



ASTFE

American Society of Thermal and Fluids Engineers

4TH THERMAL AND FLUIDS ENGINEERING CONFERENCE

Westin Hotel, Las Vegas

14-17
APRIL

2019

Las Vegas
NV, USA

www.astfe.org/tfec2019/

The 2019 American Society of Thermal and Fluids Engineers (ASTFE) Conference will be held April 14-17, 2019 in the Westin Hotel, Las Vegas, NV, USA. ASTFE is the premier international society by and for professionals within the thermal and fluids science and engineering community. The 2019 ASTFE conference provides an international forum for the dissemination of the latest research and knowledge in the thermal and fluid sciences.

- Advanced Energy Systems
- Aerospace Applications
- Atomization
- Combustion, Fire and Fuels
- Computational Methods/Tools in Thermal-Fluid Systems
- Cryogenics
- Electric, Magnetic, Flow and Thermal Phenomena in Micro and Nano-Scale Systems
- Energy and Sustainability
- Energy Storage Systems
- Energy-Water-Food Nexus
- Engineering Equipment and Environmental Systems
- Engineering Fundamentals and Methodology
- Experimental Methods/Tools and Instrumentation in Fluid Mechanics and Heat/Mass Transfer
- Flow and Heat Transfer in Biological Systems
- Flow and Heat Transfer in Materials Processing Science and Manufacturing
- Flow in Internal Multiphase Flows
- Flow Instability
- Fluid Flow and Heat Transfer in Industrial and Commercial Processes
- Fluid Flow and Heat Transfer Multiphase Phenomena
- Fluid Measurements and Instrumentation
- Fluid Mechanics and Rheology of Nonlinear Materials and Complex Fluids
- Fuel Cells
- Fundamentals in Fluid Flow and Heat/Mass and Momentum Transfer
- Heat Exchangers: Compact, Novel, Networks
- Heat Pipes
- Heat Pumps
- Heat/Mass Transfer Enhancement Techniques
- Industry Problems: CO₂ Capture
- Material Issues, Ceramics, Low Thermal Conductivity
- Measurement and Modeling of Environmental Flows
- Multiphase Flow
- Nano and Micro Fluids Applications
- Natural and Built Environments
- Plasma Physics and Engineering
- Refrigeration, Air Conditioning Systems, and Refrigerants
- Solar Energy Equipment and Processes
- Thermo-economic Analysis of Energy Systems
- Thermo-Fluid Education
- Transportation
- Turbulent Flows
- Wind Turbines Aerodynamics and Control

OUTSTANDING PLENARY SPEAKERS



Susan N. Coppersmith

Robert E. Fassnacht and Vilas Professor of Physics, University of Wisconsin-Madison. Susan Coppersmith, a theoretical physicist at the University of Wisconsin, Madison, has applied her talents across this span, from modeling the assembly of mollusk shells to programming quantum computers. Coppersmith was elected to the National Academy of Sciences in 2009, and in her Inaugural Article she describes and models the surprising intersecting lines and folds that appear in compressed monolayers of gold nanoparticle.



TD Barnes

Thornton D. "TD" Barnes, author, and entrepreneur, grew up on a ranch at Dalhart, Texas. Barnes's career includes serving as a field engineer at the NASA High Range in Nevada for the X-15, XB-70, lifting bodies and lunar landing vehicles; working on the NERVA project at Jackass Flats, Nevada; and serving in Special Projects at Area 51. Barnes later formed a family oil and gas exploration company, drilling, and producing oil and gas and mining uranium and gold. Barnes currently serves as the CEO of Startel, Inc., a landowner, and is actively mining landscape rock and gold in Nevada.



Essam E. Khalil

Professor of Mechanical Engineering, Faculty of Engineering, Cairo University, Chairman of National HVAC Code Committee, Ministry of Housing & Development, Coordinator For The National Energy Efficiency Code Committee For HVAC, Chairman National Ventilation Code Committee, Chairman Arab HVAC Code Committee, Consultant ASHRAE Members Council, AIAA Deputy Director International, USA, ASHRAE Director-At-Large, Energy and HVAC Expert at AMG, President "Consulting Engineering Bureau" CEB, Cairo.

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