Computer Science &
Engineering

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Faculty

Chair
Roch Guérin
Harold B. and Adelaide G. Welge Professor of Computer Science
PhD, California Institute of Technology
Computer networks and communication systems

Professors

Sanjoy Baruah
PhD, University of Texas at Austin
Real-time and safety-critical system design, cyber-physical systems, scheduling theory, resource allocation and sharing in distributed computing environments

Aaron Bobick
James M. McKelvey Professor and Dean
PhD, Massachusetts Institute of Technology
Computer vision, graphics, human-robot collaboration

Michael R. Brent
Henry Edwin Sever Professor of Engineering
PhD, Massachusetts Institute of Technology
Systems biology, computational and experimental genomics, mathematical modeling, algorithms for computational biology, bioinformatics

Jeremy Buhler
PhD, Washington University
Computational biology, genomics, algorithms for comparing and annotating large biosequences

Roger D. Chamberlain
DSc, Washington University
Computer engineering, parallel computation, computer architecture, multiprocessor systems

Yixin Chen
PhD, University of Illinois at Urbana-Champaign
Mathematical optimization, artificial intelligence, planning and scheduling, data mining, learning data warehousing, operations research, data security

Pat Crowley
PhD, University of Washington
Computer and network systems, network security

Ron K. Cytron
PhD, University of Illinois at Urbana-Champaign
Programming languages, middleware, real-time systems

Christopher D. Gill
DSc, Washington University
Parallel and distributed real-time embedded systems, cyber-physical systems, concurrency platforms and middleware, formal models and analysis of concurrency and timing

Raj Jain
Barbara J. & Jerome R. Cox Jr. Professor of Computer Science
PhD, Harvard University
Network security, blockchains, medical systems security, industrial systems security, wireless networks, unmanned aircraft systems, Internet of things, telecommunications networks, traffic management

Tao Ju
PhD, Rice University
Computer graphics, visualization, mesh processing, medical imaging and modeling

Chenyang Lu
Fullgraf Professor in the Department of Computer Science & Engineering
PhD, University of Virginia
Internet of things, real-time, embedded, and cyber-physical systems, cloud and edge computing, wireless sensor networks

Neal Patwari
PhD, University of Michigan
Application of statistical signal processing to wireless networks, and radio frequency signals

Weixiong Zhang
PhD, University of California, Los Angeles
Computational biology, genomics, machine learning and data mining, and combinatorial optimization

Associate Professors

Kunal Agrawal
PhD, Massachusetts Institute of Technology
Parallel computing, cyber-physical systems and sensing, theoretical computer science

Roman Garnett
PhD, University of Oxford
Active learning (especially with atypical objectives), Bayesian optimization, and Bayesian nonparametric analysis

Brendan Juba
PhD, Massachusetts Institute of Technology
Theoretical approaches to artificial intelligence founded on computational complexity theory and theoretical computer science more broadly construed
Caitlin Kelleher  
Hugo F. & Ina Champ Urbauer  
Career Development Associate Professor  
PhD, Carnegie Mellon University  
Human-computer interaction, programming environments, and learning environments

I-Ting Angelina Lee  
PhD, Massachusetts Institute of Technology  
Designing linguistics for parallel programming, developing runtime system support for multi-threaded software, and building novel mechanisms in operating systems and hardware to efficiently support parallel abstractions

William D. Richard  
PhD, University of Missouri-Rolla  
Ultrasonic imaging, medical instrumentation, computer engineering

Yevgeniy Vorobeychik  
PhD, University of Michigan  
Artificial intelligence, machine learning, computational economics, security and privacy, multi-agent systems

William Yeoh  
PhD, University of Southern California  
Artificial intelligence, multi-agent systems, distributed constraint optimization, planning and scheduling

Assistant Professors

Ayan Chakrabarti  
PhD, Harvard University  
Computer vision computational photography, machine learning

Chien-Ju Ho  
PhD, University of California, Los Angeles  
Design and analysis of human-in-the-loop systems, with techniques from machine learning, algorithmic economics, and online behavioral social science

Ulubek Kamilov  
PhD, École Polytechnique Fédérale de Lausanne, Switzerland  
Computational imaging, image and signal processing, machine learning and optimization

Alvitta Ottley  
PhD, Tufts University  
Designing personalized and adaptive visualization systems, including information visualization, human-computer interaction, visual analytics, individual differences, personality, user modeling and adaptive interfaces

Netanel Raviv  
PhD, Technion, Haifa, Israel  
Mathematical tools for computation, privacy and machine learning

Ning Zhang  
PhD, Virginia Polytechnic Institute and State University  
System security, software security

Teaching Professors

Bill Siever  
PhD, Missouri University of Science and Technology  
Computer architecture, organization, and embedded systems

Todd Sproull  
PhD, Washington University  
Computer networking and mobile application development

Professor of the Practice

Dennis Cosgrove  
BS, University of Virginia  
Programming environments and parallel programming

Senior Lecturers

Steve Cole  
PhD, Washington University in St. Louis  
Parallel computing, accelerating streaming applications on GPUs

Marion Neumann  
PhD, University of Bonn, Germany  
Machine learning with graphs, solving problems in agriculture and robotics

Jonathan Shidal  
PhD, Washington University  
Computer architecture and memory management

Douglas Shook  
MS, Washington University  
Imaging sensor design, compiler design and optimization

Lecturers

Hila Ben Abraham  
PhD, Washington University in St. Louis  
Parallel computing, accelerating streaming applications on GPUs, computer and network security, and malware analysis

Brian Garnett  
PhD, Rutgers University  
Discrete mathematics and probability, generally motivated by theoretical computer science

James Orr  
PhD, Washington University  
Real-time systems theory and implementation, cyber-physical systems, and operating systems

Senior Professor

Jonathan S. Turner  
PhD, Northwestern University  
Design and analysis of internet routers and switching systems, networking and communications, algorithms
Senior Faculty Emeritus

Jerome R. Cox Jr.
ScD, Massachusetts Institute of Technology
Computer system design, computer networking, biomedical computing

Professors Emeriti

Takayuki D. Kimura
PhD, University of Pennsylvania
Communication and computation, visual programming

Seymour V. Pollack
MS, Brooklyn Polytechnic Institute
Intellectual property, information systems