Infrastructure & Technology Research Expertise Cluster

College	Unit	First	Last	Expertise
Business	Management, Entrepreneurship & Tech.	Han-Fen	Hu	Organizational Technology Strategy; Electronic Commerce and Consumer Behavior; IT-Enabled Decision Making; Online Advertising and Software Product and Information Goods Strategy
Business	Management Information Systems	Marcus	Rothenberger	Software Process Improvement; Reusability; Performance Measurement; Service-Oriented Architectures
		Reza	Torkzadeh	Information Systems
		Jerry	Chang	Information Systems; Instrument Development; Self-Efficacy; Software Piracy; Use/Impact/Culture Aspects of IS; Organizational Learning
		Darren	Denenberg	Human-Computer Interaction; Social Computing; On-Line Communities
		Honghui	Deng	Information Systems; Risk Management; Diversity in Theory; Methodology
		Andrew	Hardin	Organizational Collaboration; Virtual Work; Technology Management; Financial Decision-Making; Entrepreneurship
		Ken	Peffers	Information Systems; Design Science Research; IT Investments and Firm Market Value
		Greg	Moody	Human-Computer Interaction; Security; Privacy; Trust; E-Commerce
Business	Economics	Brad	Wimmer	Telecommunications; Regulation; Minimum Wage; Merger Analysis; Anti-Trust; Pricing; Sports Economics
Business	Accounting	Sutirtha (Suti)	Chatterjee	Ethics in Information Systems and Business Ethics

Engineering	Mechanical		Woosoon	Yim	Dynamics; Active Material Control; Robotics
			Yitung	Chen	Computational Fluid Dynamics; Heat and Mass Transfer; Nuclear and Renewable Energy; Hydrogen Production and Utilization
			William	Culbreth	Nuclear Engineering; Aerodynamics; Experimental Fluid Mechanics and Heat Transfer
			Georg	Mauer	Dynamics and Control; Robotics; Advanced Sensor System and Instrumentation
			Samir	Moujaes	HVAC; High Temperature Hydrogen Production; Thermal Issues in High Level Nuclear Waste; Air Duct Leakage
			Brendan	O'Toole	Composites; Mechanics; Vehicle Design; Structural Dynamics
			Darrell	Pepper	Computational Fluid Dynamics; Heat Transfer; Wind Energy/Renewable Energy; Groundwater Flow; Aerospace including UAV
			Douglas	Reynolds	Acoustics and Vibration
			Stephen	Rice	Healthcare Informatics; Biomedical Design; Tribology; Wear of Materials
			Mohamed	Trabia	Mechanical Design; Optimization; Structural Failure Analysis; Experimental Mechanics; Material Characterization; Dynamic Analysis Fuzzy Logic Control
			Zhiyong	Wang	Manufacturing Process and System; Materials
			Hui	Zhao	Micro and Nano Fluidics; Lab-On-Chip Technology; Nanotechnology and Micro/Nano Energy Conversion; Energy Storage

		First	Last	Research Interests
		Denis	Beller	Nuclear Engineering; Reactor Physics; Nuclear Criticality Safety; Neutron Detection; Nonproliferation; Nuclear Security
		V.C.	Venkatesh	Design for Manufacturing; Precision Engineering; Manufacturing Systems
		Sean	Hsieh	Information Management System; Data Mining; Information Fusion
		Joon	Lee	Active Controls; Biomimetic Robots; Fuzzy Logic; Neuro-Controls; Smart Materials and Structures; Advanced Electronics
		Jian	Ma	Thermal Fluid Sciences; Process/System Engineering and Renewable Energy Systems
		Rick	Hurt	Renewable Energy Research Specialized in Solar Power Generation
		Daniel	Lowe	Radiation Transport Modeling; Large Scale Computing; Active Interrogation Techniques
		Robert	O'Brien	Radiation Detection; Radiation Transport; Unmanned Aerial Systems
		Jae-kyu	Lee	Robotics; Computer Vision; Computer Graphics
		Kwang	Kim	
Engineering	Electrical & Computer	Henry	Selvaraj	Logic Synthesis; Programmable Devices; Artificial Intelligence; Multiple Valued Functions; Digital Signal Processing; Bio-Medical Image
		Yahia	Baghzouz	Electrical Power Conversion; Renewable Source Grid Interconnection; Power Efficiency; Fuel Cell Integration
		Biswajit	Das	Nanotechnology; Solar Cells; Spintronics; Sensors

Yingtao	Jiang	Algorithms; VLSI Architectures; Circuit Level Techniques; DSP Design; Computer Architecture
Pushkin	Kachroo	Nonlinear and Hybrid Control Systems; Intelligent Transportation Systems; Mechatronics; Robotics; Distributed Parameter Systems; Differential Geometric Methods
Shahram	Latifi	Biometrics; Data Encryption and Compression; Network Security; Watermarking Sensor and Interconnection Networks; Mobile Computing Gaming Analysis
Eugene	McGaugh	Speaker Recognition and Laryngeal Pathology Detection
Brendan	Morris	Computer Vision; Intelligent Systems; Pattern Recognition; Machine Learning; Intelligent Transportation Systems; Intelligent Vehicles
Venkatesan	Muthukumar	Embedded System Design; System on Chip; Logic Synthesis; High-Level Synthesis
Emma	Regentova	Applied Image Processing with Application to Security; Medical Imaging; Remote Sensing; Non-Invasive Inspection
Ebrahim	Saberinia	Wireless Networks; 3G and 4G Cellular Systems; Agile Radio; Statistical Signal Processing
Robert	Schill	Electromagnetics; Plasma Physics; Pulsed Power; Microwaves and Optics
Sahjendra	Singh	Nonlinear and Adaptive Control Systems; Control of Aircraft, Aeroelastic Systems, and Satellites; Biorobotic Undersea Vehicles

		Peter	Stubberud	Digital and Adaptive Signal Processing; Direct Conversion Receivers; Mixed Signal Electronics; Data Converters; Delta Sigma Modulators
		Rama	Venkat	Electronic Devices; Sensors and Materials; Nanotechnology; Engineering Entrepreneurship
		Mei	Yang	Computer Architectures; Networking; Embedded Systems
		R. Jacob	Baker	Design flow and Techniques for Fabricating Safe and Secure (trusted) Integrated Circuits; Investigating 3D Packaging and Capacitive Interconnects to Reduce Power Consumption in Semiconductor Memories; Chip-Scale Methods to Implement Chemical and Biological Sensors using CMOS; Design of Readout Integrated Circuits (ROICs) for use with Focal Plane Arrays (FPAs); Heterogeneous Integration of III-V Photonic Devices with CMOS; Analog and Mixed-Signal Circuit Design for Communication Systems, Synchronization, and Data Conversion; Design of Writing and Sensing Circuitry for Emerging Nonvolatile Memory Technologies, Focal Planes, and Displays (arrays); Re-Configurable Electronics Design using Nascent Memory Technologies; Finding an Electronic (no mechanical component) Replacement for the Hard Disk Drive using Nascent Fabrication Technologies; Methods to Deliver Circuit Design Education to Industry and Off-Campus Students
		Ke-Xun (Kevin)	Sun	Optics; Interferometry; Lasers; Electronics; High Energy Density Phyiscs; Diagnostic Instruments; Space Instruments
Engineering	Computer Science	John	Minor	Artificial Intelligence; Automated Deduction; Expert Systems; Logic Representations and Programming Systems; Programming Language Design
		Wolfgang	Bein	Algorithms; Scheduling; Green Computing; Cloud Computing; Networks; Evolutionary Computing; Open Source

		Hal	Berghel	Digital Security and Forensics; Electronic Crime; Information Security; Cyberwarfare; Information Customization; Electronic Publishing
		Ajoy	Datta	Distributed Computing, Self-Stabilization, and Multiprocessor Systems
		Laxmi	Gewali	Computational Geometry; Pattern Recognition; Analysis of Algorithms; Robot Motion Planning
		Ed	Jorgensen	
		Ju-Yeon	Jo	Computer Security; Network Security; Computer Networks; Secure Communication Software Development; Software Engineering
		Yoohwan	Kim	Computer Networks; Computer Security; Network Security
		Lawrence	Larmore	Dynamic Programming (Monge Properties); Applications to String Matching; Matrix Searching; Optimal Tree Construction
		Lee	Misch	Algorithms and Data Structures; Software Engineering; Programming Languages; Web Design; Pedagogical Strategies
		Matt	Pedersen	Compilers; Languages; Process Oriented Design/Programming; Parallel programming and Debugging; Formal Verification
		Kazem	Taghva	
		Evangelos	Yfantis	Programming; Secure Servers; Multimedia; Audio and Video Compression; Computer Vision
Engineering	Civil & Environmental	David	Ashley	Construction Project Management; Project Risk Analysis and Management; Financial Engineering; Project Delivery Systems

Nader	Ghafoori	Reinforced Concrete Structures; Structural Foundation; Pavements; Durability, Strength, and Behavior of Concrete Systems
Moses	Karakouzian	Geotechnical Engineering; Foundation Engineering, Construction Materials; Highway and Pavement Materials
Mohamed	Kaseko	Transportation Systems Analysis; Artificial Intelligence Applications; Transportation Planning; Engineering Economics
Samaan	Ladkany	Finite Element Analysis; Experimental Mechanics; High Acceleration Shock Wave Mitigation in Layered Media; Earthquake Engineering
Barbara	Luke	Geotechnical Engineering; Geophysical Engineering; Seismic Site Characterization; Geotechnical Earthquake Engineering
Edward	Neumann	Human Factors in Transportation; Public Transportation; Bio-Mechanics and the Analysis of Human Motion; Ergonomics; Prosthetics
Neil	Opfer	Construction Management; Estimating and Cost Analysis; Construction Methods and Materials; Mechanical, Electrical, and Plumbing Systems
Alexander	Paz	Transportation Systems Analysis; Intelligent Transportation Systems; Traffic Safety; Human Behavior and Learning; Dynamic and Complex System
Aly	Said	Reinforced Concrete Structures; Composite Materials (FRP) in Rehabilitation of RC Structures; Self-Consolidating Concrete; Nano-Particles

		David	Shields	Project and Construction Management; Ocean and Marine Engineering and Construction; Heavy Construction; Temporary Construction Structures
		Pramen	Shrestha	Project Delivery Methods; Construction Estimating; Infrastructure Sustainability; Construction Engineering and Materials; Project Management; Construction and Highway Safety
		Haroon	Stephen	Microwave Remote Sensing; Geographic Information Systems (GIS); Data Visualization; Land Scatterometry and Radiometry; Water Resources
		Hualiang	Teng	Transportation Planning and Demand Analysis; Intelligent Transportation Systems; Air Quality Analysis; Freight Transportation Systems; Railroad
		Ying	Tian	Reinforced Concrete Structures; Experimental Investigation and Numerical Modeling of Structural Members and Systems; Extreme Loading
Fine Arts	Theatre	Joe	Aldridge	Entertainment Engineering
Fine Arts	School of Architecture	Kenneth	McCown	Urban Design; Sustainability; Architectural Design; Landscape Architectural Design; Watershed; Ecosystem; Infrastructure and Environmental Planning; Photography
Greenspun Urban Affairs	School of Environmental and Public Affairs	Jaewon	Lim	Economic Development (both in academic research and practice); Economic Impact Analysis (various types of economic and industrial activities); Investment on State and Local Governments
		Karen	Danielsen	Urban Planning Theory; National Housing Policy; Growth Management; Urban Design
Greenspun Urban Affairs	Journalism and Media Studies	Julian	Kilker	Emerging Technologies; Digital Imaging; Technology Lifecycles; Digital Archiving

		Lawrence	Mullen	Social Media and Virtual Worlds; Visual Communication
		Brian	Steinle	Microsoft; Apple Mac OSX and iOS; and Linuxred Hat Server Operating Systems; Avid Edit Suite; Adobe; Web Development
		Paul	Traudt	Emerging Technologies
Greenspun Urban Affairs	Criminal Justice	Timothy	Hart	Survey Research; Applied Statistics; Geographic Information Systems (GIS); Victimization
		Emily	Troshynski	Causes and Consequences of Violent Crime; Violence Against Women; Women and the Criminal Justice System; Human Trafficking; Sex Offender Legislation and Policy; Rehabilitation; Community Reintegration; Surveillance Technology; Global Positioning Systems (GPS); Privacy
Libraries	Lied Institute for Real Estate Studies	Marcus	Conklin	
Libraries	Library	Kristen	Costello	Information Technology
		Cyrus	Ford	Streaming Media for Academic Libraries and the Transition from Anglo American Cataloging Rules (AACR2) Standards to Resource Description and Access (RDA)
		Michaelyn	Haslam	Providing Access to Online Information Resources
		Shelley	Heaton	Library Policies for Building Use and Reference Collections
		Jason	Vaughan	Library Administration; Library Technology; Information Discovery
		Marilyn	Vent	Serials Cataloging; MARC 21 Format for Bibliographic Records
Sciences	Mathematical Sciences	Derrick	DuBose	Set Theory and Determinacy

Malwane	Ananda	Statistical Inference and Reliability
Gennady	Bachman	Mathematics; Number Theory
Arthur	Baragar	Number Theory; Arithmetic Geometry; K3 Surfaces; Picard Groups; Automorphisms; Heights; Fractals; Hausdorff Dimension
Satish	Bhatnagar	
David	Costa	Nonlinear Elliptic Problems; Variational Methods in Differential Equations
Zhonghai	Ding	Control Theory; Partial Differential Equations; Mathematical Modeling
Chih-Hsiang	Ho	Statistical Modeling; Analysis for Interdisciplinary Research Related to Human and Social Betterment
Jichun	Li	Mathematical Modeling and Scientific Computing for PDEs from Multi-Disciplinaries
Dieudonne	Phanord	Lightning Radiative Transfer and Applied Twersky's Two-Space Multiple Scattering Formalism
Ebrahim	Salehi	Topological Dynamics; Functional Analysis; Combinatorial Graph Theory
Peter	Shiue	
Sadanand	Verma	
Carryn	Bellomo	
Douglas	Burke	Mathematical Logic; Set Theory; Foundations; Large Cardinals; Forcing; Combinatorics

Sandra	Catlin	Statistical Inference for Stochastic Processes; Hidden Markov Models; Generalized Linear Mixed Models
Hokwon	Cho	Radial Basis Functions and Methods Fundamental Solutions; Dirichlet Integrals to Extended Multinomial Problems
Rohan	Dalpatadu	
Xin	Li	Applied Analysis and Computational Mathematics
Michael	Marcozzi	
Angel	Muleshkov	Ordinary and Partial Differential Equations; Applied Complex Analysis and Special Functions; Boundary Element Method
Michelle	Robinette	Topological Graph Theory
Hossein	Tehrani	Elliptic Partial Differential Equations; Topological and Variational Methods
Hongtao	Yang	Numerical Analysis and its Applications; Numerical Methods for Partial Differential Equations; Computational Finance
Amei	Amei	Probability Theory; Diffusion Approximation; Stochastic Processes; Population Genetics; Biostatistics; DNA Alignment; Selective Effects
Kaushik	Ghosh	Bayesian Statistics; Statistical Computing; Biostatistics; Disease Surveillance; Longitudinal Data; Statistical Genetics; Microarray Data
Monika	Neda	Computational Fluid Dynamics
Pengtao	Sun	Numerical Analysis; Scientific and Engineering Computing

Sciences	Geoscience	Scott	Nowicki	Planetary Geology; Geomorphology; Environmental Modeling; Remote Sensing; GIS
Sciences	Chemistry	Wayne	Stolte	Atomic and Molecular Chemistry and Physics; Synchrotron Radiation; Nano-Science; Materials Science related to Solar Cells
		Hui	Zhang	