Advanced Stability Analysis


Complex Systems Modeling and Computation


Computational Mechanics: Geometry and Numerical Simulation


High-Performance Computing (HPC)


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Uncertainty Quantification and Predictive Modeling


Bio-Engineering and Imaging

Human-Machine Collaborative Systems


Image-based Biomedical Modeling


Microfluidic Design Automation

Publications


Neuroimaging


Optimal Control and Medical Imaging

Phase-Contrast Computed Tomography

Exploiting Antenna Arrays for Next-Generation Wireless Communications Systems


Information, Interaction and Mechanism Design

Control Theory, Systems Engineering and Robotics

Automated Controller Synthesis


Control and Robotics

Networked Cyber-Physical Systems


Safe Adaptive Dependable Aerospace Systems (SADAS)

Environmental and Earth Sciences

Climate Flows


Environmental Sensing and Modeling


Global Change


Modeling Spatial Mobility


M. B. Okrah, G. Wulffhorst, and R. Moeckel, "Finding the optimal level of spatial resolution for handling non-motorized travel in macroscopic travel demand models," in 14th World Conference on Transport Research, WCTR, Shanghai, China, 2016.

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High-Resolution Gravity Modeling


Fundamental Natural and Life Sciences

Fundamental Physics


Biochemistry

Biomolecular Design


Cellular Protein Biochemistry


Chemical Catalysis, Photo-catalysis and Electro-catalysis

Functional Metagenomics


Integrative Structural Biology


Physics with Effective Field Theories

Sterile Neutrino and Dark Matter


Protein Misfolding and Amyloid Diseases


Population Epigenetics and Epigenomics


Protein Misfolding and Amyloid Diseases


Sterile Neutrino and Dark Matter


Structural Membrane Biochemistry

Supramolecular Chemistry

Synthetic Biochemistry

Gender and Diversity in Science and Engineering

Biomedical Humanities

Gender Stereotypes in Organizations

Preventive Pediatrics
Proteases in the Brain

MicroRNAs Regulating Diabetes and Obesity

Clinical Cell Processing and Purification

Medical Natural Sciences

Brain Temperature Control of Metabolic Diseases

Proteases in the Brain


Surface, Interface, Nano- and Quantum Science

Collective Quantum Dynamics

Functional Interfaces

Metal–Organic Superlattices of Quantum Magnets
Nanophotonics and Quantum Optics


Semiconductor Nanowires


Theory of Complex Quantum Systems