



American Association
for Wind Engineering

THE WIND ENGINEER

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

IN THIS ISSUE

<i>AAWE Workshop</i>	1
<i>Congratulations Ahsan Kareem</i>	2
<i>In Memory of Hans Wolfgang Liepmann</i>	2-3
<i>Old Newsletters</i>	3
<i>APCWE7 – A Grand Conference held in Grand Style at the Historic Grand Hotel</i>	3-4
<i>Open Positions</i>	5-7
<i>Presidents Corner</i>	8
<i>AAWE Information</i>	9



2ND AMERICAN ASSOCIATION FOR WIND ENGINEERING WORKSHOP

Photo: Adrian Pingstone, in the public domain

SAVE THE DATE AND WRITE THE ABSTRACT

The planning for the 2nd American Association for Wind Engineering Workshop (2AAWE) continues. We have identified the dates for the 2010 Workshop.

PLEASE SAVE THESE DATES:

Wednesday, August 18th	Evening Ice Breaker
Thursday, August 19th	Full day of presentations
Friday, August 20th	Partial or full day of presentations

The venue is the Marriott Beach Resort, Spa and Golf Club on beautiful Marco Island in Florida. This is off-peak season at this resort location, which means reduced prices, smaller crowds, and plenty to do.

We have secured this venue with a very favorable room rate of \$149 with double occupancy allowed. This rate includes a round of golf or spa access. Various social and recreational activities such as jet-ski tours and golf are being planned for the weekend.

The registration may be completed and paid for at www.aawe.org.

Please prepare a short abstract and submit via email to Kurt Gurley at:

AAWE2010@gmail.com

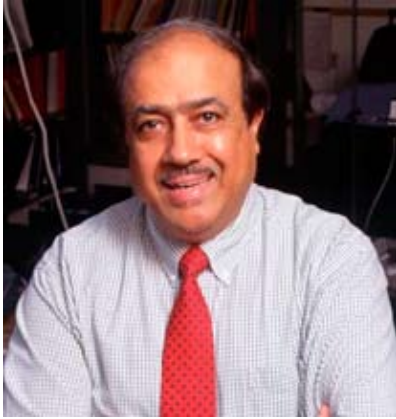
The Word template for papers may be requested at the same address, if you not already received it via email.

Deadline for abstract submission and registration details are on the website.

Students presenting a paper will be eligible for a bursary. The value will be announced in June 2010.



NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING



CONGRATULATIONS TO PROFESSOR AHSAN KAREEM

The ASCE Board of Direction elevated Professor Ahsan Kareem to the rank of Distinguished Member of ASCE (Dist.M.ASCE).

IN MEMORY OF A PIONEER AERODYNAMICIST WHO LAID THE FOUNDATION OF THE BUFFETING THEORY: HANS WOLFGANG LIEPMANN

AHSAN KAREEM

NATHAZ MODELING LABORATORY

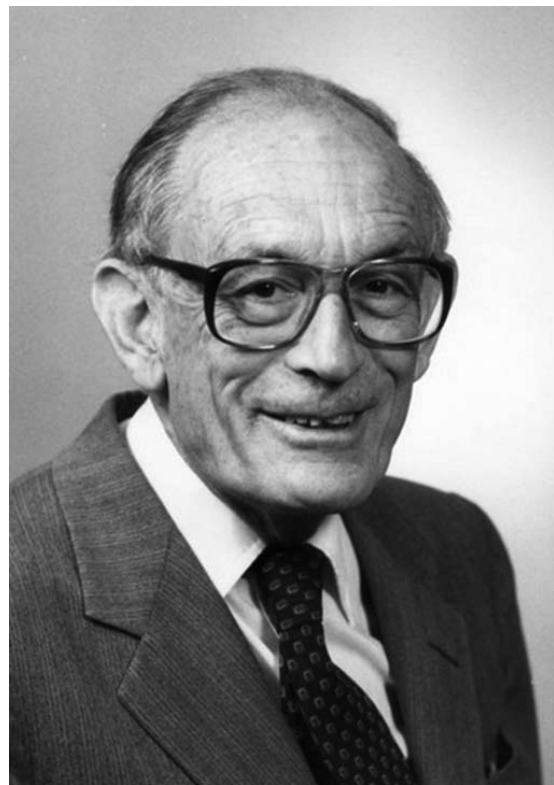
UNIVERSITY OF NOTRE DAME

WWW.ND.EDU/~NATHAZ

[HTTP://NATHAZLAB.BLOGSPOT.COM/](http://NATHAZLAB.BLOGSPOT.COM/)

The Wind Engineering community in the last year has lost two pioneers: Hans Wolfgang Liepmann and Alan G. Davenport. Both have been responsible for laying the foundations of the buffeting response of structures to atmospheric turbulence. Hans first introduced the statistical theory of buffeting for aircraft in his 1952 paper (On the Application of Statistical Concepts to the Buffeting Problem in the Journal of Aeronautical Sciences, 19, Dec. 1952). Later, Alan Davenport, armed with the tools to model near ground boundary layer turbulence, introduced the buffeting concept to land-based structures. His landmark contribution to the wind excited response of flexible structures in atmospheric boundary layer flows led to the ubiquitous gust loading factor.

Prof. Hans Wolfgang Liepmann, the Theodore von Kármán Professor of Aeronautics, Emeritus, at the California Institute of Technology, passed away in June 2009. Liepmann came to the U.S. in 1939 after impulsively expressing an interest in "hydrodynamics" during a drinking party at the successful conclusion of his PhD defense. An offer from Theodore von Kármán led to a research position in experimental fluid mechanics at Caltech's Graduate Aeronautical Laboratories (GALCIT), where Kármán was the first director. Liepmann's first experiments, on boundary layer instability and transition to turbulence, were followed by investigations of various turbulent flows that are relevant to engineering applications—a recurring theme throughout his career. Prof. Liepmann served as the third director of GALCIT from 1972 to 1985.



HANS W. LIEPMANN

Liepmann, known for his sharp wit and distinctive accent, was a noted teacher who mentored more than 60 PhD students and hundreds of undergraduates during his career at GALCIT. He strongly believed that teaching is vital, even in a research-oriented institution like Caltech. Throughout his career and up until retirement, Liepmann was devoted to teaching both graduate and undergraduate courses. The enthusiasm, clarity, and effectiveness of his lectures are legendary. He held the belief that teaching should be done without notes except for a few index cards, which made his classes very special for his students. I also note a similar philosophy in one of the best teachers I have had in Prof. Holley at MIT. Incidentally, this teaching paradigm has transcended in my own teaching style, which is in total contrast with the current wave of PowerPoint professors, with prepared detailed notes trapped within rigid boundaries.

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

In recognition of his accomplishments, Liepmann was elected a member of the National Academy of Engineering and the National Academy of Sciences. He was a recipient of the National Medals of Technology and Science, Guggenheim Medal and the Ludwig Prandtl Ring.

I have had the privilege of meeting Prof. Liepmann during his visit to the University of Houston in the late eighties. During a reception, I mentioned to him the significance of his buffeting theory and its applications to wind effects on structures. He was quite astonished and said in a very unassuming way, "Oh really! I was not aware of this!"

A pioneering researcher and teacher, Hans Liepmann will be missed by those who have benefited by building on the foundations laid by his work and followed his extemporal style of teaching that truly promotes creative thinking and innovation!

OLD NEWSLETTERS ON YOUR SHELF

Some of our older AAWWE members may be able to help with a small project I am working on for our membership. Do you have any old AAWWE Newsletters collecting dust on a shelf or in a filing cabinet? If you explore our www.aawe.org website and go to the archived newsletters (Information → News → Archived Newsletters) you will see many of our past publications in PDF format. I think we may be missing many of the older issues that form part of our collective history. The oldest I have on the site currently is April 1989. If you have an issue from any year that you do not see on the website, please send me a PDF of it. If you cannot scan a PDF just mail the hardcopy to me and I will scan it and mail it back to you. I hope can help me complete our Newsletter collection. I don't even know how far back they go – 1970s? My mailing address is below.

Leighton Cochran
1415 Blue Spruce Drive
Fort Collins, CO 80524
lcochran@cppwind.com

APCWE7 – A GRAND CONFERENCE HELD IN GRAND STYLE AT THE HISTORIC GRAND HOTEL

AHSAN KAREEM

NATHAZ MODELING LABORATORY

WWW.ND.EDU/~NATHAZ

The 7th Asia-Pacific Conference on Wind Engineering (APCWE) was held in grand style at the historic Grand Hotel in Taipei during November 8-12, 2009. Taipei is best known these days for Taipei 101, currently the second tallest building in the world with a large, tuned-mass damper and a surrounding mezzanine level that offers the opportunity to see the damper move when activated. The Grand Hotel with its unique Chinese architecture, once a palace, is an iconic structure in the Yuanshan Mountain area of Taipei. It served as the headquarter for the very well organized APCWE by the Chinese Taiwan Wind Engineering Group and Wind Engineering Research Center of Tamkang University under the leadership of Professor Chi-Ming Cheng. It was indeed a source of pride to see one's first Ph.D. student serving as a leader of the group in Taiwan and leading a very prominent center of wind engineering research in the world.

One of the highlights of the conference was the keynote lectures listed below:

- Wind-Induced Damage to Buildings and Disaster Risk Reduction
- Speaker: Professor Yukio Tamura
- Advances and Challenges in Applied Flow and Dispersion Modeling
- Speaker: Professor Bernd Leitl
- The Changing Dynamics of Aerodynamics: New Frontiers
- Speaker: Professor Ahsan Kareem

The conference was attended by participants from all three regions of IAWE: Americas; Europe/Africa; Asia and Pacific. The side excursions included a trip to the famous Taipei museum followed by a dinner at restaurant.

The conference was followed by the 5th APEC Workshop on Codification and harmonization of regional building codes and standards. This was again ably organized by Prof. Chii-Ming Cheng's group under the primary sponsorship of the Global Center for Excellence at the Tokyo Polytechnic University directed by Prof. Yukio Tamura. One of the highlights of the workshop was the eastern coastal hot spring city and the Japanese style swank hotel with private hot springs in each guest room.

Pictures on the next page highlight some of the conference activities.

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING



NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

OPEN POSITION

THE UNIVERSITY OF WESTERN ONTARIO

FACULTY OF ENGINEERING

Department of Civil and Environmental Engineering

Applications are invited for a Tier-2 Canada Research Chair in the area of Wind Energy, Wind Engineering and Wind Environment, effective July 1, 2010 or as soon as possible thereafter. Appointment will be at the rank of probationary (tenure track) Assistant or Associate Professor, depending on qualifications and experience.

The Department is home to the Boundary Layer Wind Tunnel Laboratory and the 'Three Little Pigs' Project at the Insurance Research Lab for Better Homes. Recent funding by the Canada Foundation for Innovation will allow the creation of the Wind Engineering, Energy and Environment (WinDEEE) Dome (www.eng.uwo.ca/windeee); a \$23.6 million research facility and the world's first hexagonal wind tunnel. The WinDEEE Dome is expected to produce breakthroughs in the study of wind related phenomena by simulating wind systems that could not have been reproduced in conventional wind tunnels. This will benefit, for instance, the study of tornadoes and downbursts, understanding pollutant and contaminant dispersal, wind effects on agricultural crops and forests, optimal positioning of wind farms and turbines, the assessment of the effects of wind on buildings and other structures, etc. Hence, we seek a creative, dynamic and motivated individual who can effectively use such a world-class facility and other existing research infrastructure and to positively contribute to the teaching and research efforts of the Department of Civil and Environmental Engineering.

The successful candidate will have a Ph.D. degree or equivalent in Civil and Environmental Engineering or other related engineering fields, and demonstrated outstanding research potential including an excellent publication record. (S)he will be expected to develop and sustain a vigorous research program, attract external research funding, supervise graduate students, and instruct undergraduate and graduate courses related to wind engineering, wind energy and wind environment. Industrial experience is desirable, and eligibility for registration as a Professional Engineer in Ontario is required for this appointment. Applicants should also have excellent written and oral communication skills in English.

Situated along the banks of the Thames River in picturesque London, Ontario, a city with a population of approximately 350,000, The University of Western Ontario is a prominent academic institution routinely ranked as a top research-intensive university in Canada and is committed to excel as a leading research institution internationally. If you share our commitment to excellence in teaching and research, and are eager to pursue a rewarding academic career, please forward your curriculum vitae, statements of your research and teaching interests, and the names and contact information of at least three referees to:

Prof. E.K. Yanful, P. Eng., Chair
Department of Civil and Environmental Engineering
The University of Western Ontario
London, Ontario, Canada N6A 5B9

We also welcome e-mail inquiries and submissions, to be sent to: cwalter@eng.uwo.ca

The University of Western Ontario is committed to employment equity and welcomes applications from all qualified women and men, including visible minorities, aboriginal people and persons with disabilities. The position is subject to budgetary approval. Consideration of applications will commence on March 31, 2010 and will continue until the position is filled.

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

OPEN POSITION



RESEARCH SCIENTISTS

ENTRY LEVEL AND SENIOR POSITIONS

NORWOOD, MASSACHUSETTS

JOIN A GLOBAL LEADER AND ENJOY THE WORLD OF OPPORTUNITY THAT AWAITS YOU .

Our Company. FM Global offers a dynamic and challenging work environment that is personally and professionally rewarding. We provide a wide range of growth, advancement opportunities and professional development. We offer a competitive total compensation package, which includes a wide range of attractive benefits. For more information, please visit www.fmglobal.com/careers.

We believe that equal employment opportunity, the diversity of our workforce and focus on employee merit contribute to the strength and success of FM Global.

Join the Team. Interested candidates should email resumes to Tiara Adducie, human resources at tiara.adducie@fmglobal.com. Please use the description of the position in the subject of your email.

The Research Division of FM Global is seeking resourceful knowledge-developers and problem-solvers with strong technical and communication skills to support our engineering, risk management and loss prevention needs. The open positions require individuals with a

Ph.D. degree to plan and conduct both basic and applied research related to one or more of the following fields:

- Structural Engineering including structural dynamics, structural damage and property loss, structural mechanics and finite element modeling of structural and mechanical systems,
- Earthquake Engineering including dynamic analysis and vibrations, geotechnical analysis, shake table tests, ground motions, hazard maps,
- Wind Engineering including wind loading, structural response, CFD analysis, full-scale and wind tunnel tests,
- Flood including hydrological and hydraulic modeling, stochastic precipitation models, GIS programming and applications,
- Aggregate Analysis including natural catastrophes and financial loss modeling, evaluating or developing hazard, damage and property-loss algorithms, evaluating engineering and financial data, proposing and implementing improvements, databases and data integration issues.

All positions require significant research record and solid background in probability and statistics, knowledge of model verification and validation principles and practices, and excellent project management, and written and verbal communication skills.

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

OPEN POSITION

The National Renewable Energy Laboratory (NREL), located in beautiful Golden, CO, is a leader in the U.S. Department of Energy's effort to secure an energy future for the nation that is environmentally and economically sustainable. Our mission is to develop renewable energy and energy efficiency technologies and practices, advance related science and engineering and transfer knowledge and innovations to address the nation's energy and environmental goals.

SENIOR ANALYST I - WIND TECHNOLOGIES SYSTEMS

REQUISITION #1273BR

Job/Research Summary

This is an advanced-level analyst position, directing some projects, and having responsibility for work delivery in other projects. Technical leader in policy, market, and technology/analysis areas. Works under direction and in support of Center and Program management with responsibilities for tasks/subtasks. Growing national recognition in policy, market, and/or technology analysis fields.

Job Duties

- Foster teaming with NREL analysts, National Wind Technology Center staff, and other laboratory wind analysts to facilitate flow of results and insights from projects to DOE Wind and Hydropower Technologies Program (WHTP).
- Develop model input data and evaluate modeling approaches for wind and water technology in generation capacity expansion models such as NEMS, MARKAL, and ReEDS.
- Develop methodologies and data capture approaches for estimating cost of energy under various technology improvement and market evolution scenarios.
- Coordinate and team with DOE consultants to harmonize analysis activities, develop data reporting and management systems, and provide support to WHTP metrics, project tracking, planning and general analysis activities.
- Synthesize results from research and analysis work conducted by NREL, other DOE Programs, or external sources, to apply to WHTP analysis activities.
- Initiate and perform innovative analysis in areas supporting the DOE WHTP, such as quantifying economic benefit of deployment activities or evaluating impact of policy scenarios.
- Interpret results of policy, market, economic and/or technology analysis for decision-makers and stakeholders.
- Provide input and tracking for project budgets.
- Maintain and further develop collaborations with other facilities, universities, and federal/industrial entities.
- Participate in proposal reviews and provide input for proposal preparation.
- Work with management and senior staff to develop external funding.
- Publish results in technical journals/conference proceedings. Present work at conferences, symposia, and review meetings.
- As an analyst in the NREL DC office, the successful candidate will be able to immediately offer the following:
- Individual and team knowledge of wind industry trends, technologies, markets, and data.
- General knowledge of wind research and analysis projects conducted by industry and/or laboratories as well as familiarity with the underlying data and calculations used to generate such reports.
- Experience with capacity expansion models, including NEMS and/or MARKAL, including familiarity with how wind is represented.
- Experience with DOE requirements for benefits analysis, risk analysis, and program goals. Use of NREL-generated research and analysis to support these activities.

Required Education and Experience

Relevant Master's and 6 years experience or equivalent relevant education/experience.

Preferred Qualifications

Master's degree in economics, engineering, or policy field, or equivalent relevant experience. 6 years of relevant science, policy, market, or technology analysis experience. Demonstrated knowledge of practices, techniques, and problem solving methodologies in policy, market, economic, and/or technology analysis. Demonstrated leadership in one or more areas of team, task, or project lead responsibilities. Growing demonstration of independent work. Very good interpersonal and communication (oral and written) skills. Experience in project and deliverable management. Experience with direct client interaction.

EEO Policy

NREL's policy is to provide equal employment opportunities to all qualified persons without regard to race, age, color, sex, religion, national origin, marital or veteran status, or any other legally protected status. Pre-employment drug testing required.

Submit Your Resume

Please click the following link to apply online: [NREL Job 1273](#)

If any problems, please go to our website at: www.nrel.gov/employment

NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

PRESIDENT'S CORNER



I had the opportunity last month to participate in the Computational Wind Engineering conference, hosted by Alan Huber at the University of North Carolina Chapel Hill. Regrettably, I was only able to attend one day of the conference and I know that I missed an exciting program. My congratulations and thanks to Alan for planning and presiding over this successful event.

I am very optimistic about what computational fluid dynamics applied to wind engineering problems will accomplish. In many ways, this approach can do for wind engineering what the boundary-layer wind tunnel (once a revolutionary idea) did several decades ago to advance the practice. It was particularly exciting to see a whole new set of faces at the conference, among I am sure, the future leaders of our field.

While this year has already witnessed significant disasters, both natural and man-made, the "elephant in the room" as I write this, of course, is the drama that continues to unfold in the Gulf of Mexico and for which no resolution seems to be in sight. With the impending hurricane season, this uncontrolled discharge promises to create even more problems for the people (and other inhabitants) of the Gulf Coast region. This may be an environmental disaster of catastrophic proportions and there are many, many lessons to be learned from this event. Unfortunately, in many instances, it seems we either should have known, or did know, better. Perhaps mir-

roring the pattern that we have seen so often in our own field, while technical failures ultimately result in the direct negative impact, these failures occur in an "operational" environment that is influenced, and indeed in many cases trumped, by non-technical factors. To prevent such catastrophes, we need our current and future engineering leaders to ensure that they are part of not only the technical solution, but that they influence the context in which these solutions are deployed. This - without a doubt - applies to wind engineering as well.

On a more positive note, we are very excited about the upcoming 2nd AAWE Workshop at Marco Island, Florida on August 18-20. We are most grateful to Kurt Gurley (and his team) from the University of Florida and Steve Camposano of High Velocity Inc for organizing this event, and we hope to see many of you there. Judging by the impact of the previous workshop in Vail, we are very optimistic that this too will be a huge success.

The next major conference for us in wind engineering will be the international conference (ICWE), to be held next year in the Netherlands. And a little closer to home; I am very pleased to report that the next Americas' Conference on Wind Engineering (ACWE) will be hosted by a team led by Dorothy Reed from the University of Washington and Anurag Jain from Weidlinger Associates Inc in Los Angeles. I am particularly excited that this time the conference will be co-hosted by a team from academia and industry and am grateful to Dorothy and Anurag their leadership. Stay tuned for announcements and details!

I hope you have a wonderful summer!

Sincerely,

NICHOLAS P. JONES
President, AAWE
[410] 516 4050
npjones@jhu.edu

EDITOR'S NOTE

This will be the last newsletter sent to those members of AAWE who are not current with their dues. Please renew your membership for 2010 at www.aawe.org. Thank you.

Leighton Cochran
Editor and Past President

AMERICAN ASSOCIATION FOR WIND ENGINEERING
WWW.AAWE.ORG
1415 Blue Spruce Drive
Fort Collins, CO 80524
Ph: 970-221-3371
Fax: 970-221-3124
E-mail: aawe@aaawe.org

President

Dr. Nicholas Jones
Johns Hopkins University
Dean, Whiting School of Engineering
3400 North Charles Street
Baltimore, MD 21218
E-mail: npjones@jhu.edu
Phone: 410-516-4050

President Elect

TBD

Secretary/Treasurer

Dr. Steve C.S. Cai
Civil & Environmental Engineering
Louisiana State University
Baton Rouge, LA 70803
E-mail: Cscai@lsu.edu
Ph: 225-578-8898

Board of Directors

Dr. Greg Kopp
University of Western Ontario
E-mail: gak@blwtl.uwo.ca

Dr. Doug Smith
Texas Tech University
E-mail: doug.smith@ttu.edu

Dr. Kurt Gurley
University of Florida
E-mail: kgurl@ce.ufl.edu

Mr. Jim Rossberg
Structural Engineering Institute of ASCE
E-mail: jrossberg@asce.org

TBD

TBD

Past President / Newsletter Editor

Dr. Leighton Cochran, CPEng.
CPP, Inc.
1415 Blue Spruce Drive
Fort Collins, CO 80524
Email: lcochran@cppwind.com
Ph: 970-498-2334



American Association for Wind Engineering

Established in 1966

Objectives:

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

Corporate Members of AAWE

ABS Consulting Group

www.absconsulting.com

Boundary Layer Wind Tunnel Laboratory, University of Western Ontario

www.blwtl.uwo.ca

Cermak Peterka Petersen, Inc.

www.cppwind.com

Engensus Engineering and Consulting

www.engensus.com

High Velocity

www.category5.com

Institute for Business and Home Safety

www.ibhs.org

Risk Management Solutions, Inc.

www.rms.com

Rowan Williams Davies & Irwin, Inc.

www.rwdi.com

Weidlinger Associates Inc.

www.wai.com

Wind Science and Engineering Research Center, Texas Tech University

www.wind.ttu.edu

THE WIND ENGINEER

American Association for Wind Engineering
1415 Blue Spruce Drive
Fort Collins, CO 80524
USA