



**American Association  
for Wind Engineering**

# THE WIND ENGINEER

**NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING**

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**Dr. Jack Cermak**  
1922 – 2012

Photo courtesy of CPP, Inc.

*Dear AAWE Member,*

I shared the sad news with you earlier that **Jack E. Cermak** passed away on August 21, 2012 at his home in Fort Collins, Colorado. Dr. Cermak was one of the pioneers of wind engineering and a distinguished member of AAWE. He served as the first president of the Wind Engineering Research Council (WERC) for 10 years (1976-1985) before it was renamed as AAWE. Many of you who interacted with him professionally and/or personally know that he was an educator (Professor Emeritus at Colorado State University or CSU), engineer, visionary, mentor and a friend. He was fondly known as the “father of wind engineering” because of his early and long-term contributions to the academic field that later emerged as wind engineering. He was among the first to use an atmospheric boundary layer wind tunnel to test civil engineering structures including skyscrapers. He had a very distinguished career

at CSU where he was named the University Distinguished Professor in 1986. He was the President Emeritus of Cermak, Peterka, Petersen or CPP, Inc., a wind engineering consulting company that he co-founded in 1984. ASCE has established the Jack Cermak Medal in his honor that is awarded annually for outstanding contributions in wind engineering. He was a member of the National Academy of Engineering since 1973. Jack Cermak will be remembered for his pioneering work in fluid mechanics and wind engineering over his long illustrious career of more than 50 years. I have known Jack Cermak for many years and interacted with him quite a few times during my several visits to Fort Collins, the last one being in Summer 2008. Jack will be missed by all of us. We bring this AAWE newsletter to you in dedication of Jack Cermak, who literally defined wind engineering.

*Partha Sarkar*  
AAWE President

## Celebration of the Life of Jack E. Cermak

by Ahsan Kareem, NatHaz Modeling Laboratory,  
University of Notre Dame, ahsan.kareem.1@nd.edu

Throughout the world, Dr. Cermak is considered the “father of wind engineering.” In 1959, he founded the Fluid Dynamics Laboratory at Colorado State University where he pioneered the physical modeling of wind-structure interactions in boundary layer wind tunnels. His pioneering contribution was supplemented by other developments in his laboratory under his guidance. For example, he was the first to introduce the concept of a high frequency force balance utilizing high sensitivity but stiff base measurement system and gave initial concept of the measurement of integral loads using multiple pressure transducers. In those days, it was accomplished by 5-6 transducers in multiple configurations using statistical integration due to high cost and limited channels of data that could be captured simultaneously. The techniques Cermak pioneered have now become a quintessential part of the overall design procedure for the design of structures to withstand wind gusts, which is today applied to projects from low-rise and high-rise buildings, long-span bridges, roofs, chimneys and towers to offshore structures, defense/aerospace installations and even sports apparel and arenas. Dr. Cermak served as a consultant and principal investigator for wind tunnel tests on over 500 new building projects. These projects include some of the signature structures around the globe, including his work in 1963, on the World Trade Center Towers. In 1999, the laboratory founded by Dr. Cermak was recognized by the Engineering News-Record as one of the 125 engineering innovations in the 125 years between 1874 and 1999. Dr. Cermak had a distinguished career as an engineering educator as well; he has advised over forty doctoral students, who in turn are contributing to the fields of structural and environmental engineering. This has led to generations of students influenced by him, e.g., several of his great-grand students have completed their doctoral studies and are beginning their careers in academia and industry.

Dr. Cermak has chaired many of ASCE’s key technical committees earlier in his career and later again as a second round of his service to the profession. He also served as chair of the Committee on Natural Disasters for the National Research Council, which drew the agenda for post disaster investigations of natural disasters and their impact on built and social infrastructures. He served as the Regional Editor (USA) of the Journal of Wind Engineering and Industrial Aerodynamics, Elsevier with its initial publication in 1973. This journal serves as a major source of research findings and design information for the effects of wind on structures. He has authored or co-authored more than 650 papers and reports.

In 1973, Dr. Cermak’s pioneering research led to his election to the National Academy of Engineering. He was also selected to be among one of the twelve University Distinguished Professors at Colorado State in 1986 and in 1990 and was elected as an honorary member of the American Society of Civil Engineers. Chi Epsilon, the Civil Engineering Honor Society, also elected him as National Honor member in 1994. Through the contributions of his friends, ASCE instituted Jack E. Cermak Medal in 2002, administered by the Engineering Mechanics Division and the Structural Engineering Institute, for outstanding contributions to the area of

wind effects on structures. The author is humbled by the honor of being the initial recipient of this award.

Dr. Cermak founded the Wind Engineering Research Council, which is renamed now as the American Association for Wind Engineering, serving also as its first President. He also was one of the lead organizers of the first United States meeting on the effects of wind on structures at Cal Tech in the early seventies. This meeting has grown to a major quadrennial conference serving those interested in the recent developments in wind effects on structures from the North to South America.

Dr. Cermak’s “tour of duty” netted numerous prestigious awards and honors. A sampling of these includes awards from Sigma Xi, ASCE Aerospace Division, Structural Engineering Institute, ASME Distinguished Lecturer, Senior Research Award from ASEE, ASCE’s Ernest E. Howard Award, and Robert H Scanlan Medal and a citation from the National Society of Professional Engineers.

## CERMAK “FATHER OF WIND ENGINEERING”

The author is sure that most of you would agree with William Shakespeare “there is something in the wind.” However, while Shakespeare’s fascination with wind was mostly poetic, Cermak’s interest is primarily pragmatic. Initially Cermak’s efforts in this field were confined to basic research concerning the development of scaling laws for physically simulating boundary layer flows in long test section wind tunnels. In the early sixties, it became apparent to him that an atmosphere simulated in laboratory could be applied to a host of practical problems. The first such example involved the investigation of the cause and recommended treatment for the 20 mph gusts wreaking havoc on the playing field of San Francisco’s then new Candlestick Park. Known as “the cave of wind” in 1961 All Star game, baseball’s best players committed seven errors and the relief ace was nearly thrown off the mound. This was all blamed on the capricious winds. The wind tunnel study showed that the geographic features and the stadium itself created this perilous condition and presented remedial solutions to revamp the Candlestick Park. It was also noted that if the park had been built one playing field length to the north, much of the problems would have been avoided.



WTC model in the wind tunnel – Front row: A. Davenport, M. Yamasaki, J. Skilling, L. Robertson; Back row: M. Levy and J. E. Cermak

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Wind Engineering came of age during the mid-1960s with a study of the then to-be-built World Trade Center Towers (WTC) in New York City. This study by Cermak of the twin towers would be the first comprehensive study of the wind loading on a structure that could take a large variety of atmospheric variables into account. Colorado State received this project because, at that time, it was the only institution in the world with a boundary layer wind tunnel. Cermak gleaned personal and professional satisfaction from that project, as he believed that his group created something that was useful to society in general. However, Cermak attributed the subsequent mushrooming of wind tunnel studies only in part to the greater confidence in their predictive capabilities and recognized another contributing factor: in spite of all the mathematical and engineering sophistication possible with analytical modeling and computational tools, wind analysis still managed to evade the quantification essential for design. The demand further escalated with the advent of taller, slimmer, thinner-skinned buildings, which are more sensitive to the dynamics of wind actions unlike the masonry edifices built earlier. As the Boston Hancock Tower's difficulties became known, the issues of wind effects on tall buildings came to the forefront of engineering practice. As a result, the problems of Boston's John Hancock have been viewed by some as the tall building community's Tacoma Narrows, though others still blame it on structural issues.

Dr. Cermak served as a consultant and principal investigator for wind tunnel tests on over 500 new building projects. These projects include some of the signature structures around the globe, including his work in 1963, on the World Trade Center Towers. In 1999, the laboratory founded by Dr. Cermak was recognized by the Engineering News-Record as one of the 125 engineering innovations in the 125 years between 1874 and 1999.

## A PERSONAL TRIBUTE

Like many from my part of the world, I came to the United States to study structural engineering, for example, concrete or steel structures. During my studies, I was introduced to wobbly tall buildings by Professor Hansen at MIT following an article in the Wall Street Journal on "Dizzying Heights". This piqued my curiosity and motivated me to learn more about wind and how it interacts with structures. A quick literature survey led to Jack Cermak and Alan Davenport. Both men very enthusiastically responded to my request for papers and the possibility of a fellowship for pursuing my PhD. My master's advisor said that since I am more interested in structures I should go to Canada as Jack's group was more focused on fluid dynamics. My final decision was made by the snow in Canada and I landed in Colorado from Massachusetts. In retrospect, this was a great decision as in Jack's group I added another dimension to my portfolio, fluids.

I remember vividly my first visit with Jack. Upon arrival his secretary ushered me into his small office located in the main campus of CSU with stacks of files reaching to the ceiling. I could not see Jack and after a little peeking through the little openings, I noted a very distinguished person sitting in his chair writing something on a note pad. He did not notice me as we could barely see each other. I looked around and noticed that there was no open space on the walls due to a huge number of certificates of honor.

The secretary then returned and told Jack I was there. He then stood up and we had a very cordial conversation. I was impressed by the files and the variety of books, but most importantly the collection of certificates. During the conversation he pointed at the certificate of his recent induction into the National Academy of Engineering, of which he was very proud. Later, fellow students told me he was, at that time, the only one from the state of Colorado!

I soon learned why he was the only Coloradan to do so. He was the first to develop scaling laws to model atmospheric boundary layer winds in a wind tunnel. This led to the modeling of structures in wind tunnels to study wind effects. The World Trade Center Towers in late sixties were the first application of this technology conducted under Jack's direction at CSU. Today this technology is invariably used around the world to study wind load effects on most structures. Jack accomplishments are due in part to his very strong fundamentals in mechanics his work habits and his eye for applications. This is an ideal combination for making such a pioneering contribution. He always discussed the overall goals of a project to his associates and students and then left them alone to innovate and come up with good solutions with minimal interference from his side. This put a lot of pressure on us, which taught us how to innovate and develop self-confidence. As a result, following Jack's footsteps, a large number of his students and colleagues have made in their own careers major contributions to the field.

He was easy to work with, letting you do things your way with minimal interference provided you had results to show! As students, we had a hard time going to his classes, which were often scheduled at 7 am in Colorado's winter. On Friday afternoon, most grad students would be heading to FAC in local bars. Often, as we made our way out of ERC, his huge light blue Oldsmobile would emerge from the sloping Taft Hill Street causing us to quickly turn around, often slipping and sliding due to sudden maneuvers on icy roads, in an attempt to make it back to ERC before him and turn all the instrumentation back on.

Upon graduation, I left for Houston, where the training I got under Jack quickly helped me to start working in offshore structures. I often called Jack for counsel and had long chats with him at structures congresses. He was always a good listener and offered great advice.

It was very sad to hear about his eye problem and after that I spoke occasionally with him on the phone to cheer him up. I also had a chance to visit with him in the early fall of 2008. We had a few good laughs as I reminded him of some old stories.

In February 2009, I heard of my election to the National Academy of Engineering. The first person I wanted to share the news with was Jack. I called him and Gloria said that he is snoozing, but that I should convey the news myself. Gloria placed the phone near his ear and I told him the news!

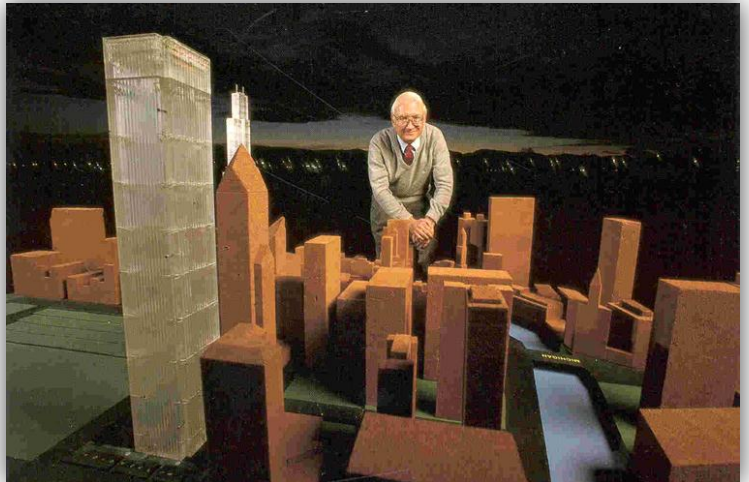
Gloria tells me that he jumped up and his face was glowing with happiness she had not seen for months. This is great news for a mentor about his student in our profession. As I proudly walk in my office every day looking at the same certificate Jack showed me during our first meeting, I see his face looking at me with the expression he has in this picture of him in the wind tunnel with



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his building models. I am proud to say that Jack, who had a legendary career, now has many generations of students (great great grand students) in academia both at home and abroad who are carrying on his legacy. He will be remembered in the hallways of academia and design offices not only for his seminal contributions, but for being a true gentleman and scholar.

**JACK WE WILL MISS YOU,  
MAY YOU REST IN PEACE!**



### Remarks for the Memorial Service of Jack E Cermak

by Jon Peterka, CPP, Inc.,  
jpeterka@cppwind.com

I want to share a few thoughts from the perspective of a colleague who has known and worked with Jack for 50 years.

Jack is famous as one of the fathers of wind engineering – some of us would say THE father of wind engineering. His long list of credentials is incredibly impressive including election to the National Academy of Engineering and Colorado State University Distinguished Professor. There is not time to list all of his accolades here; instead, I would like to tell you about Jack and his approach to engineering.

Jack's lifelong professional interest was wind engineering, although the term wind engineering would not exist for more than 20 years from his initial efforts.

Jack began as a professor at Colorado A&M (later to become Colorado State University) in 1947. By 1954, 58 years ago, Jack had already constructed the first of the large boundary layer wind tunnels that are now a basic tool in the profession of wind engineering. He demonstrated that a wind tunnel could accurately model winds blowing near the surface of the earth, and showed this technology could accurately model evaporation from a lake.

From this beginning, it was not long before he and others had demonstrated the ability of boundary layer wind tunnels to model dispersion of pollutants, wind loads on structures, and many other applications. Jack had a vision then that has developed into a discipline with hundreds of boundary layer wind tunnels and thousands of involved practitioners, faculty and students around the world.

In the early 1960s, the Meteorological Wind Tunnel at Colorado State was completed with thermal stability of the atmospheric boundary layer included. This second boundary layer wind tunnel in the world remains a state of the art facility today.

My own association with Jack started 50 years ago in 1962 as an undergraduate Civil Engineering student needing a part time job to get through engineering school. Jack put me to work with a graduate student in the laboratory; that started my long association with wind engineering. He was anxious to add to the educational experience of everyone around him; that experience was highly rewarding to me and helped to nudge me toward graduate school. I completed my master's degree in Civil Engineering with Jack as my advisor. After a few years away completing my PhD at Brown University and gathering some experience in the aerospace field, I returned to Colorado State in 1971 to teach and to work with Jack and others in the wind engineering program. I would not be where I am today if it were not for Jack's positive guiding influence on my education and career.

By 1980, Jack and I were effectively running a consulting engineering firm from the university laboratory because our research into wind loads on buildings had become very attractive to structural engineers who were designing buildings. In 1981, Jack and I founded what is now the consulting engineering firm of Cermak Peterka Petersen, or CPP. Ron Petersen joined us shortly after to add dispersion of pollutants to the firm's capability. CPP was like a second family for Jack.

Jack was one of the most disciplined and focused people I have known. He seldom took a day off, and could often be found in the office on Sunday afternoon leaving a proposal on a secretary's desk to be processed on Monday morning. He always seemed to operate at a high and intense level.

Jack possessed a remarkable mental image of the physical world around him that seemed to tell him how the world really worked.

This enabled him to understand where the new field of wind engineering could go. Nudging this new field to the place he foresaw was a lifelong ambition and was largely successful.

Jack was a talented teacher. He maintained a demanding teaching schedule, both undergraduate and graduate, while developing his research. Several times when meeting a former Colorado State graduate at a professional meeting, the person would ask if I too

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had taken Jack's course on non-linear mechanics. This course was remembered by students long into their career as one of the outstanding courses they had taken. While this course was mathematically demanding, all of us who took it seemed to come away with a better physical understanding of the world around us along with the mathematics that described it.

Jack was not always a great organizer. When I first worked for him as an undergraduate, he did not appear to maintain a meeting calendar. If you wanted to talk to him, you simply arrived at his tiny office on campus, and waited in line in the hallway. The line of 5 to 10 was composed of undergraduate students needing help on homework, graduate students wanting to discuss their research, and faculty. I never saw the department head waiting in line, so he must have had a special arrangement. In his office Jack was on the phone, while almost simultaneously conducting a conversation with his visitor. I have never understood how he could do so much in one day.

## Jack E. Cermak

by Kishor Mehta,  
National Science Foundation  
kimehta@nsf.gov

Jack Cermak has been the founder of 'wind engineering discipline' in the U.S. and the organization that is currently called 'American Association for Wind Engineering (AAWE)'. Back in 1970, a workshop was held at Cal-Tech under the tutelage of Anatol Roshko on wind related subjects. At that time, to the best of my knowledge, a Committee on Wind Engineering was formed with Jack Cermak as Chairman. The Committee was named appropriately 'Committee on Wind Engineering Research'. The Committee operated on an informal basis with the help and support of Michael Gaus who was at NSF at that time.

In late 1970s it was agreed that the Committee should have a better status and was named Wind Engineering Research Council (WERC). The WERC stayed active thanks to Jack and his efforts as President. The Council sponsored International Conference on Wind Engineering in Fort Collins, Colorado in 1979 as well as U.S. conferences on Wind Engineering (at roughly three year intervals) in the U.S. In early 1980s it was decided that the WERC should have a more formal status with By-laws and incorporation. Jon Peterka played a significant role acting as a secretary to the WERC and formulated legal aspects to get WERC incorporated in Colorado.

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A number of individuals have told me how Jack influenced their career. Larry Griffis is the President of the Structural Division of Walter P. Moore, one of the largest structural engineering firms in the US. He has received awards that put him into the very top tier of structural engineers in the US. Larry began bringing buildings under design to Jack and me at Colorado State in the middle 1970s and later to CPP to define wind loads by wind tunnel test. This is part of his email to me last week:

*"I will always remember Jack as a very gracious and warm human being, profoundly influencing the world of wind engineering and all the many people he came in contact with throughout his career. There have been only a few fellow engineers in our industry that have had a great influence on the way I try to conduct my professional life, and Jack was one of them. He was a consummate professional who always reached out to help and further the cause of wind engineering. I really enjoyed the times I had to work and interact with him at CPP."*

Frederic (1979) and Alicia (1983) and several destructive tornadoes. At the same time, commercial demand on wind tunnel testing increased with construction activities of tall and unusual buildings. It was natural that WERC be established as a formal non-profit professional organization with dues paying membership. In 1985, at the U.S. Conference on Wind Engineering at Texas Tech University, formal By-laws were adopted for WERC with election of President and Secretary-Treasurer as well as dues paying membership. After fifteen years of keeping WERC alive with little financial support, Jack Cermak stepped down as head and President of WERC. It was a monumental effort on his part to give birth to 'wind engineering' as discipline in the U.S. and nurture it through its youth.

In 1985, I became President of WERC and under the guidance of Joe Minor and Jim McDonald the formal organization was established with dues paying membership. Jack continued to provide his counsel and vision for the wind engineering research and the organization in Americas. WERC was renamed to American Association for Wind Engineering (AAWE) in early 1990.

On a personal note, my association with Jack goes back to 1972 when I met him at an ASCE conference. He was very kind in his comments and encouraging me to pursue damage documentations and assessment of wind speeds in tornadoes. In 1980s and 1990s Colorado State and Texas Tech collaborated to pursue unique research in field and in wind tunnel. From mid-1970s through 1990s, for a period of 25 years, I was fortunate to have Jack as my mentor and sounding board on science of wind engineering for ASCE 7 developments and several wind engineering research agendas. It is humbling for me to write about a person who was a great friend and truly a giant in the field in which we are working and reaping the benefits of his vision.

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## Personal Thoughts on Professor

**Jack Cermak**

by Leighton Cochran

leighton@leightoncochran.com

Dr. Cermak was my academic advisor in graduate school at Colorado State University (CSU). I first talked to him in 1983 while he was at the Sixth ICWE in Queensland and was visiting Townsville, Australia. We talked at length about coming to Fort Collins to study in his Fluid Mechanics and Wind Engineering Program within the Civil Engineering Department. Right from the beginning he was a supportive and encouraging mentor, and that continued after graduation, with ASCE committees and working at CPP.

When I was studying at CSU, and he saw me enthusiastically reading a hallway advertisement about a week-long Planetary Society Conference and workshop at the Jet Propulsion Laboratory (not exactly wind engineering) in Los Angeles, he offered to write a recommendation letter. And so, off I went to California. I doubt if that opportunity would have been there without his name on a letter to CalTech. He routinely encouraged his students to expand their educations outside our niche field.

In the early 1990s I found a large box of black and white photographs on top of the Meteorological Wind Tunnel's power room at the Engineering Research Center (ERC). These forgotten images included ten-by-eights of the 1963/1964 World Trade Center study (now republished in many places). One image in the box was of Dr. Jack (as many of his students called him) in the Industrial Wind Tunnel with Andy Warhol (see image). There had to be a story behind this discovery! I took the photograph to his office to find out. It seems that Mr. Warhol taught during a couple of summers at the CSU Art Department in the late 1960s, where he donated two of his famous large Campbell's Soup tins. Curiously these two titans of their respective fields became drinking buddies at the Wine Cellar on College Avenue. Dr. Jack's pioneering work had piqued Mr. Warhol's interest and these two people from very different worlds became friends. It would have been fun to sit in on those conversations at the Wine Cellar!

## An Open letter to Jack Cermak on his 90th Birthday-to-be

Never to be delivered

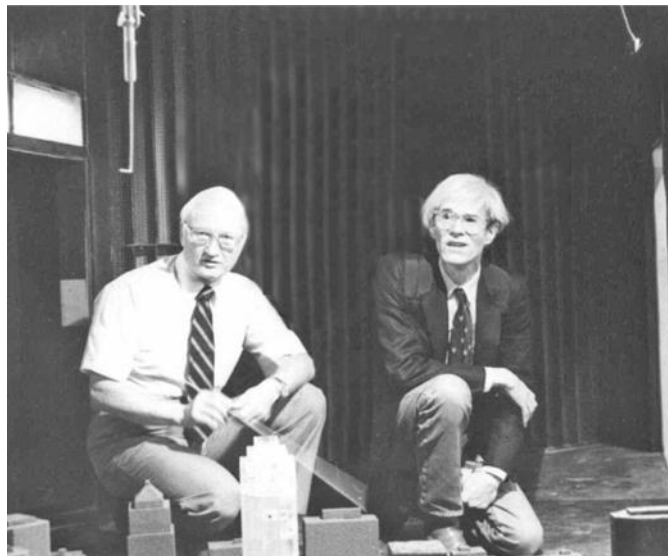
by Daryl Boggs, CPP, Inc.,

dboggs@cppwind.com

It was a fateful day in Boston, around 1972, when I attended a guest lecture at MIT by Jack Cermak on the subject of wind engineering. Wow I thought, what an exciting subject—a marriage of engineering and architecture, just what I decided I wanted. So I was able to sway my studies at MIT accordingly, and even more after taking employment in Chicago where I was able on occasion to work on a minor wind tunnel job.

And then another fateful day in Chicago, in 1979, when I decided the little wind engineering at that consultant position was just not quite enough—who else would I call but Jack Cermak at CSU. I held my breath as I inquired about openings in a PhD program

Every few years Dr. Jack taught a course at CSU on nonlinear differential equations with an historic focus on pre-chaos theory methodologies caused by the limited availability of serious computing in the 1950s. In fact, the "text" was a translated Russian dissertation on approximate solutions to these nonlinear systems.



**Dr. Jack Cermak (left) and legendary artist Andy Warhol**

This intellectually stimulating course remains a memorable event for many of Dr. Jack's students. Professor Cermak had a profound impact on my professional, intellectual and personal life. Without his encouragement I may not have spent so much time in Colorado, or even, discovered wind engineering as a career direction.

**Jack will be missed by so many, and his influence on individual lives has spanned the globe.**

involving wind tunnel work and tall buildings. "Sure" he said, and the rest is history.

Finally at CSU I was able to devote full time to participation and understanding of this wonderful subject. And it was Jack who led me, who put up with my sometimes unreasonable requests or demands, and who allowed me to pursue problems in depth, to a degree simply not possible at my former industry position. I thought my time had come.

Now 32 years later I am lucky to say that I've made a career on the very subject that caught my fancy in school, and I love it. And it was you, Jack that made it possible. And then you nurtured it, through several years at CSU and many more at CPP. I am pleased and proud to have been associated with you.

Little did I know on that fateful day that Jack had not just planted that seed in me; he had actually created that. That seed eventually grew into not only a career but an obsession. That was the result of a powerful, influential, and caring man.



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## Reflections on Jack Cermak

by Russ Derickson, rgderick@msn.com

In the mid to late '60s as a civil engineering undergraduate at Colorado State University, I would often see this short, white-haired man moving in quick step through the B-wing of the engineering building. I assumed he was a professor, but none of my fellow students ever mentioned him. For some reason I became very curious about this mysterious, diminutive man. I learned later he was responsible for the wind tunnel at CSU. I thought: the what?

A few years later I met Jack Cermak while a fledgling grad student assisting his doctoral student Monty Orgill on dispersion studies in the Fluid Dynamics and Diffusion Lab. Not sure of what I wanted to do, I shortly dropped out. In the fall of 1970, I returned to continue my graduate studies but was late for enrollment. Hearing of my plight, Jack immediately walked over to the graduate dean's office and got me enrolled.

I had one course from Jack as a master's candidate. For an individualized project, he suggested I explore Ertel's Potential Vorticity Theorem and do a paper on it. As a consequence, I became enthralled with vector identities and clever mathematical manipulations related to fluid mechanics. I had heard rumors about his course on nonlinear dynamics and it piqued my curiosity, but I was not yet schooled enough to take it. Although he was not on my master's committee, I remember several discussions with Jack over time regarding vorticity, nonlinearities, and the curious inviscid mechanisms being studied in the wind tunnel by his doctoral students J.T. Lin and Craig Hansen. At one point he humored me when I told him that I thought that gyroscopic motion played a critical role in fluid turbulence. I became vindicated when a 1979 article in *American Scientist* stated that turbulence could be viewed as "an ensemble of interacting gyroscopes." Jack's encouragement in my ponderings of the mysteries of fluid dynamics played a vital part in my student years and beyond.

After 15 years into my career, I returned to CSU in 1987 as a doctoral student. Jack served on my graduate committee. I had two courses from him, one being that famous one on nonlinear dynamics. Between Jack's course and one I took from Roger Pielke, I became further obsessed with nonlinearity. That remains the case to this day. Stemming from Jack's and Roger's inspiration, I published an article in 2000 in the *Journal of Computational Physics* on a novel approach to exploring the nonlinear Burgers equation.

But I want to talk about a deeper, personal side of Jack. We all knew Jack to be a reserved, shy man. He did not talk about himself. His professional persona was how he was mainly perceived and was his comfort zone. Sometimes he could be highly "directive" as the self-titled, but official, Professor-in-Charge of the fluid mechanics program and lab. I was honored to get a glimpse of a deeper side of him during the last of my graduate days, a side that manifested an occasional, understated chuckle and reflective musings on life. For a period of about a year, he and I would go off to a watering hole every couple of months and share wine and thoughts. A lot brewed beneath his exterior. I suspect that only his late wife Helen and second wife Gloria have seen the full panorama of who Jack was on this earth, perhaps Gloria most.

## Memories on Jack E. Cermak

by Nick Isyumov, Boundary Layer Wind Tunnel Laboratory,  
Western University, nici@blwtl.uwo.ca

I knew Professor Jack E. Cermak throughout most of my professional life. He was a wind engineering colleague, a fellow researcher, a good friend and at sometimes a competing provider of wind engineering services. He has made outstanding contributions to the field of wind engineering and I am very fortunate that our paths crossed. Also, I am proud to have received the Jack E. Cermak Wind Engineering Medal in 2012. I would like to share two of my recollections of Jack Cermak: one as a fellow ASCE committee member, the other as a wind engineering competitor.

I joined the Aerodynamics Committee of the Aerospace Division of ASCE in the early 1980s. Jack was already a member of that committee and I had the good fortune to attend many meetings with him and to gain from his wind engineering knowledge and experience. We both served on the Task-Committee on Wind Tunnel Testing of Buildings and Structures and contributed to the preparation of the 1st Edition of ASCE Manual No. 67, published in 1987; and to the subsequently expanded 2nd Edition in 1999. Professor Cermak was responsible for portions of the Manual dealing with the modeling of natural wind in wind tunnels and generously contributed to all other parts of the Manual. He attended all meetings, his submissions were on time, he was a valued source of information and he always gave good advice to others. As Editor of the Manual, I particularly valued his counsel and his meticulous proof reading, if there were bugs in the manuscript Jack would find them.

In the late 1970s Jack and I were on opposing sides of a court case regarding the 200' telecommunication tower in Moncton, New Brunswick, Canada. Cracks appeared in the reinforced concrete shaft of the constructed tower. This was attributed to wind action and NBTEL, the owners of the tower, hired another engineer to investigate the problem and to develop remedial action. The shaft was subsequently stiffened by increasing the wall thickness and by adding protruding vertical ribs at a 90 degree spacing around the perimeter. I was the wind consultant for these remedial measures. There were no funds for full wind tunnel tests and my efforts relied on a desk top study and section model tests at UWO in order to determine shape factors and examine the effects of vortex shedding. The NBTEL subsequently sued the original designer for the cost of the remedial action. On his part, the original designer felt that the remedial measures were excessive and hired Professor Cermak to carry out aeroelastic model tests of the tower. These tests did indicate wind loads which were lower than those determined in my desktop study. However, on inspection of the CSU data it became apparent that the scaling of the mass of the tower did not allow for the difference in the density of air at Fort Collins and at Moncton. Asked about this on the witness stand, Jack had to admit that his wind loads would have been larger, if his wind tunnel tests had been carried out at Moncton rather than at Fort Collins. The difference in air density did not result in large differences in the loads, however, its disregard in the aeroelastic model design did cast a shadow on the CSU data. In the end, there was no clear winner and the opposing parties reached a settlement.

# NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

## A Wife's Tribute

By Gloria Garza

During these past two weeks, I have received beautiful sentiments and memories about my Jack. I love hearing how Jack impacted lives, careers, and the world. This tribute is from a wife, who also had the privilege of working so many years with this gracious man.

Jack married his first wife Helen Carlson in 1949; their union spanned over 55 years. Her love, support, and respect helped sculpt the man that he became.

Jack's academic, research, and professional associations played major roles in earning his "Father of Wind Engineering" title. He was so generous and humble; he never presumed he had attained such an accomplishment by himself. He so loved his wind-engineering brethren and missed collaborating with them for these past 6 years.

I was 27 years old when I started working for Jack at Colorado State University (CSU) and he was 60 years young. He taught me so much over the years. It was an honor to serve as his administrative assistant. I was part of the organizing committee for his 50 Years in Education celebration and I hosted his 80th birthday party that was held at the Engineering Research Center (ERC).

I share this excerpt from my letter to him (in 1998) in support of his many years in education: "In these fifteen years I have come to know you as a great boss, a wonderful man, and a very good friend. I know I will never again have the privilege of working with such a brilliant, hardworking, dedicated, charming, and kind man. I cherish all the fond memories and look forward to experiencing more. I continue to pledge my service to you as long as you are associated with the University. I know we will be friends for many years to come." From about 2002 through most

of 2006, while I also worked full time for the Hydraulics division, Jack and I worked together only an hour or so a day at the ERC. Jack worked until he became blind in August 2006; but even in blindness (with my help), he edited an ASCE 7 document for Jon Peterka. I fulfilled my pledge of service to him by retiring from CSU on August 31 so I could care for him. Unfortunately, he could not work after his first stroke on October 31.

In the near future, I will continue my service to him when I archive his CSU and personal files. From these files, the CSU Morgan Library (Archives and Special Collections) will further perform the historical preservation of his illustrious life.

For many years, Jack worked part time at CSU and almost full time at CPP, Inc., all whilst caring for Helen at home. In March 2005, Helen was admitted to the hospital and was released for a 1-day stay in a nursing home where she died. It was important to Jack to keep her at home and not in a nursing home. With Helen gone, he wondered if a nursing home would be his fate. I promised him that under no circumstance would this be the case. Be assured that Jack was truly loved and he was cared for with the help of others. I fulfilled my promise to him, as he died at home on August 21.

I joyfully married this sweet and gentle man in 2006; and even though we had an almost 30-year association, I can say that it was not long enough. I will miss him dearly.

This tribute is submitted, in love and friendship, by his devoted and loving wife Gloria Garza.

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## Foundation Established in Memory of Late

### Dr. Michael P. Gaus

by Daan Liang, Texas Tech University

Dr. Michael P. Gaus, a well-known advocate for wind and earthquake engineering, passed away on January 3, 2012 in Seattle. To recognize his life-long contribution to the professional and scientific communities, a nonprofit Michael P. Gaus Foundation was established with the mission to advance and promote the knowledge of wind engineering and wind hazard mitigation. The certification of incorporation was issued by the State of Texas on April 23, 2012. On June 18, 2012, the IRS approved the Michael P. Gaus Foundation's tax exempt status under section 501(c)(3) of the Internal Revenue Code, allowing the foundation to receive tax-deductible contributions from individuals and corporations. The foundation is grateful for the first donation recently made by Dr. Kishor Mehta.

One of the initial activities of the foundation is to co-sponsor the Michael Gaus Distinguished Service Award bestowed by AAWE. If permitted by its financial resource, the foundation also plans to award the Michael P. Gaus Foundation Scholarship in Wind Engineering to a doctoral student on an annual basis.



To make a donation, please mail the check to:  
Michael P. Gaus Foundation  
c/o Daan Liang  
3211 53rd Street  
Lubbock, TX 79413

Any inquiries shall be forwarded to Daan Liang  
([daan.liang@ttu.edu](mailto:daan.liang@ttu.edu))



# NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

## 3rd American Association for Wind Engineering Workshop Summary

Hyannis, Massachusetts (USA), Aug. 12-14, 2012  
by Luca Caracoglia, [lucac@coe.neu.edu](mailto:lucac@coe.neu.edu),  
and Partha Sarkar, [ppsarkar@iastate.edu](mailto:ppsarkar@iastate.edu)

The 3rd American Association for Wind Engineering (AAWE2012) Workshop was held in the Resort and Conference Center at Hyannis (Cape Cod), Massachusetts from August 12th to 14th, 2012. The AAWE2012 workshop provided an excellent opportunity for interaction between engineers, students, scientists, and practitioners in the various fields of wind engineering and related disciplines. This workshop built on the success of the previous two workshops, one in Vail, Colorado (2008) and the other in Marco Island, Florida (2010), to bring the latest developments of wind engineering and wind hazard mitigation and its related disciplines to a broad audience, including university researchers, graduate students, scientists at national laboratories, and engineering practitioners in the field.

This workshop was organized, on behalf of AAWE, by Professor Luca Caracoglia (workshop chairman), Department of Civil and Environmental Engineering, Northeastern University, Boston, MA and Professor Partha P. Sarkar (workshop co-chairman and AAWE President), Department of Aerospace Engineering, Iowa State University. The organizers were assisted by staff and students from Northeastern University and members of the AAWE Board.

The workshop started on Sunday, August 12th with an ice-breaker event, held in the evening. A full day of presentations in a single-track format followed on August 13 and August 14. The official dinner was held on August 13. The workshop ended at 4 pm in the afternoon of Tuesday, August 14. The workshop was attended by 66 participants from 18 universities (including 13 US, 2 Canadian, 1 Australian, 1 Austrian and 1 Italian), insurance industries (AIR, FM Global, IBHS), private industry (RWDI, Weidlinger Associates) and government agencies (FHWA, NSF, NIST). The participants were a good mix of university faculty, graduate students/post docs and practitioners.

One of the primary goals of AAWE workshops is to encourage student participation since they are the future leaders in academia and engineering practice. Students find this type of workshop environment quite informal and therefore feel comfortable to present their research and receive feedback from attendees. Out of the 66 participants, there were more than 50% or 37 students (27 from US and 7 from Canada) at AAWE2012 making it a student-centric event. It was possible to attract so many students by supporting them through bursaries. Twenty-nine bursaries, 22 (\$400 each) through a NSF Travel Grant to the US students and 7 (\$300 each) through AAWE, were granted to the students who attended the workshop. The workshop was also supported through sponsorships from AIR Worldwide, Northeastern University, RWDI (Canada), Weidlinger Associates, and WinDEEE at Western University (Canada).

One of the primary goals of AAWE workshops is to encourage student participation since they are the future leaders in academia and engineering practice. Students find this type of workshop environment quite informal and therefore feel comfortable to present their research and receive feedback from attendees. Out of the 66 participants, there were more than 50% or 37 students (27 from US and 7 from Canada) at AAWE2012 making it a student-centric event. It was possible to attract so many students by supporting them through bursaries. Twenty-nine bursaries, 22 (\$400 each) through a NSF Travel Grant to the US students and 7 (\$300 each) through AAWE, were granted to the students who attended the workshop. The workshop was also supported through sponsorships from AIR Worldwide, Northeastern University, RWDI (Canada), Weidlinger Associates, and WinDEEE at Western University (Canada).

There were 46 oral presentations including 4 plenary papers that were organized under 2 plenary and 8 regular sessions. Further, there were 6 poster paper presentations during the three coffee breaks. Various moments of the workshop as captured in photographs could be viewed at <http://www.coe.neu.edu/Research/aawe2012/Pictures.htm>. Proceedings of the workshop that include the participants list, program, abstracts of presentations and 34 full-sized papers can be obtained from AAWE or the organizers at a modest cost.



Participants at the AAWE2012 Workshop after the last session

# NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

## AAWE Awards for 2013

The American Association for Wind Engineering is pleased to announce the following awards that will be presented at the America's Conference on Wind Engineering.

### Richard Marshall Award

**Description:** The Richard Marshall Award recognizes the contributions to Wind Engineering from a distinguished AAWE Member for the best doctoral thesis related to experimental methods or field investigations. This prestigious award honoring a PhD in Wind Engineering from a University in the 'Americas Region' of the IAWE is presented every 4 years at the America's Conference on Wind Engineering. Award is accompanied by a certificate and a prize of \$1000.

#### Requirements

- Applicant must be an AAWE member in good standing
- Applicants must have satisfied all graduation requirements before March 1, 2013 or graduated after March 1, 2009.
- Applicant's PhD dissertation must be in a topic related to Wind Engineering.

#### Application

- Applicants should be nominated by their supervisor or someone familiar with their work
- Applicants should submit a 2 page resume and an extended summary of their dissertation (20 pages maximum) or a journal paper based on their work
- Applicants can be nominated for either the Richard Marshall Award or the Robert Scanlan Award, but not for both awards.
- Nominations/applications are due by March 1, 2013

### Robert Scanlan Award

**Description:** The Robert Scanlan Award recognizes the contributions to Wind Engineering from a distinguished AAWE Member for the best doctoral thesis related to theoretical advances in the mechanics of wind of wind-structure interaction. This prestigious award honoring a PhD in Wind Engineering from a University in the 'Americas Region' of the IAWE is presented every 4 years at the America's Conference on Wind Engineering. Award is accompanied by a certificate and a prize of \$1000.

#### Requirements

- Applicant must be an AAWE member in good standing
- Applicants must have satisfied all graduation requirements before March 1, 2013 or graduated after March 1, 2009.
- Applicant's PhD dissertation must be in a topic related to Wind Engineering.

#### Application

- Applicants should be nominated by their supervisor or someone familiar with their work

- Applicants should submit a 2 page resume and an extended summary of their dissertation (20 pages maximum) or a journal paper based on their work
- Applicants can be nominated for either the Richard Marshall Award or the Robert Scanlan Award, but not for both awards.
- Nominations/applications are due by March 1, 2013

### Michael Gaus Distinguished Service Award

**Description:** The Michael Gaus Distinguished Service Award recognizes the contributions to Wind Engineering from a distinguished AAWE Member for involvement in AAWE activities, research, consulting, and outreach. This prestigious award honoring an individual is presented every 4 years at the America's Conference on Wind Engineering. Award is accompanied by a certificate and a prize of \$1000.

#### Requirements

- Applicant must be an AAWE member in good standing
- Applicants must have demonstrated significant contributions to the field of Wind Engineering for at least the 4 years preceding the ACWE. In most cases such a contribution will extend back many more years.

#### Application

- Applicants should be nominated by a member of AAWE
- Applicants should submit a 2 page resume and a summary of their career highlights
- Nominations/applications are due by March 1, 2013

### Best Journal Paper Award

**Description:** The Best Journal Paper Award recognizes the contributions to Wind Engineering from an AAWE Member for the best journal paper within the calendar year. This prestigious award honoring AAWE member(s) is presented annually, and awarded at the America's Conference on Wind Engineering and/or AAWE Workshop. Award is accompanied by a certificate and a prize of \$250.

#### Requirements

- Applicant must be an AAWE member in good standing, and half (a simple majority) of the authorship of the paper must be comprised of AAWE members in good standing.
- Applicant must have published a paper in a refereed journal within the calendar year, according to the DOI number of the publication.
- The journal paper must be in a topic related to Wind Engineering.

#### Application

- Applicants should submit a 1-2 page resume and a journal paper based on their work.

*(continued on the next page)*

# NEWSLETTER OF AMERICAN ASSOCIATION FOR WIND ENGINEERING

- Applicants nominated for this award can also be nominated for either the Richard Marshall Award or the Robert Scanlan Award.
- Nominations/applications are due by January 31, 2013

## Industry Innovation Award

**Description:** The Industry Innovation Award recognizes a distinguished AAWWE Member or AAWWE Corporate Member for their contribution or change to the practice of wind engineering or for their use of wind engineering to make a contribution to society. This prestigious award is presented every 4 years at the America's Conference on Wind Engineering. Award is accompanied by a plaque (no monetary prize).

### Requirements

- Applicant or nominating person must be an AAWWE member or corporate member in good standing.
- Applicants must have demonstrated significant contributions to the field of Wind Engineering in the 4 years preceding the ACWE.

### Application

- Applicants should submit a 1-2 page resume and a summary of their work, which could be a product, development, facility, study, code change or other contribution.
- Applicants can be nominated or they can apply directly for this award.
- Nominations/applications are due by March 1, 2013

Please send all nominations/applications to the AAWWE Awards Committee Chair:

Dr. Anne Cope  
IBHS Research Center  
5335 Richburg Rd  
Richburg, SC 29729  
[acope@ibhs.org](mailto:acope@ibhs.org)  
803.789.8000

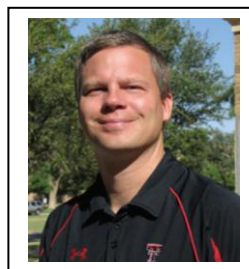
## International Recognition for AAWWE Members

Recently, three members of the AAWWE have been recognized with prestigious awards.



Dr. Ted Stathopoulos received the International Association for Wind Engineering (IAWE) Senior Award (Davenport Medal). This award was given for his many contributions to the modeling of wind load effects on structures with applications to building standards.

Dr. Stathopoulos is a Professor in the Department of Building, Civil and Environmental Engineering at Concordia University in Canada. He is currently the Editor of the Journal of Wind Engineering and Industrial Aerodynamics.



Dr. John Schroeder received the International Association for Wind Engineering (IAWE) Junior Award. This award was given for his many contributions to measurements and characterization of extreme wind events. Dr. Schroeder is an Associate Professor of Atmospheric Sciences in the Department of Geosciences

at Texas Tech University, Lubbock, Texas. He is the Director of the Wind Science and Engineering Research Center and currently serves as a member of the AAWWE Board of Directors.

Both the IAWE Senior and Junior Awards were given at the conference dinner of the BBAA7 Conference at Shanghai, China on September 4, 2012. (Source: [www.IAWE.org](http://www.IAWE.org))



Dr. David Prevatt received a Silver medal for Science and Technology from Trinidad and Tobago on September 29, 2012. This award is given annually by the National Institute of Higher Education, Research, Science and Technology (NIHERST) to honor scientists and engineers from the Republic of

Trinidad and Tobago. Dr. Prevatt was recognized for his consistent research in civil engineering focusing on improving the hurricane-resistance for residential construction and in developing tornado load models. Dr. Prevatt is an Assistant Professor in the Department of Civil and Coastal Engineering at the University of Florida and currently serves as a member of the AAWWE Board of Directors.





**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

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Professor and Director,  
Wind Simulation & Testing Laboratory  
Iowa State University  
Department of Aerospace Engineering  
Ames, IA 50011-2271  
E-mail: ppsarkar@iastate.edu  
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Baltimore, MD 21218  
E-mail: npjones@jhu.edu

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**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.

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**1415 Blue Spruce Drive**  
**Fort Collins, CO 80524**  
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