

Room	156A	156B	156C	157A	157B	163A	163B
Time	15) Design & Optimization Chair: Benjamin Smarslok, AFRL	16) Fluid Dynamics II Chair: Mitch Wolff, WSU	17) Materials II-Nano Chair: Raghavan Srinivasan, WSU	18) Computer Science I Chair: Jia Guo, WSU	19) Combustion Chair: Waruna Kulatilaka, SE	20) Human Factor/Biomed II Chair: Jamie Gengler, SE	21) Energy Management Chair: Kevin Hallinan, UD
1:20	<i>DESS10-0022</i> SORCER Enabled Collaborative Reliability Based Design Optimization Nagesh Aithal, WSU <i>Ramana V Grandhi, WSU</i>	<i>DESS10-0052</i> CFD Tool for Analysis and Design of Ranque-Hilsch Vortex Tube (RHVT) Salah Soliman, UC <i>S. Abdallah, UC</i>	<i>DESS10-0021</i> Electron Microscopy Investigation of Carbon Nanotube Growth on Diamond Substrate Betty Quinton, WSU <i>Varanasi, C.V., ARO</i> <i>Xu, Y., UES</i> <i>Barnes, P. N., AFRL</i> <i>Mukhopadhyay, S.M., WSU</i>	<i>DESS10-0033</i> An Adaptive Filtering Technique for Video Stabilization Varun Santhaseelan, UD <i>Vijayan Asari, UD</i>	<i>DESS10-0090</i> A Shock Tube Experimental and Kinetic Modeling Study of Ignition Delay Times of Hydrogen Combustion under Fuel-Rich Conditions Aditya Nagulapalli, UD <i>Giacomo Flora, UD</i> <i>Saumitra Saxena, Moshan Kahandawala, and Sukh S. Sidhu, UDRI</i>	<i>DESS10-0128</i> Biomechanics of ACL Injury Kelly Estes, WSU <i>Tarun Goswami, D.Sc., WSU</i>	<i>DESS10-0010</i> Estimating Industrial Building Energy Savings Using Inverse Simulation Franc Sever, UD <i>Kelly Kissock, UD</i> <i>Dan Brown and Steve Mulqueen, CEE</i>
1:40	<i>DESS10-0069</i> Swarm Optimization for Real-Time Adaptation for Variable Operating Points Alan Jennings, UD <i>Raul Ordonez, UD</i>	<i>DESS10-0082</i> SOLVCON: New Python-Based Software Framework for Massively Parallelized Hyperbolic PDE Solvers Using the CESE Method Yung-Yu Chen, OSU <i>Sheng-Tao John Yu, OSU</i>	<i>DESS10-0032</i> Multi-scale Hierarchical Interfaces to suppress Interfacial Delamination in Composites Anil Kumar Karumuri, WSU <i>Sharmila M. Mukhopadhyay, WSU</i>	<i>DESS10-0035</i> Depth Dependent Nonlinear Enhancement for Visibility Improvement of Hazy Images Saibabu Arigela, UD <i>Vijayan Asari, UD</i>	<i>DESS10-0106</i> Simulation of Reflected Shock Tube Combustion Experiments Using Multiple Computational Approaches Giacomo Flora, UD <i>Saumitra Saxena, Moshan S. P. Kahandawala, and Sukh S. Sidhu, UDRI</i>	<i>DESS10-0129</i> Statistical Analysis of Dimensional Anatomy of the Vertebral Body in the Cervical Spine of Chinese Singaporeans and Projection on U.S Susan Schweitzer, WSU <i>Mary Blackmore, PhD and Tarun Goswami, D.Sc, WSU</i>	<i>DESS10-0068</i> Campus Energy Inventory Bob Chasnov, CU <i>Mark Gathany, CU</i>
2:00	<i>DESS10-0014</i> Transonic Aeroelastic Analysis of Supersonic Tailless Air Vehicles Kenneth Gannon, WSU <i>Ramana V. Grandhi, WSU</i>	<i>DESS10-0087</i> Low Pressure Seeder Development for PIV in Large Scale Open Loop Wind Tunnels Ryan Schmit, AFRL	<i>DESS10-0057</i> Carbon Nanostructure As Thermal Interface Material Muhammad Omar Memon, UDRI <i>Sylvain Halliot and Khalid Lafdi, UDRI</i>	<i>DESS10-0036</i> A Nonlinear Manifold for Color Restoration Alex Mathew, UD <i>Ann Theja Alex and Vijayan Asari, UD</i>	<i>DESS10-0095</i> A Shock Tube Ignition Delay Study in the Combustion of Selected Surrogates for Jet Fuels Giacomo Flora, UD <i>Saumitra Saxena, Moshan S. P. Kahandawala, and Sukh S. Sidhu, UDRI</i>	<i>DESS10-0130</i> Effects of Anthropometric Geometry on the Outcome of Finite Element Models of Vertebral Endplates Isaac Mabe, WSU <i>Tarun Goswami, D.Sc., WSU</i>	<i>DESS10-0034</i> Tracking Energy Use in University of Dayton Student Housing Nathan Lammers, UD <i>Franc Sever, Brian Abels, and Patrick Bruketa, UD</i>
2:20	<i>DESS10-0023</i> Quantification of Modeling Uncertainty in Aeroelastic Analyses Matthew Riley, WSU <i>Ramana V. Grandhi, WSU</i>	<i>DESS10-0102</i> CFD Analysis of NREL Phase VI Wind Turbine Rotor Yen-Pin Chen, WSU <i>Dr. J. Menart, WSU</i>	<i>DESS10-0058</i> Use of Carbon Nanostructure in Transient Spike Power Applications Muhammad Omar Memon, UDRI <i>Khalid Latdi, UDRI</i>	<i>DESS10-0037</i> A Projection Based Method for Illumination Correction Ann Theja Alex, UD <i>Alex Mathew and Vijayan Asari, UD</i>	<i>DESS10-0096</i> Characterization of Vortex-Shedding Transitions Using Proper Orthogonal Decomposition Stanislav Kostka, SE <i>Sukesh Roy, SE</i> <i>Amy C. Lynch, Barry V. Kiel, and James R. Gord, AFRL</i>	<i>DESS10-0131</i> Hip Implant Stem Interfacial Motion, a Finite Element Analysis Analysis Mbulelo Makola, WSU <i>Dr. Tarun Goswami, WSU</i>	<i>DESS10-0004</i> GSHX by RCL Joel Baetens, UD
2:40	<i>DESS10-0071</i> Aeroelastic Control Using Receptance Frequency Response Functions Laura McDonough, MU <i>Kumar Vikram Singh, MU</i>	<i>DESS10-0078</i> Numerical Investigation of an Elliptic Cone at High Angle of Incidence in Nonequilibrium Flow Michael Atkinson, UD <i>Jonathan Poggie and Jose Camberos, AFRL</i>	<i>DESS10-0079</i> Electroless Ni Plating of Carbon Nanotubes for SiC Power Modules Bang-Hung Tsao, UDRI <i>Betty T. Quinton, James D. Scofield, and Paul N. Barnes, AFRL</i> <i>Jacob W. Lawson, UDRI</i>	<i>DESS10-0049</i> Recurrence Time Distribution, Renyi Entropy, and Pattern Discovery Jianbo Gao, WSU <i>Wen-wen Tung, PU</i> <i>Qian Han, WSU</i>	<i>DESS10-0043</i> Comparison of Numerical and Ground-Test results of the HiFire-2 Combustor Robert Yentsch, OSU <i>Faure J. Malo-Molina, AFRL</i> <i>Datta V. Gaitonde, OSU</i>	<i>DESS10-0051</i> Position and Weight Distribution of Grocery Bags to Minimize Center of Pressure Displacement Melissa Taylor, UD <i>Erin Sutton, Julia Schaeffer, Deborah Kinor, and Dr. Kimberly Edginton Bigelow, UD</i>	
3:00	Break	Break	Break	Break	Break	Break	Break

Abbreviations:

AFIT: Air Force Institute of Technology
AFRL: Air Force Research Laboratory
ARO: Army Research Office
ASI: Applied Science, Inc
BHS: Beaver Creek High School

CCH: Cincinnati Children's Hospital
CEE: Cascade Energy Engineering
CSU: Central State University
CU: Clemson University
CWU: Case Western University
IAI: Intelligent Automation Inc.

MU: Miami University
NIOSH: The National Institute for Occupational Safety and Health
NRL: Naval Research Laboratory
OAI: Ohio Aerospace Institute
OSU: The Ohio State University

PIAD: Petroleum Institute, Abu Dhabi, UAE
PU: Purdue University
SCC: Sinclair Community College
SE: Spectral Energies LLC
SGC: SynGenics Corp

SLU: St. Louis University
UC: University of Cincinnati
UCF: University of Central Florida
UD: University of Dayton
UDRI: University of Dayton Research Institute

UES: UES Inc.
UI: University of Idaho
UM: University of Michigan
UO: University of Oklahoma
UWB: University of West Bohemia
WSU: Wright State University

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Time	22) Structures/Damage Prediction Chair: Vipul Ranatunga, MU	23) Fluid-Dynamics III Chair: Roger Kimmel, AFRL	24) Materials III Chair: Feng Liu, WSU	25) Computer Science II Chair: Tzung-Tza Shen, WSU	26) Thermal Sciences Chair: Larry Byrd, AFRL	27) Human Factor/Biomed III Chair: Ravi Penmetsa, WSU	28) Environmental Chair: Kevin Hallinan, UD
3:20	<i>DESS10-0018</i> Cohesive Zone Model Based Multiscale Structural Damage Evolution Michael Thomas, WSU	<i>DESS10-0005</i> HIFiRE-1 Overview and Preliminary Results Roger Kimmel, AFRL David Adamczak, AFRL	<i>DESS10-0015</i> Functionalization of Nanomaterials for Biosensor Applications Elizabeth Maurer, WSU Sharmila Mukhopadhyay, WSU Dr. Saber Hussain, AFRL	<i>DESS10-0083</i> Hierarchical Genetic Algorithms Jennifer Seitzer, UD	<i>DESS10-0126</i> Numerical Study of Heat Transfer Performance of Two-Layered Microchannel Heat Sinks Using Nanofluids as Coolants for Microelectronics Cooling Sri Priyanka Tunuguntla, UC Urmila Ghia, UC	<i>DESS10-0013</i> Analyzing Range of Motion in Total Hip Arthroplasty Dishita Patel, WSU Tarun Goswami, D.Sc., WSU	<i>DESS10-0107</i> Toxic Organic Pollutants from Combustion of Printed Circuit Board Laminates Kavya Muddasani, UDRI Moshan Kahandawala, Sukh Sidhu, and Alexander Morgan, UDRI
3:40	<i>DESS10-0011</i> Probability of Fracture Nomographs Using Cohesive Zone Modeling Venkateswaran Shanmugam, WSU Ravi Penmetsa, WSU Eric Tuegel, AFRL	<i>DESS10-0054</i> Flow and Acoustic Modifications for Military Aircraft Noise Reduction David Munday, UC Nick Heeb and Ephraim Gutmark, UC Junhui Liu and K. Kailasanath, NRL	<i>DESS10-0110</i> Experimental Studies of Hydrogen Generation from the Aluminum-Water Reaction Using Aluminum Nanoparticles Faizan Ahmad, UDRI Moshan Kahandawala and Sukh Sidhu, UDRI	<i>DESS10-0066</i> Texture Photogrammetry Surface Reconstruction of Membrane Wings Using Tracking Cameras Chris Allen, AFIT Alan Jennings and Jonathan Black, AFIT	<i>DESS10-0077</i> Transient Thermal and Structural Analysis of a SiC Power Module Using Ansys Workbench Katie Sondergelt, UDRI Jacob W. Lawson and Bang-Hung Tsao, UDRI James D. Scofield, AFRL	<i>DESS10-0139</i> Mechanical Comparison of Cadaver Femurs Implanted with Various Intramedullary Nails Alyssa George Whitney, WSU Chris Gayton, Michael Prayson, Greg Gould, Tarun Goswami, DSc, WSU	<i>DESS10-0097</i> Identification and Quantitation of Hazardous Air Pollutants (HAPs) from Aircraft Engines David Anneken, UDRI Richard Striebich, Matthew J. DeWitt, and Christopher Klingshirn, UDRI Edwin Corporan, AFRL
4:00	<i>DESS10-0006</i> Application of the Campbell Diagram Concept to Identification of Fatigue Cracks in Bladed Disk Assemblies Josh Gaerke, WSU Joseph C. Slater, WSU Oleg Shirayev, PIAD	<i>DESS10-0045</i> Numerical Study of a MHD-Heat Shield Nicholas Bisek, OAI Jonathan Poggie, AFRL Iain Boyd, UM	<i>DESS10-0089</i> High Temperature Stability of Amorphous Si-B-C-N Thin Films Jamie Gengler, SE John Jones, Andrey Voevodin, AFRL Petr Steidl, Jaroslav Vlcek, UWB	<i>DESS10-0050</i> Multiscale Analysis of Biological Signals Jianbo Gao, WSU Wen-wen Tung, PU Qian Han, WSU	<i>DESS10-0065</i> Thermal and Hydraulic Performance of an Ice Slurry Thermal Energy Storage System Joshua Hartman, UDRI Lanchao Lin, Roger Carr, Richard Harris, UDRI Levi Elston, AFRL	<i>DESS10-0136</i> Constitutive Modeling of Bovine Brain Tissue at High Strain Rates Bhargava Sista, UC Kumar Vemaganti, UC	<i>DESS10-0108</i> Use of Algae for Bioremediation of Waste Water Saikumar Chalivendra, UDRI Nilesh Chavada, Moshan Kahandawala, Sukh Sidhu, and Jerome Servaites, UDRI
4:20	<i>DESS10-0059</i> Determining Most Likely Flight Profiles from Aircraft Usage Data for Damage Prognosis Jia Guo, WSU Benjamin P. Smarslok and Eric J. Tuegel, AFRL Ravi Penmetsa, WSU	<i>DESS10-0044</i> High-Order Numerical Methods for Electrical Discharge Modeling Jonathan Poggie, AFRL	<i>DESS10-0132</i> Anisotropic Electrical Resistivity Properties of Nanostructured Metallic Thin Films Grown Using Oblique Angle Deposition Technique Piyush Shah, UDRI Andrew Sarangan, Said Elhamri, and Mo Ahoujja, UD Elena Gulians, UDRI	<i>DESS10-0140</i> Scalable Techniques for Semantic Web Reasoning Raghava Mutharaju, WSU Frederick Maier and Pascal Hitzler, WSU	<i>DESS10-0093</i> Non-Equilibrium Thermodynamics of Coupled Unsteady Power and Thermal Management Systems Justin DelMar, UD John Doty, UD	<i>DESS10-0138</i> Characterization and Improvement of a Cone-Beam CT Scanner for Quantitative Imaging Jimish Joshi, Thomas Hangartner	
4:40	<i>DESS10-0055</i> Accounting for Induced Defects Using DARWIN Ashley Whitney-Rawls, WSU	<i>DESS10-0127</i> Computational Investigation of Laminar Flow of Shear Thinning Non-Newtonian Fluids Through a Circular-to-Rectangular Transition (CRT) Duct Sowmya Krishnamurthy, UC Urmila Ghia, UC	<i>DESS10-0124</i> Characterization of Bulk Mechanical Complex Modulus of a Thermal Barrier Coating at Various Temperatures Using a Free-Free Beam Apparatus Oliver Easterday, AFIT Anthony Palazotto, Lt. Col. Richard Branam, and William Baker, AFIT Tommy George, AFRL		<i>DESS10-0100</i> Enhancement of Droplet Heat Transfer by Time-Periodic Electric Field Mohamed Abdelaal, UC Milind Jog, UC	<i>DESS10-0142</i> Hyperspectral Imaging (HSI) to Track Functionalized Gold Nanorods to Target and Identify Specific Biomolecules in a Cellular Environment Bradley Stacy, AFRL & UD Christin Grabinski, and Saber Hussain, AFRL	
5:00	<i>DESS10-0047</i> Adaptive Multiscale and Nonlinear Methods for Structural Health Monitoring Jianbo Gao, WSU Wen-wen Tung, PU Qian Han, WSU	<i>DESS10-0137</i> Progress in Modeling Supersonic Boundary Layer Bleed with Computational Fluid Dynamics Albert Morell, UC Awatef Hamed, UC	<i>DESS10-0121</i> Sensor and Membrane Materials Based on Molecularly Imprinted Polymers Raj Makote, UDRI		<i>DESS10-0017</i> Generic Aircraft Thermal Tip-to-Tail Modeling and Simulation Scott Eastbourn, WSU Rory Roberts, WSU		