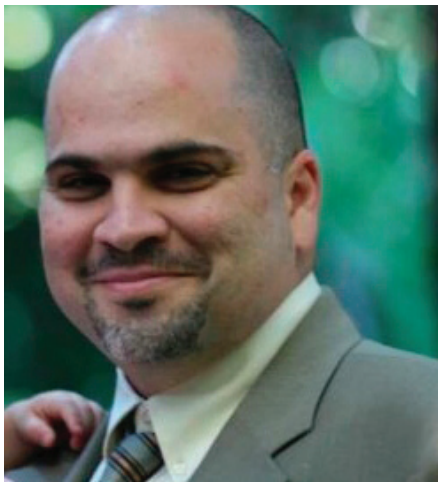
Dorothy Reed is a professor of civil and environmental engineering at the University of Washington. Her research interests include the investigation of the resiliency and sustainability of civil infrastructure systems with particular emphasis on post-hurricane performance of power delivery systems. She has been involved in research in several areas of wind engineering such as time series analysis of wind loading on cooling towers and other structures, the performance of glass cladding during wind loading, occupant comfort criteria for tall buildings, and the physical and numerical modeling of tuned solid and liquid dampers. She was a visiting professor at Carnegie-Mellon University in 1987 where she investigated the use of influence diagrams and rules for expert systems to characterize structural design for wind loading. She has been involved in post-hurricane damage investigations for several years. Dr. Reed joined the University of Washington in 1983 following two years at the National Institute of Standards and Technology, formerly the National Bureau of Standards. She received a BSCE from the University of South Carolina, magna cum laude, and an MS and Ph.D. in civil engineering from Princeton University. She is a licensed professional civil engineer in Washington State. At the University of Washington, she served as an associate dean of academic affairs for three years. She has lectured on wind engineering and other topics such as structural reliability at many meetings and institutions nationally and internationally.

Héctor Cruzado, PUPR, AAWE Board Member (2 Years)



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Héctor Cruzado completed his PhD in Wind Science and Engineering from Texas Tech University in 2007. In 2009 he very successfully chaired the 11th Americas Conference on Wind Engineering in his homeland, Puerto Rico. He currently is a Professor at Polytechnic University of Puerto Rico, where he is also the Director of the Civil Engineering Graduate Program. Dr. Cruzado has been very active in AAWE since his graduation from TTU and he will be a very welcome younger member of the AAWE Board.

Steven Camposano, HV, AAWE Board Member (4 Years)

STEVE@CATEGORY5.COM

Steven Camposano was born in Cambridge, Massachusetts and attended Northeastern University in Boston, before moving to Florida to assist his father with a family hotel business in Fort Myers. Drawn forever by the sub-tropical climate of South Florida, Steve spent many years in the Hurricane shutter sales business. Currently, Camposano is the owner of High Velocity Hurricane Protection Systems, based in Naples. A company he founded in 2000 for commercial highrise and residential shutter installations. The company designs, engineers, installs and services their own proprietary brand of hurricane protection products known as the Category5 line, which includes motorized rolling and motorized accordion styles among others. Steve has directed many large scope, mid and high rise, condo projects and uses peak cladding pressures to design the shutter systems derived from specific wind-tunnel study data or building code analysis for compliance. His Category5 shutter systems protect the National Hurricane Center, in Miami. All of Steve's Category5 shutters have received product approval from Miami-Dade County, Florida, and are certified to high pressures with very sizeable spans. Steve is a certified aluminum and awning contractor and has been a member of ASCE since 2000. He currently serves as Vice-Chair of the ASCE Structural Wind Engineering Committee. He is a former member of the Construction Institute and is an active member of AEI and SEI, TCWE and AAWE (co-hosting the last AAWE Workshop on Marco Island in 2010).

John Schroeder, TTU, AAWE Board Member (2 Years)

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John Schroeder is the Director of Texas Tech University's Wind Science and Engineering Research Center (WISE), and an Associate Professor in the Department of Geosciences (Atmospheric Science Group). He directs Texas Tech's hurricane research program and the West Texas Mesonet. Dr. Schroeder has a multidisciplinary background with graduate degrees in engineering and atmospheric science. (B.S., Civil Engineering, University of Missouri, Rolla, 1994; M.S., Atmospheric Science, TTU, 1997; Ph.D., Civil Engineering, TTU, 1999). He has had numerous peer-reviewed publications in both engineering and atmospheric science journals. His interests include: wind flow characterization, boundary layer structure, wind hazards (e.g. hurricanes, thunderstorms and tornadoes), instrumentation, data acquisition, weather monitoring networks, weather radar, wind engineering, statistical and time series analysis.

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President's Corner

Greetings, I am Partha Sarkar, your new AAWE President for the current term (2011-12). I wish you all a very happy and prosperous New Year. Having served as AAWE's Secretary/Treasurer for many years and its Board member in the past, I am excited to get this opportunity to lead AAWE. First, I welcome aboard all the newly appointed members of the AAWE Board, Steven Camposano, Hector Cruzado, Anne Cope, David Prevatt, Dorothy Reed and John Schroeder and President-Elect Greg Kopp. Next, I sincerely acknowledge the efforts of the AAWE nomination committee to make it all happen, particularly, its Chair and Past President Ahsan Kareem who has been working steadily to get all the officers in place on time. I want to thank the outgoing President Nick Jones and all those who served as Board members in the past term, namely, Greg Kopp, Doug Smith, Kurt Gurley and Jim Rossberg for keeping AAWE's ball rolling, during which AAWE continued to expand its membership, remained active through its role in supporting and planning regional and international conferences and supporting AAWE's second successful Workshop in Marco Island, Florida (chaired by Kurt Gurley and Steve Camposano). I would like to acknowledge the Past President (2007-08) and the Editor of this newsletter, Leighton Cochran, and his co-workers at CPP for their immense contributions that have taken AAWE to the next higher level. As you know, under Leighton's leadership there were many new developments that took effect, like organization of the first AAWE Workshop, enhancement of the website and newsletter, expansion of individual and corporate memberships including foreign members, payment of membership dues through credit card, etc. These efforts have paid off. We have currently 235 individual members and 10 corporate members including many individual members from outside the Americas. The person who keeps track of membership dues and cash flow also deserves to be recognized and that is the Secretary/Treasurer. Therefore, I want to thank Steve Cai on behalf of AAWE for the wonderful job that he has done all these years. Finally, I want to thank all of you to support AAWE through your continued membership.

While I am formulating my "To Do List" of AAWE activities that I would like to see during my term, I would like to hear your opinions and suggestions that will make AAWE more visible and help it to better serve its mission, namely, the advancement of science and practice of wind engineering and the solution of national wind engineering problems through transfer of new knowledge into practice. I hope many of you are planning to attend the 13th International Conference on Wind Engineering in Amsterdam this July, where I along with other Board members will get an opportunity to meet you and share ideas to make AAWE a better organization.

Lastly, I request you to renew your membership for 2011, play an active role as a member by sharing your research or work of interest through the newsletter and encouraging others who are not current members to join AAWE.

Sincerely,

Partha P. Sarkar
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Editor's Note

Leighton Cochran
lcochran@cppwind.com

As we are now well into 2011, please visit our website and renew your individual, student or corporate membership for 2011 - www.aawe.org. The timely arrival of membership dues is essential to keeping AAWE in good financial shape. It assists in the management of Workshops and Conferences and contributes to student attendance to those events. Thank you.

I would also like to thank Reagan Reynolds at CPP for composing such a well-designed AAWE Newsletter for all of us to enjoy.

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Objectives:

- The advancement of science and practice of wind engineering.
- The solution of national wind engineering problems through transfer of new knowledge into practice.

Established in 1966

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