

# GLOBAL Gas Turbine News

ATLANTA, GEORGIA USA • ASME INTERNATIONAL GAS TURBINE INSTITUTE

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## Turbo Expo 2007 Set for Montreal

The excitement is building as gas turbine professionals from around the world make their plans to attend the 52nd edition of TURBO EXPO, ASME's gas turbine technical congress and exposition, from May 14 -17, 2007, in Quebec, Canada, at the Palais des Congres, located in Montreal's Quartier international.

# TURBO EXPO

Gas Turbine Technical Congress & Exposition

Presented by the International Gas Turbine Institute

Recognized as the world's premier event focused on gas turbines, this year's highlights include:

- The largest Turbo Expo technical congress ever produced in North America
- A high-quality exhibition of gas turbine products & services supported by the leading companies in the industry
- A momentous keynote luncheon featuring prominent industry leaders
- Enhanced attendee package that includes expanded networking opportunities, including 3 receptions and 4 lunches
- An Early Career Forum & Fair offering a unique opportunity for beginning engineers to interface with industry experts
- Three pre-conference short courses providing in-depth study on selected subjects
- An invited Scholar Lecture covering a topic of significant and timely contribution to the science and practice of gas turbine engineering

As an added bonus, Turbo Expo is being held in Montreal, a city famous for its culture, fine dining, great shopping and festivals. Montreal encompasses European charm in the heart of North America. Modern skyscrapers stand side by side with centuries-old buildings in Canada's second largest city.

### Keynote Luncheon to Kick-Off Conference

An opening luncheon on Monday, May 14, will feature awards presentations and keynote speakers. This year's keynote speakers, Dr. John Saabas, executive vice president for Pratt & Whitney Canada and Dr. David C. Wisler, manager of university programs for GE Aircraft Engines, will share their perspectives and insights on meeting the challenges of *Developing the Next Generation of Global Gas Turbine Engineers*.

### Early Career Forum and Fair to be Held in Montreal

Prior to the opening of Turbo Expo 2007, the ASME Center for Professional Development, Practice and Ethics and the Committee on Early Career Development will host an Early Career Forum and Fair at the Palais des Congres on Sunday, May 13, 2007, from 8 a.m. – 5 p.m.

For engineers in the beginning stages of their careers, the Early Career Forum & Fair will provide a unique opportunity to acquire exclusive practical advice and information on issues relevant to their careers from experienced experts in industry. Senior-level engineering students will also benefit from this important event.

The associated Career Fair is open to all attendees of the Forum. Engineering companies will be on-hand to discuss open positions and opportunities.

The Early Career Fair and Forum is a separate event from Turbo Expo; however, registration for the Fair/Forum also includes registration for the Turbo Expo Technical Congress for one day (Monday), including the keynote luncheon, as well as admission to the Exhibition on Tuesday.

Fees are \$50 for ASME members and \$75 for nonmembers. Register online at <http://asmeconferences.org/TE07/ConfRegistration.cfm>.



## VIEW FROM THE CHAIR

Tony Strazisar, Chair, IGTI Board of Directors



**Tony Strazisar**  
Chair  
IGTI Board of Directors

Will Rodgers once said, "Even if you're on the right track, you'll get run over if you just sit there." It was with that thought in mind that the IGTI Board of Directors asked Mike Ireland to develop a strategic plan for the Institute when he came on board as Managing Director a little more than a year ago. While we feel we've been on the right track for the last fifty years in developing TURBO EXPO into the world's premier gas turbine technical meeting and in spinning off GTUS as a stand-alone event for the last three years, we also recognize that we can't "just sit there" with these two meetings being our sole offering.

Mike did a masterful job of crafting a plan that will serve as a roadmap for future Institute activities and initiatives and the Board of Directors approved the plan last spring. The plan has five broad objectives:

- Become customer-driven and provide outstanding customer service
- Provide opportunities for customer networking
- Be seen as the clearinghouse for gas turbine information
- Provide opportunities for the professional development of our customers
- Advocate and promote gas turbines to the public, policy makers, and future engineers.

### Here's just a few examples of changes being driven by the Strategic Plan:

Our conference attendees and exhibitors have been asked for input on how to improve TURBO EXPO and GTUS through several customer surveys in the last two years. You've been talking and we've been listening. All TURBO EXPO advanced registrants will receive their conference credentials by mail before the meeting. (Of course if you feel that waiting in an on-site registration line provides quality networking time, you are welcome to register on-site in Montreal, but I suspect many of you will forego this opportunity!) All paid registrants at TURBO EXPO will receive admission to the Awards Luncheon on Monday and to Exhibit Luncheons on Tuesday through Thursday. This will maximize your networking opportunities and give you more time to explore the exhibit without conflicting with our top-notch technical sessions. Finally, the Local Liaison Committee is sponsoring an Early Career Forum on Sunday, a special networking opportunity for new gas turbine professionals.

The IGTI staff in Atlanta and the Board of Directors are focusing on Education as a new initiative for IGTI. At TURBO EXPO this year, the keynoters and

## On the Right Track

the IGTI Scholar Lecture will focus on education and collaborative research in keeping with our new focus on professional development. In addition, we've created a new staff position in Atlanta, Manager of Professional Development, and Tim Wiley joined the IGTI staff in that capacity in November. Tim's focus will be to develop new opportunities for professional development that reach beyond the TURBO EXPO and GTUS meetings. In January we used the power of the Internet to offer our first webinar, with Dr. Lee Langston discussing the role of gas turbines in global energy conversion. Tim's goal is to provide at least ten webinars each year. In March, the Board of Directors will conduct a planning workshop to explore in depth additional ways to develop and deliver educational products to benefit both seasoned and early-career gas turbine professionals and to use in advocating and promoting gas turbines. It's our hope that the March workshop will help us lay new track that will enable us to deliver new products to new customers in record time. And we're counting on you, our loyal IGTI members, to use your professional knowledge to help us drive the train.\*

## CALENDAR OF EVENTS

### MARCH 5-9, 2007

*7th European Conference on Turbomachinery*  
Athens, Greece

The scope of the conference covers the scientific and engineering fluid dynamic and thermodynamic problems in the design, development and operation of axial, mixed flow and radial turbomachinery.

### MAY 14-17, 2007

*ASME Turbo Expo 2007*  
Palais des Congres in Montreal, Canada

IGTI's flagship event comprises a major gas turbine conference and exhibition.  
<http://asmeconferences.org/TE07/>

### JUNE 9-14, 2007

*ASME Summer Annual Meeting*  
Fairmont Royal York Hotel in Toronto, Canada  
Contact: Melissa Torres, [TorresM@asme.org](mailto:TorresM@asme.org)

### SEPTEMBER 10-13, 2007

*35th Turbomachinery Symposium*  
George R. Brown Convention Center  
Houston, Texas US

### NOVEMBER 4 -7, 2007

*2007 Middle East Mechanical Expo Conference & Exhibition*  
Gulf International Convention Center, Gulf Hotel  
Manama, Kingdom of Bahrain

This Expo offers a unique opportunity for the Middle East region mechanical engineering professionals to share and exchange experiences and to explore the latest products & most recent technologies.

### DEC 11-13, 2007

*ASME Gas Turbine Users Symposium 2007*  
Co-located with Power-Gen International  
New Orleans, Louisiana, USA

Intended for gas turbine users/operators, knowledge providers, OEMS, project developers, third-party providers and others in the gas turbine community, GTUS 2007 will offer ideas and practical solutions for gas turbine operating challenges.

### APRIL 22-24, 2008

*The Independent Power & Energy Europe 2008*  
(incorporating On-Site Power) Exhibition  
National Exhibition Centre, Birmingham, UK

The event brings leading independent power and energy companies together under one roof, providing the ideal showcase and platform to network and display new technologies and products for all aspects of these growing markets.

### JUNE 9-13, 2008

*ASME Turbo Expo 2008*  
Estrel Berlin Hotel & Convention Center  
Berlin, Germany  
IGTI's flagship event comprises a major gas turbine conference and exhibition.



# Turbo Expo 2007 Leadership



Leading the organization of Turbo Expo 2007 are Conference Chair Reza Abhari, Executive Conference Chair Dr. Hany Moustapha, and Technical Program Chair Jayant Sabnis.

Abhari is a professor at the Institute for Energy Technologies of the Swiss Federal Institute of Technology (ETH Zurich). Abhari, said that, "Through its world-renowned Technical Congress and uniquely-focused Exposition, Turbo Expo brings together in a single forum the newest developments and solutions to some of the most challenging problems for those working with gas turbines worldwide."

Dr. Moustapha, ASME fellow and senior manager of Pratt & Whitney Canada Technology Programs, is serving as executive conference chair and local liaison committee chair for TURBO EXPO 2007. "As executive conference chair, Moustapha has formed a broad base of support among local companies and organizations involved in gas turbine products and services," said Abhari in expressing his appreciation for Moustapha's leadership. Moustapha stated that he and the local committee are "delighted to welcome such a prestigious gas turbine conference and exhibition to Montreal."

Dr. Sabnis is the Chief Engineer of Systems Analysis and Aerodynamics at Pratt & Whitney. Abhari com-

mended Sabnis for his work with IGTI's 17 Technical Committees in developing an outstanding program that this year will offer over 800 technical presentations and unique opportunities to meet leading authorities and learn about their latest work and advancements in gas turbine technology. "Over the decades, Turbo Expo has been a major forum for the introduction of countless innovations in all areas of gas turbine engines, including turbofans, combined cycles, materials coatings, and many others," according to Sabnis.

Abhari announced that this year more than 100 companies and other organizations will participate in the exposition, including Pratt & Whitney, Rolls-Royce, CD-adapco, and Ansys. Among the highlights of the exposition, National Research Council Canada will display the Bell 412HP helicopter incorporating advanced systems.\*



## Short Courses to be Offered Prior to Turbo Expo

This year IGTI is offering three educational short courses on Sunday, May 13, the day before Turbo Expo opens. "Combustion Humming in Gas Turbine Based Power Plants," "Gas Turbine Repair & Metallurgy" and "Rotordynamic Analysis of Centrifugal Compressors and API 617 Review" will each be held at the Palais des Congrès in Montreal.

### 2007 Scholar Lecturer Announced

Dr. Edward M. Greitzer, H.N. Slater Professor and Deputy Department Head for Aeronautics and Astronautics at the Massachusetts Institute of Technology, has been selected as IGTI's 2007 Scholar Lecturer for Turbo Expo. Greitzer's lecture *Some Aerodynamic Problems of Aircraft Engines: Fifty Years After*, will be based on a technical paper in which he proposes that step changes in gas turbine performance can emerge from multidisciplinary research conducted in collaborative endeavors. He will discuss how collaboration is critical in advancing technology, but has been much less a factor in gas turbine research.

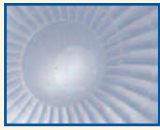
For more information or to register for Turbo Expo 2007, visit <http://asmeconferences.org/TE07/>. We look forward to seeing you in Montreal!

"Combustion Humming in Gas Turbine Based Power Plants" will be taught by Tim Lieuwen, a professor for the School of Aerospace Engineering, Georgia Institute of Technology in Atlanta, GA. The course will introduce students to combustion instabilities, often referred to as "humming."

"Gas Turbine Repair & Metallurgy" will be taught by Lloyd Cooke, Manager of Operations for Liburdi Turbine Services, Paul Lowden, Principal Engineer for Liburdi Turbine Services and Warren Miglietti, Principal Engineer for General Electric Corporation. The course is for operations and maintenance personnel who require an understanding of basic gas turbine metallurgy and repair technology in order to conduct business with repair shops and make repair vs. replacement parts decisions.

"Rotordynamic Analysis of Centrifugal Compressors and API 617 Review" will be taught by Dr. Edmund A. Memmott, Principal Rotor Dynamics Engineer for Dresser-Rand and Dr. Krish Ramesh, Senior Product Technology Engineer for Dresser-Rand. The course will provide a fundamental description of the rotor dynamics of centrifugal compressors and a history of the development of rotor dynamic capabilities in the context of the history of the dynamics paragraphs of API 617 from the 1st to the 7th editions.

The registration fee to attend a pre-conference short course is \$500 and will include lunch, refreshment breaks and course materials. For a more in-depth description of each short course, please visit <http://asmeconferences.org/TE07/ShortCourses.cfm>.\*



## **GE Signs Gas Turbine Contracts Valued over \$950 Million for Three Projects in Saudi Arabia**

GE Energy announced it has signed three contracts with the Saudi Electric Company (SEC) worth in excess of \$950 million to supply 23 F-class gas turbines and additional equipment for three power plants that will add 2,900 megawatts of capacity to the Kingdom's electricity grid.

### **These projects include:**

- Fifteen GE Frame 7FA gas turbine-generators for the Qurayyah Open Cycle Power Plant, a 1,907-megawatt project in Saudi Arabia's Eastern Province.
- Four 7FA units for the Faras Power Plant Expansion, also located in the Kingdom's Eastern Province, totaling 509 megawatts.
- Four 7FA machines for the Riyadh Power Plant No. 8 Extension-III Simple Cycle Power Plant in Saudi Arabia's Central Province, totaling 491 megawatts.

"We are excited to be able to support our long-standing relationship with Saudi Electric Company as well as the continuing growth of Saudi Arabia," said Steve Bolze, President of Power Generation for GE Energy. "We are pleased that SEC has selected our F-class gas turbines, which have been well-proven in more than 17.5 million hours of commercial service worldwide, to meet the challenge for reliable and efficiently produced power."

"These contracts are the latest in a long series of agreements between the two companies," said Abdullah Taibah, Region Executive, GE Energy – Middle East. "Over the years, SEC has purchased more than 200 GE Frame 5, 6 and 7E gas turbines for projects across the Kingdom."

In addition to the gas turbine-generators, GE will supply generator step-up transformers and main breakers, unit auxiliary transformers and ISO-phase busbars for each of the three plants. The scope of GE's contracts also includes technical advisory services, customer on-site training and performance testing.

Initially, the 7FA gas turbines will be used in simple-cycle, base load operation at all three plants, while the Qurayyah plant will have the option to be converted to combined-cycle in the future. Natural gas will be the primary fuel, with distillate oil as a backup, at all three plants.

## **Mirant to Sell Six Gas-Fired Plants for \$1.4bn**

Mirant Corporation is to sell six US natural gas-fired plants to LS Power Equity Partners, a member of the LS Power Group, for a \$1.407bn, which includes estimated working capital.

The net proceeds to Mirant from the sale after extinguishing \$83m of project-level debt are expected to be \$1.324m. The company does not expect to recognize any significant tax or book gain on the transaction.

The US plants being sold are the following: Zeeland (903MW), West Georgia (613MW), Shady Hills (469MW), Sugar Creek (561MW), Bosque (546MW) and Apex (527MW), constituting a total of 3,619MW. The transaction is expected to close by the second quarter of 2007 after the satisfaction of conditions.

"Although these plants do not fit within our business strategy, they are excellent facilities," said Edward R Muller, Chairman and Chief Executive Officer of Mirant Corporation. "We wish LS Power great success with them."

## **MIT creates turbine engine on a chip**

With funding from the U.S. Army Research Laboratory, MIT researchers are putting a tiny gas-turbine engine inside a silicon chip about the size of a quarter. The resulting device could run 10 times longer than a battery of the same weight can, powering laptops, cell phones, radios and other electronic devices. It could also dramatically lighten the load for people who can't connect to a power grid, including soldiers who now must carry many pounds of batteries for a three-day mission -- all at a reasonable price. The researchers say that in the long term, mass-production could bring the per-unit cost of power from microengines close to that for power from today's large gas-turbine power plants. (from MIT Tech Talk – Sept 2006)

## **OPRA Turbines Opens New Office**

Opra Turbines has opened a new sales and application engineering office in Houston, Texas, U.S.A. to serve the Western Hemisphere petroleum production and industrial markets for gas turbine generator sets in the 2000 KW range. The office is the initial entry of Opra Turbines into markets outside of Europe and operates as Opra Turbines, Inc., a wholly owned subsidiary of Opra Technologies ASA. At a future date, a turbine packaging and service facility is expected to be established in Houston to support customer orders and new installations in this hemisphere.

Focus of the Houston office will be the application and sale of the Opra 16-3 industrial gas turbine. It will be staffed with senior gas turbine sales personnel with extensive experience in the application and operation of industrial gas turbines in the petroleum production and industrial markets. Additional personnel will be added in the coming months to meet customer activity and inquiry levels.

Opra Turbines, Inc. is located at Kirkwood Plaza South, Suite 150, 11777 Katy Freeway in Houston, providing ready access to customers throughout the city. Opra Technologies ASA is headquartered in Oslo, Norway, with operations in Hengelo, The Netherlands, Stavanger, Norway and now Houston.

## **Gasification Power Plants Planned for Kentucky and Texas**

While renewable energy technologies are supplying a growing fraction of the nation's electricity, energy companies are also pursuing cleaner ways to generate electricity from coal. On January 23, GE Energy Financial Services, a unit of General Electric, announced that it is investing in a Kentucky power plant that will convert coal into a fuel gas similar to natural gas, which will be fed into a combined cycle gas turbine. The 630-megawatt facility will be built in Henderson County, near the northwest corner of the state, with a 20 percent equity investment by GE. Construction is expected to begin late this year, with commercial operation beginning in 2010 or 2011.

A gasification power plant is also being planned near Houston, Texas, but with a unique spin. Hunton Energy, an independent power producer, announced on January 24 its plans to build a \$2.4 billion power plant that will gasify petroleum coke, a refinery byproduct similar to coal. A nearby Valero Energy Corporation refinery will provide the petroleum coke, and Hunton Energy will use a combined cycle gas turbine to generate as much as 1,200 megawatts of power. The company plans to sequester the carbon dioxide produced by the plant by injecting it into the ground, possibly as a means of enhancing oil recovery from nearby oil wells. The groundbreaking for the first phase of the power plant is scheduled for next year. \*

# PROFESSIONAL DEVELOPMENT

## New Year Brings Change



Just like taxes, 2007 rolls in to encourage and convict us to shed the past and set sights on what lies ahead. This year is definitely different than the past as the IGTI board, staff, and members of ASME look to establish a secure foundation with a strong focus on Education initiatives.

### Two Successful Webinars Held

A key initiative this year is to hold 10 Webinars (web-based, virtual seminar held via the Internet) on a topic of interest to the gas turbine community. To date, we have hosted two successful Webinars with registrants from around the world. On January 3, 2007, Dr. Lee Langston, Professor Emeritus with the University of Connecticut's Mechanical Engineering department, presented *The Role of Gas Turbines in Global Energy Conversion*. Langston's presentation provided a "state of the industry" primer for anyone involved with gas turbines. Overall, the program received positive feedback by respondents to our post-Webinar survey. In fact, 85% of those who attended said they plan to attend future events.

On February 6, 2007, we held our second Webinar, *Discover the Benefits of Renewable Energy: Biomass Fuel Project by University of Iowa*. In this presentation, Ferman Milster, Associate Director of Utilities and Energy with the University of Iowa's Department of Facilities Management, described how their power plant has successfully utilized a process to convert a circulating fluidized bed boiler to co-fire oat hulls and coal. Milster's program included discussion about combined heat and power, open and closed carbon cycles, chemical comparison of oat hulls and coal as fuels, demonstrated emissions reductions, relative expenditures for purchased energy, and the Chicago Climate Exchange.

We are currently making plans for the rest of this year's Webinars, and we are looking for presenters for (but not limited to) these topics:

- IGCC electric power
- GT design trend electric power
- GT market analysis vs. other energy technologies
- GT air filtration and acoustical solutions
- GT fuel coalescing filters
- GT inlet and exhaust systems
- GT maintenance
- GT repair
- Turbine cleaning

Share your skill with your members and those wanting to improve their understanding of the industry by presenting a topic today. If you are interested in presenting a program, developing a presentation, want a copy of the Virtual Seminar Guidelines, or wish to learn about upcoming programs, visit our web site at <http://igti.asme.org/> or email Tim Wiley ([wileyt@asme.org](mailto:wileyt@asme.org)). \*

### ASME Scholarship Online Application

#### Scholarship Deadlines:

February 1, 2006 - March 15, 2007

Nearly \$100,000 in academic scholarships are awarded annually to ASME Student Members worldwide. Applications for the 2007-08 academic year will be accepted online (only) from February 1 through March 15, 2006. All applicants will be notified of results between June 15 and June 30, 2007. The program is a collaboration between the ASME Center for Education and the ASME Foundation.

Contact: Kemi Oluwanifise,

For more info: [http://www.asme.org/Education/College/FinancialAid/Online\\_Scholarships.cfm](http://www.asme.org/Education/College/FinancialAid/Online_Scholarships.cfm)



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### MISSION STATEMENT

The International Gas Turbine Institute of The American Society of Mechanical Engineers is dedicated to supporting the international exchange and development of information to improve the design, application, manufacture, operation and maintenance, and environmental impact of all types of gas turbines, turbomachinery and related equipment.



# The End is the Beginning

## Five Years as JEGTP Editor

By Lee Langston

On July 1, 2006 my five-year term as editor of the Transactions of the ASME's *Journal of Engineering for Gas Turbines and Power* came to an end. The new editor is Dilip Ballal, Hans von Ohain Distinguished Professor at the University of Dayton and ASME Vice President of IGTI.

The past five editorial years have been busy and productive ones, serving authors from around the world who wish to have their work published in the Journal. My editorial team has consisted of my wife Liz, Editorial Assistant, Production Coordinator Judy Sierant of ASME Technical Publishing in New York, a family of dedicated Journal associate editors, five past IGTI review chairs and a whole host of technical committee session chairs. The team efforts rest upon a bedrock of a thousand or so anonymous reviewers who recommend what is to be published in the Journal and subsequently archived.

Over the five years, we have published over 600 papers in the *Journal of Engineering for Gas Turbines and Power* in four issues per year, amounting to more than 5000 Journal pages. In 2004 we made the transition from papers submitted through mail services, to submission electronically on ASME's JournalTool Web site; this simplified the submission and review process significantly and seems to have resulted in more paper submissions.

There has been a continued growth of numbers of papers submitted to the Journal, increasing the backlog which is now about 1.5 years from paper submission to publication. For the past two years I have asked for additional journal pages to reduce the backlog, but



Lee Langston

have been unsuccessful in obtaining them from the ASME Publications Committee. I would urge the new editor Dilip Ballal to continue to petition the committee for more pages and more issues per year.

Although the Journal started 126 years ago in 1880 as a collection of energy conversion technology papers in the first volume of the Transactions of ASME, it is only in the last few decades that volunteer members served as editors. A listing follows:

Arthur Wennerstrom	1983 – 1988
George Serovy	1988 – 1993
Howard Julien	1993 – 1998
Harold Nelson	1998 – 2001
Lee Langston	2001 – 2006

Dilip thus becomes the sixth volunteer editor of JEGTP. Both Liz and I wish him and his wife Shuba (who will serve as the new editorial assistant) all the best. We have found that a husband/wife editorial team works well, and can be a sort of a bad cop/good cop duet when dealing with irate authors upset with critical reviews or with recalcitrant reviewers.

Being a technical editor is a rewarding and illuminating experience. One is constantly exposed to new ideas and new ways of viewing old ideas. Also, authors are always to be counted on to present fresh insights on why their work is unique and therefore must be published.

But the work is unrelenting. There are always new papers coming in to be acted upon – especially it seems after a vacation or a business trip. When Dilip was considering his editorship, I was tempted (but for selfish reasons, did not) to quote H.L. Mencken's 1936 letter to William Saroyan:

"I note what you say about your aspirations to edit a magazine. I am sending you by this mail a six-chambered revolver. Load it and fire every one into your head. You will thank me after you get to Hell and learn from other editors how their job was on earth. I wouldn't go back to magazine editing for all the money wasted by the Brain Trust."

Since my student days, I have always been awed and fascinated by thermodynamics, the scientific and engineering discipline that governs energy and energy conversion, both subject and substance of JEGTP papers. This fascination has served me well in the five-year journey of exploration as editor. T.S. Eliot wrote about such a journey:

"We shall not cease from exploration  
And the end of all our exploring  
Will be to arrive where we started  
And know the place for the first time."

My editor's journey has ended with an increased appreciation and wonder of thermodynamics ... and of the human efforts of contributors to the Journal, devoted to the understanding and application of energy and energy conversion.

May the next JEGTP editor's five-year journal of exploration similarly be one of fair winds and following seas. ✨

## BOOK NEWS

Joan G. Moore and John Moore

### **Functional Reynolds Stress Modeling**

*New Book Examines Turbulence Models Using Reynolds Stress Equations*

*Functional Reynolds Stress Modeling* is a recent book that develops a family of turbulence models with increasing levels of functionality, using the Reynolds stress equations. It applies the models to stationary and rotating flows including boundary layers, laminar to turbulent transition, and rapid distortion and uses glyphs to visualize turbulence stress and spectrum tensors.

The book is published by Pocahontas Press and co-authored by Joan and John Moore, ASME Professional Development short course lecturers and a former IGTI Education Committee chair.

*Functional Reynolds Stress Modeling* is aimed at graduate students, researchers, academics, and code developers, interested in the fields of turbulence and turbulence modeling, with application in advanced turbomachinery blade-row design, for example. It reconciles Reynolds stress modeling with rapid distortion theory and direct numerical simulations, and provides reviews and discussion of experimental and DNS data. A CD included with the book contains data analyses, derivations of equations, and color versions of figures. For more information, visit [users.adelphia.net/~moore64/frsm/](http://users.adelphia.net/~moore64/frsm/)



# IGTI Staff: We're Here to Serve!

In order to better serve the gas turbine industry, 2006 saw a number of changes to IGTI staff in Atlanta. Mike Ireland joined IGTI in December of 2005 and shortly thereafter collaborated with the IGTI Board of Directors to prepare an ambitious strategic plan for IGTI. Our vision is to be the world's foremost vehicle for the development and dissemination of all gas turbine educational and technological information. Key objectives of the plan include:

- Become customer-driven and provide outstanding customer service
- Provide opportunities for customer networking
- Be seen as the clearinghouse of gas turbine information
- Provide opportunities for the professional development of our customers
- Advocate and promote gas turbines to the public, policy makers and future engineers

For many years, IGTI has been synonymous with Turbo Expo. It was time to expand our reach and step up as the professional society of the gas turbine industry by offering more products and services. In order to accomplish our initiatives, we had to make significant changes to our organizational chart.

First and foremost, Turbo Expo isn't disappearing. However, we did want to make it a better experience for both attendees and exhibitors. Kevin Gaffney, who had been over Expositions and Marketing departed shortly after the Barcelona Meeting for an opportunity to lead another association. Gaffney accomplished much during his tenure with IGTI and established excellent customer relations with our exhibitors and sponsors. He certainly will be missed. However, his departure enabled us to reorganize a dated internal structure.

Judy Osborn, who has been with IGTI for over ten years, was promoted to Manager of Conferences and Expositions. She will oversee all aspects of Turbo Expo, GTUS and any future meetings that IGTI produces. Judy supervises Stephanie Sears, who coordinates Congress and Kristin Barringer, who coordinates Exhibits. Both bring talent and dedication to the team and we are confident thanks to Judy's leadership that you will see continuing improvements to Turbo Expo and other IGTI offerings.

For over 50 years Turbo Expo has been a great source of networking, information sharing and education. Our desire is to expand on that one-week experience and make IGTI your 24/7/365 gas turbine resource. We recently hired Rebecca Watrous as Communications Coordinator. She will be responsible for marketing IGTI products, gathering and disseminating industry information, and enabling our members to network and exchange ideas via a Virtual Information Clearinghouse. Over the next few years, you will see substantive changes to the IGTI website, which will allow you easy access to published papers, articles, books, training courses and opportunities to exchange information with each other.

An important part of our mission is to improve the gas turbine industry as a whole and provide opportunities for the professionals who work in it to advance personally. We have recently hired Tim Wiley as the IGTI Professional Development Manager. We are fortunate to have someone with Tim's education and experience in developing and managing training programs to lead IGTI in this effort. Tim is responsible for updating our current offerings, investigating and developing new programs on a variety of platforms, and possibly developing credentialing programs as needed. One of his first activities has been the creation of a series of webinars (web-based seminars) on salient industry topics. These one-hour live sessions delivered via the web offer you the opportunity to stay current without having to leave the office. In fact, they are also available for downloading afterwards at your convenience. These will provide the building blocks for many professional development opportunities at your disposal in the coming years. Our goal is to scan the industry, develop core competencies for each segment of the workforce and then deliver tools that will assist you in advancing your career.

IGTI is moving from a group of administrative staff responsible for putting on Turbo Expo each year to a team guiding a full-fledged society of gas turbine professionals. Of course, we still are only the staff. IGTI is your society. In order to best serve you, we need feedback and direction. And more importantly, we need you to participate and even volunteer to serve. We are lead by a volunteer Board, who act with your best interest in mind. We have 17 Committees that will need to expand their focus beyond Turbo Expo. Please let us know what we need to do to serve you better. And finally, please take advantage of what we offer. We can only be successful if you utilize what we do. \*

*Judy Osborn receives her certificate of recognition for 10 years of service to IGTI.*



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## **GTUS 2006 Provides Excellent Networking Opportunity... GTUS 2007 Set for New Orleans**

Led by expert, influential leaders of the gas turbine user community, GTUS 2006, held November 28-30 in Orlando, Florida, offered an impressive array of panel sessions, tutorials, and case studies addressing day-to-day challenges confronting both hands-on gas turbine operators and management-level decision-makers. Like GTUS 2005, the symposium was co-located with PennWell's popular trade show, Power-Gen International.

Registrants at the 2006 conference came predominantly from the United States, Canada, South America, and Western Europe and had a varied selection of topics from which to choose, organized under five primary tracks: Fuel Quality Issues and Approaches; Life Extension and Repair Processes; Products and Applications; Vibration and Dynamics; and General Topics of Importance to Users. Various fields within the gas turbine industry were represented, including

engineering management, engineering design/systems and planning, corporate management, and operations.

Patrick Campbell, GTUS 2006 Chair, said that the highlight of the conference was the networking dinner held on Wednesday, November 29. "The dinner provided a great opportunity for attendees to become better acquainted and share common experiences in an informal setting."

Campbell noted that the most popular topics at the conference dealt with products and applications upgrades and life extension and repair processes. His goals for GTUS 2007, to be held Dec 11-13 in New Orleans, Louisiana, include increasing attendance among gas turbine user companies and incorporating more round-table and case-study sessions into the conference format. In addition, Campbell said, "We are looking forward to holding the symposium in New Orleans and supporting the rebuilding efforts there."\*

### **Call for Sessions**

*ASME Gas Turbine Users Symposium 2007*  
*Chair: Patrick Campbell, GM, Project Initiatives, GE Oil & Gas*  
*December 11 - 13, 2007*  
*New Orleans, Louisiana USA*  
*Co-Located with Power-Gen International*

The ASME International Gas Turbine Institute is now accepting proposals for sessions to be offered during the 4th annual Gas Turbine Users Symposium (GTUS). The conference program will consist of multiple concurrent panel, case study, tutorial and discussion sessions. Proposed sessions should address the specific needs and interests of individuals who operate, troubleshoot and maintain combustion turbines, and for those who provide products and services to users. Possible tracks along which session topics may be developed include:

Fuel Quality Issues & Approaches  
Life Extension & Repair Processes  
Products & Applications  
Vibration & Dynamics

Other track(s) will be considered either as an alternative or an addition to these if sufficient developer and user interest is indicated.

### **Please submit session proposals by email to [igtiprogram@asme.org](mailto:igtiprogram@asme.org) in the following format:**

Subject of Email: GTUS07 Session Proposal

Include the following in the body of the email:

#### **Primary Contact/Session organizer, include:**

- Name
- Job Title
- Company
- Complete Mailing Address
- Phone Number
- Email Address

**Session Topic:** Enter Tentative Session Title

**Session Type:** Enter only ONE session type:

- Panel
- Case Studies
- Tutorial
- Discussion

**Conference Track:** Enter only ONE conference track:

- Gas Turbine Fuel Quality Issues & Approaches
- Gas Turbine Life Extension & Repair Processes
- Gas Turbine Products & Applications
- Gas Turbine Vibration & Dynamics
- Other (Specify)

**Session Description, include:**

- How this session will address the needs & interests of GT users
- What type of companies will be asked to provide presenters for the session
- A list of several potential presentation topics or discussion points

