



ASME International Gas Turbine



AWARDS PROGRAM



THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS® (ASME®)

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THE AWARDS

2020 ASME R. Tom Sawyer Award

2018 ASME Gas Turbine Award

2018 John P. Davis Award

2019 Dedicated Service Award

*2020 ASME IGTI Aircraft
Engine Technology Award*

*2020 ASME IGTI Industrial Gas
Turbine Technology Award*

*2020 ASME IGTI Dilip R. Ballal
Early Career Engineer Award*

AWARD COMMITTEES

*Honors & Awards
Committee*



John Blanton
Chair

*Aircraft Engine
Technology Award
Committee*



Andrew Nix
Chair

*Industrial Gas
Turbine Technology
Award Committee*



John Gülen
Chair



R. TOM SAWYER

Award

Awarded to an individual who has made important contributions to advance the purpose of the gas turbine industry and the ASME International Gas Turbine Institute over a substantial period of time. The contribution may be in any area of Institute activity but must be marked by sustained forthright efforts.



Sunao Aoki

Executive Corporate Adviser
Mitsubishi Heavy Industries, Inc.

(Retired 2019)

Sunao Aoki joined Mitsubishi Heavy Industries (MHI) Ltd. in 1972 after receiving his Master's Degree in Aeronautical Engineering from Kyushu University. He was engaged in the design and key technology development for new gas turbines from 1972 to 2003. He devised unique technology strategies for large gas turbines for power generation and led the development of cutting-edge technology through collaboration with world-class universities over 20 years.

He also played a significant role as the chief turbine designer for the development of gas turbines, such as M701D, MF111, M501F/M701F, M501G/M701G, and M501H. In 2003, he became a director of MHI and expanded his activities to manufacturing, supply-chain management, and after-sales service.

He was elected a Fellow of ASME in 2004. In 2006, he became the CTO and led all of the MHI's technology development. He actively promoted the development of critical technologies for gas turbines with a firing temperature of 1700°C. These technologies led to the success of M501J/M701J.

He retired from MHI in 2011 as Senior Executive VP. From 2013 to 2018, he again worked for MHI and led a project for enhancing the cost competitiveness of the combined cycle.

GAS TURBINE AWARD

The Gas Turbine Award was established in 1963 to be given in recognition of an outstanding contribution to the literature of combustion gas turbines or gas turbines thermally combined with nuclear or steam power plants.

Receiving the 2018 Gas Turbine Award for their paper:

“Experimental and Numerical Investigation of Optimized Blade Tip Shapes”



Bogdan Cernat
von Karman Institute for
Fluid Dynamics, Belgium

Bogdan Cezar Cernat is a PhD Candidate in the Turbomachinery and Propulsion department of the von Karman Institute for Fluid Dynamics.

Bogdan received his MSc in Mechanical Engineering from Polytechnic University of Marche in Ancona, Italy, where he graduated “cum laude” in 2014. In July 2015, he obtained the Research Master degree at the von Karman Institute for Fluid Dynamics, with a project on the aerodynamic investigation of turbine blade cooling channels by full-field optical measurement techniques.

Since 2015, he is a PhD candidate at the von Karman Institute. His research entails the implementation of advanced rotor blade tip geometries in aeroengine high pressure turbines. His field of expertise includes experimental and numerical techniques to characterize unsteady turbomachinery flows, with focus on the design and implementation of high-bandwidth aerothermal instrumentation and on the development of advanced data-reduction procedures.

Bogdan is an active member of the ASME, and his research led to the publication of four journal articles and five technical papers.



Marek Pátý
Department of Technical
Mathematics, Prague,
Czech Republic

Marek Pátý is a PhD student at the Department of Technical Mathematics at CTU in Prague, Czech Republic. During his master studies at CTU in Prague he led the Vehicle Aerodynamics Department in the Formula Student team EForce Prague Formula.

After graduating with Distinction in 2015 he started his PhD on numerical investigation of fluids structure interaction in turbomachines and in 2017 he completed with Honors the Research Master Course at the von Karman Institute in Belgium.

Marek is currently finishing his PhD at CTU in Prague and his research concentrates on numerical flow simulation, postprocessing and flow analysis in turbomachines.



***Dr. Cis De
Maesschalck***

Aerothermal Engineer
Rolls Royce

Dr. Cis De Maesschalck is currently a Turbine Aerothermal Engineer in the Future Programmes & Technology group at Rolls-Royce plc. His work covers the design of the Turbine Architectures for the next generation civil aircraft engines.

He received a Master in Mechanical Engineering from the Katholieke Universiteit Leuven in Belgium in 2011 and a Research Master specializing in Turbomachinery & Propulsion at the von Karman Institute for Fluid Dynamics in 2012. In 2016/17, he obtained a double doctoral degree from Purdue University and the Vrije Universiteit Brussel for his combined numerical and experimental work on the optimization of unshrouded turbine blade tip designs.

Dr. De Maesschalck is a Fulbright Alumnus, and co-authored over 30 scientific publications and 3 patents while working across the globe at universities and in the industry, focusing on today's aerothermal challenges.

He has been involved with ASME since 2013 through a variety of positions, including the ASME ECLIPSE Leadership Program, co-organizer of the ASME Advanced Manufacturing & Repair for Gas Turbines Symposium, member of the ASME IGTI Heat Transfer Committee and he has chaired sessions at Turbo Expo for several years.



***Dr. Sergio
Lavagnoli***

Associate Professor
von Karman Institute

Dr. Sergio Lavagnoli is an Associate Professor in the Turbomachinery and Propulsion department of the von Karman Institute for Fluid Dynamics.

He received his MSc in mechanical engineering from the Polytechnic University of Marche in Italy in 2006 and in 2008 he obtained the Research Master degree from the von Karman Institute. He received his PhD in Applied Sciences from the Polytechnic University of València, Spain, in 2012 with an experimental work on the aero-thermodynamics of a multi-airfoil turbine vane frame for aircraft jet engines. Upon graduation he continued to work at the von Karman Institute as a post-doctoral researcher and research engineer, before being appointed assistant professor in 2015 and associate professor in 2020.

Professor Lavagnoli has 13 years of experience on experimental and numerical aerothermal studies on gas turbine engine turbomachinery. His research area includes fundamental studies on the aerodynamics and heat transfer of jet-engine turbines, turbomachinery optimization and development of instrumentation and data processing techniques.

He has coauthored over thirty technical papers and journal articles and two patents. He is an active ASME and AIAA member and currently serves in both the AIAA Gas Turbine Engines and the ASME Heat Transfer technical committees. Sergio is also a member of the editorial board of the IGTI Global Gas Turbine News.

JOHN P. DAVIS AWARD

Awarded to a paper that focuses on new or continuing gas turbine applications, identifies planning, installation, operating and/or maintenance problems and their solutions, and exemplifies candid exposure of real-world problems and solutions.



Dr. Sung Choi

Science &
Technology Lead
Naval Air Systems
Command

Dr. Sung Choi is a Science & Technology Lead in materials engineering at Naval Air Systems Command (NAVAIR). He received his MS and PhD in Mechanical Engineering from University of Washington and University of Massachusetts - Amherst, respectively. Dr. Choi's major areas of interest include advanced propulsion materials systems in their applications to structural propulsion components with respect to fracture and fatigue, reliability, environmental durability, life prediction/modeling, and test methodology developments. He has over 30 years of experience in propulsion materials, including 17 years at the NASA Glenn. He works extensively with industry, academia, and government to implement propulsion materials technologies to advanced Naval propulsion systems. Dr. Choi is a former Chair of Ceramics Committee of IGTI, a recipient of 4 IGTI Best Paper Awards, a Fellow of ASME, and an Associate Fellow of NAVAIR. He has written over 250 technical articles in journals, proceedings, reports, and book chapters.



David Shifler

S&T Program Officer
Office of Naval Research

Dave has over 40 years of experience in the areas of materials and materials characterizations. He is currently S&T program officer in the Naval Materials Division of the Mission Capable, Persistent and Survivable Naval Platforms Department (Code 33) at the Office of Naval Research (ONR) in the areas of high temperature propulsion materials for aero and shipboard gas turbine engines and in cellular materials for blast mitigation and thermal management.

He is a NACE-certified Corrosion Specialist, a NACE-certified Materials/Design Specialist and a registered professional engineer (metallurgical engineering). He is a Fellow of NACE International, the Institute of Corrosion in the UK, and ASM International.

He has edited several books and has authored numerous book chapters, papers, and government technical reports, in the areas of non-aqueous, aqueous, and high temperature corrosion. He is currently finalizing a book on Marine Corrosion. He also belongs to numerous professional societies related to materials, materials characterization, corrosion, and electrochemistry of materials.

DEDICATED SERVICE

Award

The ASME Dedicated Service Award honors unusual dedicated voluntary service to the Society marked by outstanding performance, demonstrated effective leadership, prolonged and committed service, devotion, enthusiasm and faithfulness.



***Dr. Michael
Klassen***

Vice President & Principal
Research Engineer
*Combustion Science
& Engineering*

Dr. Klassen is Vice-President and Principal Research Engineer at Combustion Science & Engineering, Inc. He is responsible for the design and execution of numerous experimental and analytical projects in combustion research and fire protection engineering. Dr. Klassen is also Chief Technical Officer for LPP Combustion. He is a co-inventor of a process for clean combustion of liquid fuels and responsible for development of the technology.

Dr. Klassen obtained his Ph.D. at the University of Maryland, where he studied the combustion properties of liquid-fuel pool flames. Dr. Klassen served as a Visiting Assistant Professor at Purdue University, where he developed laser and optical diagnostic techniques for use in combustion applications and studied NO_x formation at elevated pressures. Dr. Klassen has recently directed research projects in areas including ignition, combustion kinetics and high-pressure combustion. Dr. Klassen recently completed a term as the Chair of the Combustion Fuels and Emissions Committee for IGTI.



Dr. Atul Kohli

Senior Fellow
*Heat Transfer —
Analytical Methods*

Dr. Atul Kohli received his Bachelor's degree in Mechanical Engineering from the Indian Institute of Technology in Kharagpur, India. After receiving his Masters and PhD. in Mechanical Engineering from The University of Texas at Austin, he joined Pratt & Whitney in 1997. Atul has held positions of increasing responsibility within Turbine Aerodynamics, Multi-Disciplinary Optimization, Turbine Durability and Aero-Thermal Systems disciplines. His focus has been on improved modeling of cooling and heat transfer across various engine components. As Senior Technical Fellow, he impacts a broad range of Pratt & Whitney products by improving proficiency of practitioners and developing state-of-the-art analytical methods and design processes. He has more than 30 refereed publications and 15 issued patents with over 30 pending.

Since 1995, Atul has participated in the ASME Turbo Expo in various roles as an author, reviewer, session organizer, vanguard chair, point contact and most recently, conference chair. He has been an active member of the K-14 Heat Transfer committee and is the incoming vice-chair. Atul was elected an ASME fellow in 2009.

AIRCRAFT ENGINE TECHNOLOGY AWARD

For outstanding contribution to air breathing propulsion through inspiring leadership, education, and research having major impacts on aircraft engine operational capability, performance, and design.



Dr. Wing Ng

*Christ Kraft Endowed Professor, College of Engineering
Alumni Distinguished Professor
Virginia Tech*

Dr. Wing Ng is the Chris Kraft Endowed Professor in the College of Engineering and an Alumni Distinguished Professor at VaTech. In addition to being a professor, Wing is also the founder of Techsburg; an engineering company that has provided important testing services to the aerospace and gas turbine industries for over twenty years.

He has performed research for industries (Rolls-Royce, Pratt & Whitney, General Electric, Siemens, Honeywell, Solar Turbines, Honda, Doosan, Northrop-Grumman...etc) and government agencies (NASA, DoD, DOE). Many of his research directly impact aerospace products, resulting in significant saving to his sponsors. Wing has also received several awards for his teaching and research and has received several best paper awards from ASME and AIAA.

He has served as Technical Editors for several Journals for both of these professional societies, and he is a Fellow of the ASME and a Fellow of AIAA. Wing is also active in serving the US government and has given expert testimony to the US Congress relating to US aerospace industries, as well as served on various advisory committees for NASA and the DoD.

Wing received a BS in Mechanical Engineering from Northeastern U and an MS and a PhD in Mechanical Engineering from MIT.

INDUSTRIAL GAS TURBINE TECHNOLOGY

Award

For outstanding contributions and leadership in gas turbine combustion research and development in electric power generation industry.



Dr. Thomas Sattelmayer

*Professor and Chair of the Thermodynamics
Institute in Mechanical Engineering
Technical University of Munich*

After 11 years in industry at BBC/ABB, Dr. Sattelmayer joined the Technical University of Munich in Germany in 1997 and since then he is Professor and Chair of the Thermodynamics Institute in Mechanical Engineering.

His research interest is related to thermo fluid dynamics with special focus on power systems, reliability & safety, mobility and water. In the combustion area, research projects include thermoacoustics instabilities, turbulent flame noise, flame propagation, self-ignition and engine knock, turbulent mixing, NO_x and CO formation, supersonic combustion and transition from deflagration to detonation. Research projects in two-phase flow and heat transfer include energy systems, atomization, confined multiphase flows, subcooled boiling and catalytic exhaust gas treatment with urea.

Since his first ASME journal publication appeared in 1986, Dr. Sattelmayer has remained closely associated with the ASME International Gas Turbine Institute throughout his professional career and has been active in almost all functions of the Institute.

Dr. Sattelmayer received the IGTI John P. Davis Award in 1990, the Asea Brown Boveri Technology Achievement Award in 1993, the ASME Gas Turbine Award in 2002 and 2011 and the Innovation Award of the Global Power and Propulsion Society (GPPS) in 2017.

He has a total of about 550 publications, including about 170 journal publications and some book chapters.

More than 100 students have completed their doctorates at the Thermodynamics Institute under Dr. Sattelmayer's supervision.

DILIP R. BALAL EARLY CAREER AWARD

Awarded to an individual who has made significant contributions in the gas turbine industry within the first five years of their career.



Dr. Reid Berdanier

*Assistant Research Professor, Mechanical Engineering
Penn State University*

Dr. Reid Berdanier is an Assistant Research Professor at Penn State University in the Department of Mechanical Engineering.

He obtained a B.S. in Mechanical Engineering from Syracuse University in 2010. He then moved to Purdue University, where he received an M.S. in Mechanical Engineering in 2012 and a Ph.D. in 2015.

At Purdue, his research contributions focused on the experimental characterization of rotor tip clearance flows in multistage compressors. In 2016, Dr. Berdanier joined the faculty at Penn State University as part of the Steady Thermal Aero Research Turbine (START) Laboratory.

His current research focuses on the development and integration of novel instrumentation techniques for turbomachinery applications and the use of these methods to reveal the underlying flow physics governing aerodynamics and heat transfer in turbines and compressors. He is an active member of ASME and the IGTI Turbomachinery Committee.

OUTGOING CHAIRS

The core of IGTI is its committees, and the members of those committees drive our excellence. We greatly appreciate those individuals who commit to leading these committees as chair and recognize their time, expertise and effort required to do the job. Thank you for your service from July 1, 2018 to June 30, 2020.

Wilfried Visser

Aircraft Engine Committee

Johan Van der Spuy

Fans and Blowers Committee

Jun Shi

Ceramics Committee

John Blanton

Heat Transfer Committee

Pierre Q. Gauthier

*Coal, Biomass & Alternative
Fuels Committee*

Douglas Nagy

*Manufacturing Materials &
Metallurgy Committee*

Peter Loftus

*Controls, Diagnostics &
Instrumentation Committee*

Jerzy T. Sawicki

Structures & Dynamics Committee

Ionna Aslanidou

Education Committee

Shawn Siroka

Student Advisory Committee

Thomas Christiansen

Electric Power Committee

BEST PAPERS

Aircraft Engine

GT2019-91039: Fan Flow Field in an Installed Variable Pitch Fan Operating in Reverse Thrust for a Range of Aircraft Landing Speeds

David John Rajendran,
Vassilios Pachidis

Ceramics

GT2019-90368: Foreign Object Impact Damage in Ceramic Matrix Composites: Experiments and Computational Predictions

Rajesh Kumar,
Matthew Mordasky

Coal, Biomass & Alternative Fuels

GT2019-91191: Implementing Environmental Impact Assessment on the Life Cycle for Industrial Gas Turbines Development

Alessandro Musacchio,
Mattia Vicarelli, Simone Colantoni, Pietro Bartocci, Francesco Fantozzi

Combustion, Fuels, and Emissions

GT2019-91396: Impact of Wall Temperature in Large Eddy Simulation of Light-Round in an Annular Liquid Fueled Combustor and Assessment of Wall Models

Stefano Puggelli, Théa Lancien, Kevin Prieur, Daniel Durox, Sebastien Candel, Ronan Vicquelin

GT2019-90447: Examining the Effect of Geometry Changes in Industrial Fuel Injection Systems on Hydrodynamic Structures With BiGlobal Linear Stability Analysis

Thomas Ludwig Kaiser, Kilian Oberleithner, Laurent Selle, Thierry Poinsot

GT2019-90438: Prediction of the Flow Response of a Turbulent Flame to Acoustic Perturbations Based on Mean Flow Resolvent Analysis

Thomas Ludwig Kaiser, Lutz Lesshafft, Kilian Oberleithner

Controls, Diagnostics, and Instrumentation

GT2019-90161: Extending Engine Gas Path Analysis Using Full Flight Data

Liang Tang, Allan Volponi, Ethan Prihar

Cycle Innovations

GT2019-91036: Techno-Economic Comparative Analysis of Innovative Combined Cycle Power Plant Layouts Integrated With Heat Pumps and Thermal Energy Storage

Rafael Guédez, Jose Garcia, Antti Nuutinen, Giovanni Graziano, Justin Chiu, Alessandro Sorce, Luca Piantelli, Alberto Traverso, Björn Laumert

GT2019-91138: Model-Based Analysis of the Start-Up Improvement of a CCPP due to Steam Turbine Warm-Keeping With Air

Dennis Toebben, Tobias Burgard, Sebastian Berg, Manfred Wirsum, Pei Liu, Zheng Li, Wolfgang F. D. Mohr, Klaus Helbig

Education

GT2019-92060: Offering Engineering Students Global Prospective Through Experiential Learning Project in Wind Energy and Sustainability

Lamyaa El-Gabry,
Tina Jaskolski

Electric Power

GT2019-90773:

Development of High Efficiency 5MW Class Gas Turbine the Kawasaki M5A

Shinya Ishihara, Koji Terauchi, Takuya Ikeguchi, Masanori Ryu

Fans & Blowers

GT2019-90212: Successive Aeroacoustic Transfer of Leading Edge Serrations From Single Airfoil to Low-Pressure Fan Application

Till M. Biedermann, Frank Kameier, Christian Oliver Paschereit

Heat Transfer

GT2019-91870: Heat Transfer Coefficient Augmentation for a Shaped Film Cooling Hole at a Range of Compound Angles

Shane Haydt, Stephen Lynch

GT2019-90997: Scaling Flat Plate, Low Temperature Adiabatic Effectiveness Results Using the Advective Capacity Ratio

Jacob Fischer, James L. Rutledge, Luke McNamara, Marc D. Polanka

GT2019-90770: Numerical Investigation on the Effect of Rotation and Holes Arrangement in Cold Bridge Type Impingement Cooling Systems

Simone Paccati, Lorenzo Cocchi, Lorenzo Mazzei, Antonio Andreini

Industrial and Cogeneration

GT2019-90324: Gas Path Diagnostics for a Once-Through Steam Generator

Yuzhi Chen, Yiguang Li, Mike Newby

Manufacturing Materials & Metallurgy

GT2019-90971: Development of Production Eddy Current Inspection Process for Additively Manufactured Industrial Gas Turbine Engine Components

Brandon Kemerling, Daniel Ryan

Marine

GT2019-91873: Advantages and Experience of Using SSS (Synchro-Self-Shifting) Clutches in Hybrid Propulsion Such As CODELOG or CODELAG Naval Marine Systems

Morgan Hendry, Nicholas Bellamy

Mircoturbines, Turbochargers, and Small Turbomachinery

GT2019-91596: A Numerical Thermohydrodynamic Study of Fixed Pad Oil Lubricated Thrust Bearings

Saeid Dousti, Paul Allaire, Jianming Cao, Bradley Nichols, Timothy Dimond

Oil & Gas Applications

GT2019-90057:

Anomaly Detection in Gas Turbine Time Series by Means of Bayesian Hierarchical Models

Enzo Losi, Mauro Venturini, Lucrezia Manservigi, Giuseppe Fabio Ceschini, Giovanni Bechini

Steam Turbine

GT2019-91297: Probabilistic Lifetime Assessment Approach of 2%-Cr Steel Considering Material and Loading Profile Scatter

Klaus Helbig, Dennis Jarmowski, Felix Kolzow, Christian Kontermann

GT2019-90003:

Development and Verification Tests of Titanium 50-Inch and 60-Inch Last Stage Blades for Steam Turbines

Shigeki Senoo, Takeshi Kudo, Hisataka Fukushima, Kiyoshi Segawa, Kazuya Sakakibara

Structures & Dynamics

GT2019-90396: Simple Contact Stiffness Model Validation for Tie Bolt Rotor Design With Butt Joints and Pilot Fits

Aaron Rimpel, Matthew Leopard

GT2019-91621: Conceptual Flutter Analysis of Stepped Labyrinth Seals
Roque Corral, Almudena Vega, Michele Greco

GT2019-90984: Pressure Profile Measurements Within the Gas Film of Journal Foil Bearings Using an Instrumented Rotor With Telemetry
Karim Shalash, Jürg Schiffmann

Supercritical CO₂ Power Cycle Committee

GT2019-90493: sCO₂ Power Cycle Component Cost Correlations From DOE Data Spanning Multiple Scales and Applications
Nathan T. Weiland, Blake W. Lance, Sandeep R. Pidaparti

GT2019-91189: The Role of Turbomachinery Performance in the Optimization of Supercritical Carbon Dioxide Power Systems
Alessandro Romei, Paolo Gaetani, Andrea Giostri, Giacomo Persico

Turbomachinery

GT2019-92048: The Influence of Fan Root Flow on the Aerodynamics of a Low-Pressure Compressor Transition Duct
A Duncan Walker, Ian Mariah, Dimitra Tsakmakidou, Hiren Vadhvana, Chris Hall

GT2019-90217: Tip Leakage Flow Instability in a Centrifugal Compressor
Teng Cao, Tadashi Kanzaka, Liping Xu, Tobias Brandvik

GT2019-90307: The Impact of Combustor Turbulence on Turbine Loss Mechanisms
Masha Folk, Robert J. Miller, John D. Coull

Wind Energy

GT2019-90956: Assessing the Sensitivity of Stall-Regulated Wind Turbine Power to Blade Design Using High-Fidelity CFD
Andrea Giuseppe Sanvito, Giacomo Persico, Michele Sergio Campobasso

ASME IGTI Committee

BEST TUTORIAL

Oil & Gas Applications

Industrial Gas Turbines: An Introduction

Rainer Kurz, Bernhard Winkelmann

2020

YOUNG ENGINEER TURBO EXPO

Participation Award

Saarthak Gupta

Indian Institute of Science

Xiao He

Imperial College London

Shreyas Hegde

Duke University

Daniel Inman

Purdue University/ USA Air Force

Hardik Jani

Texas A&M University

Andressa Johnson

University of Connecticut

Hussain Kaizar

Texas A&M University

Zhihui Li

*Institute of Engineering Thermophysics,
Chinese Academy of Sciences*

Marco Manfredi

Politecnico di Milano

Luca Mantelli

Università degli Studi di Genova

Izzet Sahin

Texas A&M University

Hari Shrestha

Atlas Copco Comptec LLC

Sanna Siddiqui

Florida Polytechnic University

Dung Tran

Energy Recovery Inc

Xing Yang

Xi'an Jiaotong University

James Braun

Purdue University

Elise Delhez

*University of Liege (Belgium) &
Polytechnique Montreal (Canada)*

Scott Egbert

University of Colorado Boulder

Mahmood Alqefl

Praxair

Maria Alessadandra Ancona

University of Bologna

STUDENT ADVISORY COMMITTEE

Travel Award

Dino Anthony Celli

The Ohio State University

Tânia Sofia Cação Ferreira

*Université catholique de Louvain/von
Karman Institute for Fluid Dynamics*

Spencer Sperling

The Ohio State University

Avinash Ambadas Renuke

University of Genoa, Italy

Manas Madasseri Payyappalli

Indian Institute of Technology Bombay

Richard Alan Celestina

The Ohio State University

Elissavet Boufidi

*von Karman Institute/Université
Catholique de Louvain*

Mavroudis D. Kavvalos

Malardalen University (MDH)

Matthew Aaron Meier

Purdue University

Louis Edward Christensen

The Ohio State University

Alessandro Romei

Politecnico di Milan

Brian, Frederick, Knisely

Pennsylvania State University

Kedar Prasad Nawathe

University of Minnesota -- Twin Cities

Rahul Kumar

Indian Institute of Technology Madras

Mohammed Ibrahim Kittur

University of Malaya, Kuala Lumpur, Malaysia

Kishore Ranganath

Ramakrishnan

North Carolina State University

Bernhard Stiehl

Universtiy of Central Florida

Shinjan Ghosh

University of Central Florida

Shuo Mao

Virginia Tech

Erik Matthew Ninnemann

University of Central Florida



The American Society of Mechanical Engineers
International Gas Turbine Institute