

Multimedia, Visualization and Modeling Research @ Arizona State University



Winslow Burleson, Assistant Professor

Ph.D. in Media Arts and Sciences, MIT Media Lab 2006. (MSE Stanford University 1997, BA Rice University 1995)

Research Interests: Human-Computer Interaction applied to creativity and innovation, well-being, design engineering, scientific exploration, gaming, and educational technology.

Visibility: 2005-2007 Invited participant and member of the Program Committee for the National Academy of Science US-Chinese Frontiers of Science Symposium.

Recent Publications: Evidence for Gender Specific Approaches to the Development of Emotionally Intelligent Learning Companions, *IEEE Intelligent Systems Journal*, (2007); Automatic Prediction of Frustration, *International Journal of Human Computer Studies*, (2007); Affective Learning Companions, *Educational Technology* (2006).

Current Projects: Affective Learning Companions (NSF), Game As Life - Life As Game (NSF), Astronaut Robot Mission Simulator (JPL), Creative IT (NSF).

Awards: NSF Affective Learning Companions (2007), NSF Game As Life - Life As Game (2007), JPL SURP (2007), Deutsche Telekom PAM (2007), iRobot Human Robot Interaction Curriculum Initiative (2007), National Academies of Science Kavali Fellow (2007).



Selcuk Candan, Associate Professor Associate Director, Arts, Media, and Engineering *Ph.D. in Computer Science, University of Maryland, College Park 1997. (BS Bilkent University 1993)*

Research Interests: Data management, Information integration, Storage/Querying/Retrieval of multimedia and Web data, Assistive technologies for information and data access, Security and privacy of data.

Visibility: Editorial board member of VLDB journal, Editorial board of the ACM Digital Symposium Collection, PC chair for ACM International Conference on Multimedia (SIGMM)'08.

Recent Publications: Scalable Filtering of Multiple Generalized-Tree-Pattern Queries over XML Streams (*IEEE TKDE* 2008), Supporting OLAP Operations over Imperfectly Integrated Taxonomies. (*SIGMOD* 2008), Uncertain QBE for Web Service Mashup (*SIGMOD* 2008), Runtime Semantic Query Optimization for Event Stream Processing (*ICDE* 2008), Extracting Relevant Snippets for Web Navigation (*AAAI* 2008), Sum-Max Monotonic Ranked Joins for Evaluating Top-K Twig Queries on Weighted Data Graphs (*VLDB* 2007), Feedback-based InConsistency Resolution and Query Processing on Misaligned Data Sources (*SIGMOD* 2007), Integrating and Querying Taxonomies with QUEST in the Presence of Conflicts (*SIGMOD* 2007), Mashup Feeds: Continuous Queries over Web Services (*SIGMOD* 2007), Middleware for Distributed and Autonomous XML Message Processing (*ICDE* 2007), Data-quality Guided Load Shedding for Expensive In-Network Data Processing (*ICDE* 2007).

Current Projects: NSF, MAISON: Middleware for Accessible Information Spaces on NSDL; NSF, AOC: Archaeological Data Integration for the Study of Long-Term Human and Social Dynamics; Mellon Foundation; Digital Antiquity: Planning a Digital Information Infrastructure for Archaeology; NSF, Design of Dense RFID Systems for Indexing in the Physical World across Space, Time, and Human Experience; NSF ITR Medium Award, iLearn: IT-enabled Ubiquitous Access to Educational Opportunities for Blind Individuals, 2003-2008.



Gerald Farin, Professor Associate Director of Academic Affairs, School of Computing and Informatics

Ph.D. Mathematics Tech. Univ. Braunschweig., 1980.

Research Interests: 3D Modeling, Curve and Surface Design, Scientific Visualization.

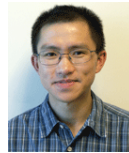
Visibility: Editor-in-chief, *Computer-Aided Geometric Design* (Elsevier). Editorial board, *The Visual Computer* (Springer).

Recent Publications: Dimensions of Spline spaces (*JACM* 2006), Rational Circles are Chord Length (*CAGD* 2007).

Books: *Curves and Surfaces for CAGD*, Morgan Kaufmann 2002 (5th ed.), *NURBS*, AK Peters 2004 (2nd ed.), *Scientific Visualization and Computation*, AK Peters 2008.

Current Projects: 3D Brain Imaging (Arizona Alzheimer Center), 3D face recognition (NSF).

Awards: Dagstuhl award for achievements in Geometric Modeling.



Baoxin Li, Assistant Professor

Ph.D. in Electrical Engineering, University of Maryland College Park, 2000. (B.S. Univ. of Sci. & Tech. of China, 1992)

Research Interests: Computer vision & Pattern Recognition, Image/Video Processing, Statistical methods in visual computing.

Visibility: PC Member: CVPR 2008, ACM-MM 2008 (Content Track), ISS 2009, ICME 2007. TPC Chair: VPQM 2006 and 2007. Organizing Committee & Finance Chair: CIVR 2006, ICIP 2008. Editorial Board & Area Editor: *Signal Processing: Image Communications*.

Recent Publications: Bayesian Tactile Face (CVPR'08), Joint Conditional Random Field of Multiple Views (CVPR'08), Learning Correlation for Human Motion Tracking (ICCV'07), Rao-Blackwellized Particle Filtering for Human Motion Tracking (*IEEE Trans. IP* 2007).

Current Projects: 3D for Enhancing Target Discrimination (DoD/IAI), Shared Vision (ARO), Stereoscopic Endoscopy (Mayo Clinic/ASU), in Interdisciplinary Research Environment for Motion Analysis (NSF).



Gregory M. Nielson, Professor

Ph.D. Mathematics University of Utah, 1970.

Research Interests: Scientific Visualization, Geometric Modeling.

Visibility: Director, IEEE Technical Committee on Computer Graphics and Visualization, Editorial Board, *Computer-Aided Geometric Design*, Editorial Advisory

Board & Founding Editor, *Trans. on Visualization and Computer Graphics*.

Recent Publications: Implicit fitting of point cloud data using radial Hermite basis function, *Computing*, 2007; 3D Face Animation Based on Raw Scanned Data of Real Individuals, *CAD/Graphics* 2007; Parameterizing Marching Cubes Isosurfaces with Natural Neighbor Coordinates, *Advances in Geometric Modeling and Processing 2008*, LNCS 4975, pp. 315-328. Springer, 2008; Adaptive, Implicit Modeling of Urban Terrain Point Cloud Data, *ACOMP 2008*.

Books: *The Visual Extraction of Knowledge from Data* (Bonneau, Nielson & Ertl), Springer 2006, *Data Visualization: The State of the Art*, Kluwer 2003 (Post, Nielson, Bonneau).

Current Projects: Geometry Processing for IsoSurfaces (NSF), Urban/Terrain Environment Modeling (US Army Research Office) US-Asian Research Alliance (NSF).

Awards: IEEE Meritorious Award, Dagstuhl (John Gregory Memorial) Research Award, ASU Mentor of Year Award, IEEE Golden Core Member, IEEE Outstanding Contribution Award.



Sethuraman Panchanathan, Professor Director, School of Computing & Informatics

Ph.D. in Electrical Engineering, University of Ottawa 1989.

Research Interests: Multimedia computing, Face/Gait recognition, Genomic signal processing, Haptic interfaces.

Visibility: Editor-in-chief, *IEEE Multimedia*; Conference Chair, Third International Conference on Body Area Networks (BodyNets 2008); Associated Editor for: *Journal of Visual Communication & Image Representation*, *Journal of Electronic Imaging*, *International Journal on Artificial Intelligence Tools Architectures, Languages, Algorithms, and International Journal on Systemics, Cybernetics and Informatics*.

Recent Publications: Multiple Cue Integration in Transductive Confidence Machines for Head Pose Classification, *IEEE CVPR* 2008 Workshop on Online Learning for Classification; Analysis of Low resolution accelerometer data for human activity recognition, *ICASSP* 2008; An Interactive Wearable Assistive Device for Individuals who are Blind for Color Perception, *HCI International* 2007; Person-Independent Head Pose Estimation using Biased Manifold Embedding, *EURASIP Special Issue on Advanced Signal Processing & Pattern Recognition for Biometrics* (2008); Modeling Context in Haptic Perception, *Rendering & Visualization*, *ACM Tran. on Multimedia Computing, Comm., and Applications* (2008).

Current Projects: iLearn: IT-Enabled Intelligent and Ubiquitous Access to Educational Opportunities for Blind Students (NSF-ITR), Computational Analysis of Gene Expression Pattern Images (NIH), Investigation of Spatial Memory Formation and Retention in Patients with Early Alzheimer's Disease (Mayo Clinic), Ubiquitous Environment to Facilitate Access to Textbooks & Related Materials for Individuals

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who are Blind or Visually Impaired (Dept. of Economic Security), IGERT: An Arts, Sciences and Engineering Research and Education initiative for Experimental Media (NSF), An Interdisciplinary Research Environment for Motion Analysis (NSF).

Awards: Fellow of IEEE, Fellow of SPIE, Best poster paper awards: Medicine Meets Virtual Reality Conference (2006, 2007, 2008), Governor's Innovator of the Year in Academia Award (2004).



Hari Sundaram, Assistant Professor

Ph.D. in Electrical Engineering, Columbia University, 2002

Research Interests: Multimedia, Computational models for experiential systems.

Visibility: Associate Editor: ACM Trans. on Computing, Communications and Applications, IEEE Signal Processing Magazine, ACM SIG Multimedia web editorial board (2004-07). Guest Editor: Special Issue on Communities and Media Computing, IEEE Trans. on Multimedia. Program Committee member: ACM-MM08, CIVR08, WWW08, ICIP08.

Recent Publications: Media adaptation (ACM TOMCCAP 08, ACM MM07), Linear Transform Approximation (JASP 08), Event Models (Proc. IEEE 08), Social network Dynamics (CIKM 08), Social Network Summaries (CIKM 08), Community Evolution (WWW 08), Communication Flow (ACM HT08).

Current Projects: NSF ARIA, NSF AURA, NSF MAISON, NSF IGERT, NSF CISE.

Awards: IBM Faculty Award (2007, 2008), IBM UIMA Innovations Award (2006), Best Student Paper Award (Joint Conf. on Digital Libraries 2007), Best Paper Finalist (ACM Multimedia 2007), Best student paper award finalist (ICASSP 2006).



Peter Wonka, Assistant Professor

Ph.D. in Computer Science, Vienna University of Technology 2001. (Dipl.-Ing., Vienna University of Technology 1997)

Research Interests: Computer Graphics, Visualization, Information Visualization, Procedural Modeling, Visibility, Real-time Rendering, Urban

Environments.

Visibility: Program Committee Member EGSR 2008, I3DG 2008, IEEE RT 2008.

Recent Publications: Interactive Procedural Street Modeling (SIGGRAPH 2008), Image-Based Procedural Modeling of Building Facades (SIGGRAPH 2007), Interactive Visual Editing of Grammars for Procedural Architecture (SIGGRAPH 2008), Road Network Extraction and Intersection Detection from Aerial Images by Tracking Road Footprints (IEEE TGRS).

Current Projects: CAREER: Constrained Procedural Urban Modeling (NSF), Visual Geo-Analytics (NSF), Pilot: SOUZOU - Creativity through Procedural Modeling (NSF), Gameworld (FIT-IT), Innovative 2D/3D Building, Asset, and Resource Tracking Visualization Tool (STTR), Geometry-based Feature Extraction and Analysis for Geospatial Datasets (NGA).

Awards: NSF CAREER award 2006, Günther Enderle Award for the best paper at Eurographics 2001.



Jieping Ye, Assistant Professor

Ph.D. in Computer Science, University of Minnesota, Twin Cities. (B.S. Fudan University, 1997)

Research Interests: Machine Learning, Data Mining, Bioinformatics.

Visibility: Program Committee member of KDD-08, ICML-08, CVPR-08, ECCV-08, ICDM-08, SDM-08.

Recent Publications: Hypergraph spectral learning (KDD 08), Shared subspace learning for multi-label classification (KDD 08), Heterogeneous data fusion for Alzheimer's disease study (KDD 08), Supervised subspace kernel learning (KDD 08), Least squares Canonical Correlation Analysis (ICML 08), SVM training with indefinite kernels (ICML 08), Discriminant kernel learning (JMLR 08), Adaptive diffusion kernel learning for protein function prediction (BMC Bioinformatics 08), Biological image annotation (Bioinformatics 08, ACM TKDD 08).

Current Projects: Machine learning approaches for biological image informatics (NSF), Computational analysis of expression pattern

images (NIH), Tensor factory (NSF), Integrated spectral dimensionality reduction (NGA).

Awards: ICML 2004 Outstanding Student Paper Award.

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Chitta Baral, Professor Chair, Department of Computer Science and Engineering

Ph.D. in Computer Science, University of Maryland 1991. (B.Tech, IIT Kharagpur 1987)

Research Interests: Knowledge representation,

Temporal logics, logic programming, dynamic systems, text extraction, question answering, Natural language semantics, Bioinformatics.

Visibility: Associate Editor of Journal of AI Research, Area Editor of ACM Transactions on Computational Logic, Editorial board member of Journal of Theory and Practice of Logic Programming.

Recent Publications: Non-monotonic goal language 2 (AAAI08), From English to Answer set programming (AAAI08), Non-monotonic goal language 1 (IJCAI07), Causal and probabilistic reasoning (IJCAI 07), Maintainability (AI Journal 08), Mining Gene-disease relationships (PSB 08).

Book: Knowledge Representation, reasoning and declarative problem solving: Cambridge; 2003.

Current Projects: Modeling cell Behavior (NSF), Goal Languages (ONR-MURI), Text extraction (Science Foundation AZ), Collaborative biocuration (Science Foundation AZ), Integrating DB and IR for QA in Biology domain, From Natural language to logic programming.

Awards: NSF CAREER award 1995.



Hasan Davulcu, Assistant Professor

Ph.D. in Computer Science, Stony Brook University 2002 (B.S. Middle East Technical Univ., Turkey 1993)

Research Interests: Data/Web Mining, Information Integration, Workflows and Web services, Database Systems.

Visibility: PC member, National Conference on Artificial Intelligence (AAAI 2007), PC Member, International Conference on Data Engineering (ICDE 2007) Co-Chair, Workshop on Information Integration on the Web; PC member, National Conference on Artificial Intelligence (AAAI 2004).

Recent Publications: Mining Search-Phrase Definitions from Item Descriptions (ICDE 2008), Term Ranking for Clustering Web Search Results (WebDB 2007), Information Extraction from Web Pages Using Presentation Regularities and Domain Knowledge (WWW Journal 2007), Baum-Welch Style EM Approach on Simple Bayesian Models for Web Data Annotation. (WI 2007).

Current Projects: A Logic-Based Dynamic Policy Model for Adaptive Workflow Management (NSF CAREER), NSDL Digital Library (NSF DUE), Archaeological Informatics (NSF IIS)



Subbarao Kambhampati, Professor

Ph.D. in Computer Science, University of Maryland 1989. (B.Tech, IIT Madras 1983)

Research Interests: Automated Planning/Scheduling; Constraint Satisfaction, Information Integration.

Visibility: Program Co-Chair, AAAI 2005; Program Co-chair, AI Planning Systems Conference 2000. Advisory board member, Journal of AI Research; Executive Council of Intl. Conf. on Automated Planning & Scheduling; Editorial Board of AI Magazine and IEEE Intelligent Systems.

Recent Publications: When is temporal planning Really temporal? (IJCAI 2007), An LP-Based Heuristic for Optimal Planning (CP 2007), Query processing over Incomplete Autonomous Databases (VLDB 2007), A Hybrid Linear Programming and Relaxed Plan Heuristic for Partial Satisfaction Planning Problems (ICAPS 2007), Optimal Ad Ranking for Profit Maximization (WebDB 2008), Sequential Monte Carlo in Reachability Heuristics for Probabilistic Planning (Artificial Intelligence, 2008); Loosely coupled formulations for Automated Planning: An Integer Programming Perspective (JAIR, 2008).

Current Projects: Partial Satisfaction Planning (ONR), Commitment and Opportunity Sensitive Replanning (ONR MURI), Integrated learning and planning (DARPA), Computational approaches to creativity (NSF), Handling data incompleteness and query imprecision in autonomous data sources(Google).

Awards: NSF Research Initiation (1992), NSF Young Investigator (1994); College of Engineering Teaching Excellence award (2002), Fellow of AAAI (Association of Advancement of Artificial Intelligence) (2004), IBM Faculty Award (2004), Google Research Award (2008).



Pat Langley, Professor

Ph.D. in Cognitive Psychology, Carnegie Mellon University, 1980.

Research Interests: Cognitive architectures for intelligent agents, Computational scientific discovery, Interactive assistants for complex cognition, Computational models of human behavior,

Computational biology and ecology.

Visibility: Founding Executive Editor of Machine Learning, Founding Board Member of the International Machine Learning Society, Program, Co-Chair of Integrated Intelligence track for AAAI-07 and AAAI-08, Editorial board member of Machine Learning, Editorial board member of Data Mining and Knowledge Discovery.

Recent Publications: Cognitive architectures (JMLR, 2006; AAAI-06; CogSci-07), Computational scientific discovery (IJHCS, 2006; ECML-06), Computational ecology (Cological Complexity, 2007).

Book: Elements of Machine Learning (Morgan Kaufmann, 1995), Scientific Discovery (MIT Press, 1987).

Current Projects: Human-Robot Interaction (ONR-MURI), Learning Skills from Failure (ONR), Supporting Creativity through Analogical Mapping (NSF), Interactive Modeling of Complex Biological Systems (SFaz)

Awards: Fellow of AAAI, Fellow of the Cognitive Science Society.



Joohyung Lee, Assistant Professor

Ph.D. in Computer Science, University of Texas at Austin 2005. (B.Eng. Seoul National University, 1998)

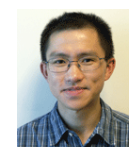
Research Interests: Knowledge representation and reasoning, logic programming, commonsense reasoning, nonmonotonic reasoning, computational semantics of natural language.

Visibility: Program committee member of AAAI 2008, NMR 2008, Commonsense 2007, AAAI 2006 Spring Symposium, NMR 2006.

Recent Publications: A new perspective on stable models (IJCAI 2007), Head-elementary-set-free logic programs (LPNMR 2007), Yet another proof of the strong equivalence (CENT 2007), A reductive semantics for counting and choice in answer set programming (AAAI 2008), On loop formulas with variables (KR 2008).

Current Projects: Grounding-independent reasoning in answer set programming, Relating nonmonotonic logics to classical logic, From natural language to logic programs.

Awards: AAAI 2004 Outstanding Paper Honorable Mention Award.



Baoxin Li, Assistant Professor

Ph.D. in Electrical Engineering, University of Maryland College Park, 2000. (B.S. Univ. of Sci. & Tech. of China, 1992)

Research Interests: Computer vision & Pattern Recognition, Image/Video Processing, Statistical methods in visual computing.

Visibility: PC Member: CVPR 2008, ACM-MM 2008 (Content Track), ISS 2009, ICME 2007. TPC Chair: VPQM 2006 and 2007. Organizing Committee & Finance Chair: CIVR 2006, ICIP 2008. Editorial Board & Area Editor: Signal Processing: Image Communications.

Recent Publications: Bayesian Tactile Face (CVPR'08), Joint Conditional Random Field of Multiple Views (CVPR'08), Learning Correlation for Human Motion Tracking (ICCV'07), Rao-Blackwellized Particle Filtering for Human Motion Tracking (IEEE Trans. IP 2007).

Current Projects: 3D for Enhancing Target Discrimination (DoD/IAI), Shared Vision (ARO), Stereoscopic Endoscopy (Mayo Clinic/ASU), An Interdisciplinary Research Environment for Motion Analysis (NSF).



Huan Liu, Associate Professor

Ph.D. in Computer Science, University of Southern California, 1989. (B. Eng. Shanghai Jiaotong University, 1985)

Research Interests: Social Computing, Data/Web Mining, Machine Learning, Feature Selection, Text Classification, Healthcare Informatics.

Visibility: PC Co-Chair for SIAM Data Mining 2009, Conference Co-Chair for PAKDD 2008, Founding Co-Organizer of workshop series of Social Computing (SBP'08 and SBP'09), Editorial Board and Advisory Board for Encyclopedia, Handbook, and Journals.

Recent Publications: Identifying Influential Bloggers (WSDM'08), Topic Taxonomy Adaption (ACM TKDD'08), Interacting Features (IJCAI'07), Spectral Feature Selection (ICML'07), Semi-Supervised

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Feature Selection (SDM'07).

Books: Social Computing, Behavioral Modeling, and Prediction (Springer 2008), Computational Methods of Feature Selection (Chapman and Hall/CRC Press, 2008), Feature Selection for Knowledge Discovery and Data Mining, Kluwer, 1998).

Current Projects: Modeling Group Interactions (AFOSR), BloggerTrackers (ONR), DeepSearch (AFRL), Link Mining of Textual Data (MITRE).



Kurt Van Lehn, Professor

Ph.D. in Computer Science, MIT 1983

Research Interests: Applications of AI to Education (Intelligent Tutoring Systems; Teachable agents; Tutorial NL dialogue systems); Human Learning (Student Modeling; Cognitive Modeling); Cognitive Science (Self-

explanation; Cognitive Skill Acquisition; Physics Expertise)

Visibility: Former senior editor, Cognitive Science. Editorial boards of AI in Education, Cognition and Instruction, Machine Learning, Journal of the Learning Sciences; Senior PC member for ITS, AI&Ed, Cognitive Science Conference.

Recent Publications: When are tutorial dialogues more effective than reading? (Cognitive Science, 2007); Eliminating the gap between the high and low students through meta-cognitive strategy Instruction (ITS08); The behavior of tutoring systems. (Int. J. of AI in Education, 2006); Explaining self-explaining: A contrast between content and generation (AIED 07)

Book: Mind Bugs (MIT Press, 1990); Architectures for Intelligence (Erlbaum, 1991).

Current Projects: Physics LearnLab (NSF/PSLC); Tutoring scientific explanation via natural language dialogue (NSF);

Awards: Fellow of the Cognitive Science Society, Fellow of the Center for Advanced Study in the Behavioral Sciences, 9 best paper awards at conferences



Jieping Ye, Assistant Professor

Ph.D. in Computer Science, University of Minnesota, Twin Cities. (B.S. Fudan University, 1997)

Research Interests: Machine Learning, Data Mining, Bioinformatics.

Visibility: Program Committee member of KDD-08, ICML-08, CVPR-08, ECCV-08, ICDM-08, SDM-08.

Recent Publications: Hypergraph spectral learning (KDD08), Shared subspace learning for multi-label classification (KDD08), Heterogeneous data fusion and analysis for Alzheimer's disease study (KDD08), Supervised subspace kernel learning (KDD08), Least squares CCA (ICML08), SVM training with indefinite kernels (ICML08), Discriminant kernel learning (JMLR08), Biological image analysis (ACM TKDD08).

Current Projects: Machine learning approaches for biological image informatics (NSF), Computational analysis of expression pattern images (NIH).

DATABASES



Selcuk Candan, Associate Professor
Associate Director, Arts, Media, and Engineering
Ph.D. in Computer Science, University of Maryland, College Park 1997. (BS Bilkent University 1993)

Research Interests: Data management, Information integration, Storage/Querying/Retrieval of multimedia and Web data, Assistive technologies for information and data access, Security and privacy of data.

Visibility: Editorial board member of VLDB journal, Editorial board of the ACM Digital Symposium Collection, PC chair for ACM International Conference on Multimedia (SIGMM)'08.

Recent Publications: Scalable Filtering of Multiple Generalized-Tree-Pattern Queries over XML Streams (IEEE TKDE 2008), Supporting OLAP Operations over Imperfectly Integrated Taxonomies. (SIGMOD 2008), Uncertain QBE for Web Service Mashup (SIGMOD 2008), Runtime Semantic Query Optimization for Event Stream Processing (ICDE 2008), Extracting Relevant Snippets for Web Navigation (AAAI 2008), Sum-Max Monotonic Ranked Joins for Evaluating Top-K Twig Queries on Weighted Data Graphs (VLDB 2007), Feedback-based InConsistency Resolution and Query Processing on Misaligned Data Sources (SIGMOD 2007), Integrating and Querying Taxonomies with

QUEST in the Presence of Conflicts (SIGMOD 2007), Mashup Feeds: Continuous Queries over Web Services (SIGMOD 2007), Middleware for Distributed and Autonomous XML Message Processing (ICDE 2007), Data-quality Guided Load Shedding for Expensive In-Network Data Processing (ICDE 2007).

Current Projects: NSF, MAISON: Middleware for Accessible Information Spaces on NSDL; NSF, AOC: Archaeological Data Integration for the Study of Long-Term Human and Social Dynamics; Mellon Foundation; Digital Antiquity: Planning a Digital Information Infrastructure for Archaeology; NSF, Design of Dense RFID Systems for Indexing in the Physical World across Space, Time, and Human Experience; NSF ITR Medium Award, iLearn: IT-enabled Ubiquitous Access to Educational Opportunities for Blind Individuals, 2003-2008.



Yi Chen, Assistant Professor

Ph.D. in Computer Science, University of Pennsylvania, 2005. (B. Eng. Central South University, 1999)

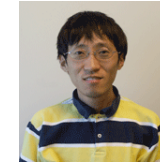
Research Interests: Data management, including query evaluation and optimization, keyword search on semi-structured/structured data, data integration, data streams, web and scientific applications.

Visibility: Publicity and proceedings chair for PODS 2009, Program committee member for ICDE 2009, APWeb-WAIM 2009, AAAI 2008, CIKM 2008, VLDB 2008.

Recent Publications: Reasoning about keyword search (VLDB/JDMR'08), Workflow mining and optimization (SIGKDD'08), Snippet generation (SIGMOD'08), Keyword search on XML data (ICDE'08, SIGMOD'07), Data integration over incomplete and imprecise data (VLDB'07, CIDR'07).

Current Projects: Keyword search on XML and databases, Text extraction and retrieval (Science Foundation AZ), Workflow retrieval and optimization (NSF).

BIOINFORMATICS



Seungchan Kim, Assistant Professor

(Unit head, Biocomputing Unit, Tgen)

Ph.D. in Electrical Engineering, Texas A&M University; Post-doctoral fellowship in Cancer Genetics, NIH

Research Interest: Comp. Biology, Bioinformatics, Genomic Signal Processing, Statistical Machine Learning.

Visibility: Associate Editor of EURASIP Journal of Bioinformatics and Systems Biology, Guest Editor of Current Genomics Special Issue on Genomic Signal Processing, Program Committee of GENSIPS (2001-2008), ICMLA (2006-2008), DREAM (2007-2008), MLBB 2008, BioKDD 2008, NIH study section panel (2007, ZRG1 BST-D 10 B).

Recent Publications: Bioinformatics 7 (JBI, DREAM 2007 (2), EURASIP JBSB, IJCAI 2007, CSB 2007, Biodevices), Genomic Signal Processing 3 (GENSIPS 2007 (3)), Biomedical collaboration 3 (Molecular Cancer Therapeutics, Cancer Research, Prostate).

Current Projects: Cellular context mining and biomedical data integration (NIH/NLM, Science Foundation AZ), Biomedical collaboration (pancreatic cancer (NIH/NCI), melanoma (NIH/NCI), radiation (NIH/NIAID), breast cancer (DoD), context-specific gene regulatory network modeling and analysis.

Awards: AACR-AstraZeneca Scholarship-in-Training Award (2002), US Patent No. 7,003,403 (awarded on April 2006, Quantifying Gene relatedness Nonlinear Prediction of Gene Expression Levels).

Highlights: Two AAAI fellows (Langley, Kambhampati); AAAI 2005 Program Co-Chair (Kambhampati), Associate/Area Editor (JAIR-Baral, ACM TOCL – Baral, Signal Processing and Image Communications - Li), Editorial Board Member (ML – Langley, DM & KD – Langley, AI Magazine & IEEE Intelligent Systems – Kambhampati, TPLP – Baral, VLDB Journal – Candan, etc.), NYI award (Kambhampati), CAREER awards (Baral, Davulcu), Eight papers in IJCAI 2007 (Baral-2, Kambhampati-3, Liu, Lee, Kim), Four papers in AAAI 2008, Two papers in ICML 2008, Three papers in KDD 2008, Two papers in CVPR 2008, Four papers in SIGMOD 2007 (Candan-3, Chen), Three papers in VLDB 2007, Two papers in ICDE 2007, Two papers in ICDE 2008, Three papers in SIGMOD 2008. **Funding from NSF** (Langley, Kambhampati, Baral, Ye, Davulcu, Li, Candan, and Chen), ONR, ONR-MURI, DARPA, IARPA, AFOSR, AFRL, NIH/NLM, NIH/NCI, NIH/NIAID, DOD/IAI, ARO, SFaz, Mayo Clinic, IBM, Google and MITRE.

Network Research @ Arizona State University



Sandeep K.S. Gupta, Professor

Ph.D. in Computer Science, Ohio State University 1995. (M.Tech, IIT Kanpur; B.Tech, IT BHU)

Research Interests: Parallel and Distributed Computing and Systems with emphasis on Mobile, Pervasive and Autonomic Computing.

Visibility: Editorial board member of *IEEE Communication Letters*, TPC Chair of *BodyNets'08*, TPC Co-Chair of *GreenCom'07*.

Recent Publications: Energy-Efficient, Thermal-Aware Scheduling for Homogenous High-Performance Computing Datacenters: A Cyber-Physical Approach (*IEEE TPDS 2008*, Special Issue on Power-Aware Parallel and Distributed Systems), Wireless Sensor Localization Using SOM (*IPSN'07*), Energy-Aware Self-Stabilizing Multicasting (*IEEE IPDPS'07*) Book: Fundamentals of Mobile and Pervasive Computing, McGraw-Hill, 2004.

Current Projects: CSR-DMSS Next Generation Thermal-Aware Energy-Efficient Resource Management for Data Centers (NSF), Building Greener Datacenters in Arizona (Science Foundation of Arizona), Thermal Management for Datacenters (Intel Corporation), Optimizing Multicore Proxy Server Performance (Intel Corp), CT-ISG Physiological Value Based Security for Body Area Networks (NSF).

Awards: NSF ITR 2000, Best Paper Award at ICISIP'2006.



Dijiang Huang, Assistant Professor

Ph.D. in Computer Science, University of Missouri-Kansas City, 2004.

Research Interests: Network Security, Privacy Preservation Techniques, Key Management, Secure Ad Hoc Network Routing, Trust Management for VANETs.

Visibility: PC Co-Chair for Information Security Symposium (*ICC*) 2010, Publication Chair for *HPSR 2008*, Finance Chairs for *ISADS 2007*, *FTDCS (2007,2008)*.

Recent Publications: Unlinkability Measure for MANETs (*IEEE ToWC, 08*), Secure Group Key Management for MANETs (*Ad Hoc Journal, 08*), Trust Management of VANET (*MobiArch08*), C-Mix (*IH08*), On-demand Lightweight Anonymous Routing/Information Theoretic Measure for MANETs (*ICMU08*), Privacy Preservation Services (*SAC08*), Distributed RFID Access Control (*ICC08*).

Current Projects: Pairing Implementation in Sensors (CES), Anonymous MANET Communications (AFRL).



Andréa W. Richa, Associate Professor

Ph.D. in Computer Science, Carnegie Mellon University 1998.

Research Interests: Algorithms for distributed wireless and mobile networks, Graph algorithms, Randomized algorithms, Approximation algorithms, Combinatorial optimization, Distributed resource

allocation

Visibility: Plenary Speaker, *AdHocNow'07*. Publicity Chair, *ACM SPAA'08*; Guest Editor, *ACM Baltzer Journal on Mobile Networks and Applications (MONET)*, Special Issue on Foundations of Mobile computing, 2004. Program Chair *ACM DIALM-POMC Joint Workshop* on Foundations of Mobile Computing, 2003. PC Member, *ACM-SIAM SODA, 2008*. *ACM MobiHoc 2005*, *ACM DIALM-POMC, 2004, 2007, 2008*, *ACM SPAA 2001*.

Recent Publications: An $O(\log n)$ Dominating Set Protocol for Wireless Ad-Hoc Networks under the Physical Interference Model (*MOBIHOC'08*), A Jamming-Resistant MAC Protocol for Single-Hop Wireless Networks (*PODC 2008*), Dynamic Routing and Location Services in Low Doubling Dimension (*DISC 2008*), Compact routing with slack in low doubling dimension (*PODC 2007*), Optimal scale-free compact routing schemes in doubling networks (*SODA 2007*).

Linearization: Locally Self-Stabilizing Sorting in Graphs (*ALENEX 2007*), Continuous-Time Collaborative Prefetching of Continuous Media (*IEEE Trans on Broadcasting 2007*), MANET Routing with Provably Low Complexity Through Constant Density Clustering and Route Request Broadcast (*Wireless Personal Comm 2007*), Overlay Networks for Peer-to-peer systems (*Handbook of Approximation Algorithms and Metaheuristics 2007*).

Current Projects: Theory of Self-stabilizing Networks (NSF CCF), Dynamic Routing and Location Services (NSF CCF).

Awards: NSF CAREER Award 2000.

Arunabha Sen, Associate Professor



Ph.D. in Computer Science, University of South Carolina, 1987.

Research Interests: Resource optimization in optical, Wireless and sensor networks, Video transmission over mobile ad-hoc networks, Network processors, System/Network on chip design, Combinatorial optimization, Algorithm design and analysis.

Visibility: Associate Editor, *IEEE Transactions on Mobile Computing*, Program Committees of *IEEE INFOCOM*, *Globecom*, *ICC*, *ACM Foundations on Mobile Computing*.

Recent Publications: "A New Min-Cut Problem with Application to Electric Power Network Partitioning," *European Transactions on Electrical Power*, (2008), On Sparse Placement of Regenerator Nodes in Translucent Optical Networks, *IEEE Globecom'08*, "Finding a path subject to many additive constraints", *IEEE/ACM Transactions on Networking*, (2007), "Coverage Problem for Sensors Embedded in Temperature Sensitive Environments" Proc. of *IEEE SECON'07* "Relay Node Placement in Large Scale Wireless Sensor Networks", *Computer Communications*, (2006), "Fault Tolerance in Sensor Networks: A New Evaluation Metric", Proc. of *IEEE INFOCOM'06*.

Current Projects: Shared-Vision: Embedded Technology for Military Operations in Urban Terrain (ARO), VISION-SHARE System (DURIP).



Violet Syrotiuk, Associate Professor

Ph.D. in Computer Science, University of Waterloo (Canada) 1992.

Research Interests: Cross-layer design and optimization in changing network conditions, modelling and monitoring, medium access control protocols, multi-hop wireless networks including

MANETs, WSNs, WMNs, and cognitive radio networks.

Visibility: Associate Editor, *Computer Networks*. Associate Editor, *International Journal of Communication Systems*. TPC Co-Chair *ACM MSWiM'08* (11th ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems).

Recent Publications: "Rateless Forward Error Correction for Topology-Transparent Scheduling," *IEEE/ACM Transactions on Networking*, April 2008; "Adaptive Audio Streaming in Mobile Ad Hoc Networks using Neural Networks," *Ad Hoc Networks*, June 2008; "Ternary Schedules for Energy-Limited Sensor Networks," *IEEE Transactions on Information Theory*, August 2007.

Current Projects: Characterizing Protocol Interaction (NSF); Cross-Layer Design and Optimization in Cognitive Radio Networks (ONR); Conditional Reliability and the Identification of Communities (ONR).



Guoliang (Larry) Xue, Professor

Ph.D. in Computer Science, University of Minnesota, 1991.

Research Interests: Network science; QoS provisioning; Cross-layer design of wireless networks; Privacy, anonymity and survivability.

Visibility: TPC co-Chair of *IEEE INFOCOM'10*; TPC co-Chair of *IEEE ICC'09 Symposium on Adhoc and Sensor Networks*; Associate Editor of *IEEE Transactions on Wireless Communications*; Associate Editor of *IEEE Network Magazine*; Area Editor of *Computer Networks*.

Recent Publications: Relay node placement in sensor networks (*INFOCOM'07*, *INFOCOM'08*); Multiconstrained QoS routing (*IEEE/ACM Transactions on Networking*, V15 (2007) and V16(2008)); Protection and restoration (*IEEE JSAC*, V21(2003), *IEEE/ACM Transactions on Networking*, V16(2008)), Cross-layer design in wireless mesh networks (*MOBIHOC'05*, *INFOCOM'06*, *IEEE Transactions on Wireless Communications*, 2007).

Current Projects: Dynamic Spectrum Access Networks (NSF), Efficient Survivable Routing in Next Generation Networks (NSF).

Awards: Best Paper Award at *IEEE Globecom'07*; Distinguished Invited Speaker at *IEEE ICCCN'08*.

Network Research @ Arizona State University

Highlights: INFOCOM'2010 TPC co-Chair (Xue); ICC'2010 and ICC'2009 symposium TPC co-Chairs (Huang, Xue); BodyNets'2008 TPC Chair (Gupta); MSWiM'2008 TPC co-Chair (Syrotiuk); DIALM-POMC 2007 and 2006 TPC co-Chairs (Sen, Richa). Associate Editor of IEEE Transactions on Mobile Computing (Sen); Associate Editor of IEEE Transactions on Wireless Communications (Xue); Associate Editor of IEEE Network (Xue); Associate Editor of IEEE Communications Letters (Gupta); Area Editor of Computer Networks (Syrotiuk, Xue); NSF CAREER Award (Richa); NSF ITR Awards (Gupta, Syrotiuk, Xue); Best paper awards (Gupta, Xue); Plenary Speaker at AdHocNow 2007 (Richa); Distinguished Invited Speaker at IEEE ICCCN'2008 (Xue); numerous publications in prestigious venues such as IEEE/ACM Trans. on Networking, ACM Trans. on Sensor Networks, IEEE Trans. on Information Theory, IEEE Trans. on Mobile Computing, IEEE Trans. on Wireless Communications, IEEE Trans. on Parallel and Distributed Systems, IEEE JSAC, ACM MOBIHOC, ACM PODC, IEEE INFOCOM and SIAM/ACM SODA.

Embedded Systems Research @ Arizona State University



Karam S Chatha, Associate Professor

Ph.D. in Computer Science and Engineering, University of Cincinnati, 2001.

Research Interests: Application specific digital system design, including architectures, design methodologies, and computer-aided design tools. In particular, Network-on-Chip design, programming/compiling for multi-core

architectures, thermal and low power design on uni-processor and multi-core architectures, multiprocessor System-on-Chip synthesis, hardware-software co-design, and reconfigurable and adaptive computing.

Visibility: Finance Chair, IEEE/ACM Symposium on Networks-on-Chip (NOCS) 2009, 2007; Member of Technical Program Committee of DAC (2008, 2007), DATE (2009, 2008), ICCAD (2008), ASPDAC (2009, 2008), CODES+ISSS (2008, 2007, 2006), NOCS (2009, 2008); Referee of TCAD, TVLSI, TODAES, TECS, ToC, TSP and JSA.

Recent Publications: Design of Application Specific Network-on-Chip Architectures (TCAD 2008, TVLSI, TVLSI 2006), Multi-core programming (TODAES 2007, DAC 2007, DATE 2007, ASPDAC 2007), Thermal aware scheduling (ICCAD 2008, ICCAD 2007), Low power design and scheduling (CODES+ISSS 08, ASPDAC 2008, ISLPED 2007),

Current Projects: An Integrated Design Framework for Application Development on Multi-core Processors (SFAZ); System-level Design of Network-on-Chip Architectures (NSF); Integrative Security Infrastructure for Personal Identities and Consumer Computing (NSF); Analytical Techniques for Global Energy Minimization of a System of Interacting Components (NSF).

Awards: NSF CAREER Award 2006; IEEE/ACM William J. McCalla Best Paper Award, International Conference on Computer-Aided Design (ICCAD), 2007; Best Paper Award, International Symposium on Field Programmable Logic (FPL), 1999.



Georgios E Fainekos, Assistant Professor (to join in Fall 2009)

Ph.D. in Computer Science, University of Pennsylvania, 2008.

Research Interests: Cyber-Physical Systems including hybrid and dynamical Systems, real time and embedded systems, control and automation, formal verification and testing, Logic, (motion) planning in robotics, mechatronics, unmanned aerial vehicles (UAV), and inverse design engineering

Visibility: Referee of IEEE TAC, IEEE TASE, IEEE TSMC Part A, IEEE Robotics and Automation Magazine, EMSOFT, CDC, ACC, ECC, ADHS, ICRA and IROS.

Recent Publications: "Temporal Motion Planning ..." Elsevier 2007, "Robust Sampling for MITL Specifications" 5th Inter. Conference on Formal Modeling and Analysis of Timed Systems 2007, "Hierarchical Synthesis of Hybrid Controllers from Temporal Logic Specifications" Hybrid Systems: Computation and Control 2007, Robust test generation and coverage for hybrid systems, Hybrid Systems: Computation and Control 2007, "From Structured English to Robot Motion", International Conference on Intelligent Robots and Systems 2007, "Where's Waldo? Sensor-Based Temporal Logic Motion Planning", International Conference on Robotics and Automation 2007, "Partial Order Techniques for the Analysis and Synthesis of Hybrid and Embedded Systems", IEEE Conference on Decision and Control 2007.

Awards: Finalist, Best Student Paper (2007 International Conference on Robotics and Automation), Best Poster Award (2005 Graduate Research Symposium at the University of Pennsylvania), Award for academic excellence in engineering sciences for the academic year 2000-2001 (Awarded by the Technical Chamber of Greece; Given to the top 5 students of every year in each department)



Yann-Hang Lee, Professor Associate Chair, Department of Computer Science and Engineering

Ph.D. in Computer, Information and Control Engineering, University of Michigan Ann Arbor, 1985.

Research Interests: Real-time computing, embedded system and software, Fault-tolerant computing,

distributed computing, and service-oriented computing.

Visibility: Keynote - SNPD(07) and CAINE(06), Co-Chair - ICES(07), Advisory and Publicity Committee - ISORC(06), Steering Committee - SEUS(06), PC - WESE(06, 07, 08), SCC(06), IWEC(06), ESO(06), IWSSPS(06), SOCA(07), ICOIN(07), SEC(07), SAC(06).

Recent Publications: Voltage-Clock-Scaling and Scheduling, IEEE Trans. Computers, (2003) Journal of Embedded Computing, (2004), Secure Sensor Network and Localization, EUC (2006), IJWMC (2007), IJSNET (2007), Scheduling in Real-time VM, EMSOFT (2006), Real-time Systems Journal (2007), Real-Time SOA, SOSE (2006)

Current Projects: Preparing High School Faculty for Teaching Service-Oriented Computing, Department of Education; Process-based Ontology Design for Smart Home Applications, ETRI



Aviral Shrivastava, Assistant Professor

Ph.D. in Computer Science, University of California, Irvine 2006.

Research Interests: Compilers and microarchitectures for embedded systems, including techniques for power, performance reliability, temperature and code size improvement.

Visibility: Program Committee Member of CASES 2007, 2008, LCTES 2008, RTCSA 2007, 2008, DSD 2007, 2008, Referee of Journals, TCAD, TVLSI, TECS, TODAES.

Recent Publications: A Graph Drawing Based Spatial Mapping Algorithm for Coarse- Grained Reconfigurable Architectures (TVLSI), Partially Protected Caches to Reduce Failures due to Soft Errors in Multimedia Applications (TVLSI), Register File Power Reduction Using Bypass Sensitive Compiler (TCAD 2008), Automatic Design Space Exploration of Register Bypasses in Embedded Processors (TCAD 2007), Static Analysis of Processor Stall Cycle Aggregation (CODES+ISSS 2008), 'SDRM: Simultaneous Determination of Regions and Function-to-Region Mapping for Scratchpad Memories (HIPC 2008), Hiding Cache Miss Penalty Using Priority-based Execution for Embedded Processors (DATE 2008), A Compiler-in-the-Loop Framework for Exploration of Horizontally Partitioned Caches (ASPAC 2008)

Software: EXPRESSION: An Architecture Description Language (ADL) based Retargetable Compiler-Simulator toolchain, PBExplore: A Compiler-in-the-Loop Framework to explore Register Bypasses in Pipelined Embedded Processors, PTSMT: A Tool for Cross-Level Power, Performance and Thermal Exploration

Books: Compiler Design Handbook, : Optimizations and Machine Code Generation, Second Edition, CRC Press 2007, Processor Description Languages, Morgan Kaufman, 2008.

Current Projects: An Integrated Design Framework for Application Development on Multi-core Processors (SFAZ), Low Power Compilation using Phoenix (Microsoft Corp.)

Awards: Best Paper Candidate at ASPAC 2008



Sarma Vrudhula, Professor Director, Consortium for Embedded Systems

Ph.D. in Electrical Engineering, University of Southern California, 1985.

Research Interests: Computer-Aided Design of VLSI circuits and systems, Design and optimization for low power VLSI, Statistical timing and power analysis with

process variations, Performance and power optimization of single and multi-core processors, Thermal modeling of multi-core processors, Threshold Logic circuit design, threshold logic network synthesis, application of Boolean and threshold models to gene regulatory networks.

Visibility: Director, Consortium of Embedded Systems; Director of NSF Center for Low Power Electronics (1996-2007); Associate Editor of ACM Transactions on Design Automation of Electronic Systems; Associate Editor of IEEE Transactions on Computer-Aided Design.

Recent Publications: "Current source based cell models for statistical timing ...", DAC 2008, "Efficient online computation of core speeds ...", ISLPED 2008, "Leakage minimization of digital circuits ...", TCAD 2007, "Analysis of power supply noise ...", IEEE D&T 2007, "Performance optimal processor throttling under thermal constraints", CASES 2007, "Throughput of multicore processors under thermal constraints", ISLPED 2007.

Current Projects: An Integrated Design Framework for Application Development on Multi-core Processors (SFAz), A novel threshold logic based circuit architecture for high performance and low power digital systems (SFAz), Synthesis, Verification and Testing for Nano-CMOS and Beyond using Threshold Logic (NSF), Analytical Techniques for Global Energy Minimization of a Systems of Interacting Components (NSF), Methodologies for Robust Design of Information Systems under Multiple Sources of Uncertainty (NSF),

Embedded Systems Research @ Arizona State University

Awards: Best Paper Award ISEQED 2008, Outstanding Paper Award MIXDES 2001.

DISTRIBUTED SYSTEMS



Donald S. Miller, Associate Professor

Ph.D. in Electrical Engineering, University of Southern California, 1972

Research Interests: Operating Systems, Computer Architecture, Computer Networks, Virtual Machine Implementation, Embedded Operating System and Network Software. Single Address Space Operating Systems

Recent Publications: Lower Level Architecture of the Sombbrero Single Address Space Operating System (PDCS) 2006, Distributed Scheduling for the Sombbrero Single Address Space Operating System (PDPTA) 2006, Using Network Processors for Packet Filtering (PDPTA) 2005

Current Projects: Security in virtual machine monitor implementations, Linux kernel modifications



Partha Dasgupta, Associate Professor

Ph.D. in Computer Science, SUNY Stony Brook 1984.

Research Interests: Computer system security, distributed operating systems

Visibility: Program vice chair, ICDCS03, CNIS2007

Recent Publications: Community sensor grids: virtualization for sharing across domains (MobiSys

08). Towards more effective virus detectors (CSI 07), Vulnerabilities of PKI based smartcards (MILCOM 07), Kernel and application integrity assurance: ensuring freedom from rootkits and malware in a computer system (AINAW 07), Anonymous communications on the Internet (CNIS 05)

Current Projects: Secure Computations in presence of Malware (NSF), Hierarchical Operating Systems for next generation Multi-Core Processors (SFAz), An Integrated Design Framework for Application Development on Multi-Core Processors (SFAz and Raytheon), Multi-Core Processors and Programming (Intel), Integrated Security Infrastructure for Personal Identities and Consumer Computing (NSF).

Award: Best Paper Awards (PDCS'05, ICDCS'95)

Highlights: *Keynote* (SNPD'07 and CAINE'06 – Lee), *Conference Co-Chair* (ICISS'07 – Lee), *Associate Editorships* (IEEE TCAD, ACM TODAES – Vrudhula), *CAREER award* (Chatha), *Best Paper award /nominations* (ISQED 2008- Vrudhula, ICCAD 2007- Chatha, ASPDAC 2008- Shrivastava), *Journals - Seven papers* accepted/published in IEEE Transactions in 2007-08 (Vrudhula, Chatha, Shrivastava), *Three papers* published in ACM Transactions in 2007-08 (Vrudhula, Chatha, Shrivastava), *Conferences* - Two papers at DATE 2007 (Chatha, Shrivastava) Two papers at DAC 2007 (Vrudhula, Chatha), Two papers at ISLPED 2007 (Vrudhula, Chatha), Four papers at ESWEEK 2007 (Vrudhula, Chatha, Shrivastava), Four papers in VLSI Design 2008 (Vrudhula, Shrivastava), Four papers at ASPDAC 2008 (Vrudhula, Chatha, Shrivastava), Two papers at DATE 2008 (Vrudhula, Shrivastava), Two papers at ESWEEK 2008. *Funding from* \$2M SFAZ Strategic Research Group Grant (Vrudhula, Chatha, Shrivastava), NSF (Vrudhula, Chatha), Dept. of Education (Lee), SFAZ CAA (Vrudhula), Microsoft (Shrivastava), Intel (Vrudhula), Raytheon (Vrudhula).

Information Assurance Research @ Arizona State University
(Including Computing Systems, Data and Network Security; Service Computing; and Software Engineering)



Gail-Joon Ahn, Associate Professor

Ph.D. in Information Technology, George Mason University 2000

Research Interests: Vulnerability and risk management, authentication and access control, security architecture for distributed systems, identity management, policy analysis and enforcement, formal models for computer security, and cyber crime analysis

Visibility: Information Director, ACM SIGSAC; Steering Committee Chair, ACM SACMAT; PC Co-chair for WWW '09 Security and Privacy Track; Guest Editor, ACM TISSEC (2007)

Recent Publications: Analyzing and managing role-based access control policy analysis (IEEE TKDE 08), Risk evaluation for personal identity management based on privacy attribute ontology (ER 08), Beyond user-to-user access control for online social networks (ICICS 2008), Enabling verification and conformance testing for access control model (ACM SACMAT 08), Visualization based policy analysis: case study in SELinux (ACM SACMAT 08), Systematic policy analysis for high-assurance services in SELinux (IEEE POLICY 08), Portable user-centric identity management (IFIP SEC 08)

Current Projects: Malware Detection and Analysis (NIJ), Assured Information Sharing (NSF), Secure Collaboration (DOE CAREER), Responding Network-centric Attacks through Visual Analysis (NSA), Securing Online Social Networks (NSF), Automated Policy and Configuration Management, Secure Healthcare Transaction Control.

Awards: DoE CAREER award (2003), Educator of the Year award (Federal Information Systems Security Educators' Association, 2005)



Rida Bazzi, Associate Professor

Ph.D. in Computer Science, Georgia Institute of Technology 1994

Research Interests: Reliable distributed computing, computer security, computer-assisted reliability

Visibility: General chair, PODC 07, PC member, PODC 00 and 05, and DISC 01

Recent Publications: On the Establishment of Distinct Identities in Overlay Networks (Distributed Computing 2007, special issue of selected papers from PODC 2005). Hop Chains: Secure Routing and the Establishment of Distinct Identities (Theoretical Computer Science (to appear), special issue of selected papers from OPODIS 2006).

Awards: NSF CAREER award 2000



Selcuk Candan, Associate Professor

Ph.D. in Computer Science, University of Maryland, College Park 1997

Research Interests: Security and privacy of data

Visibility: Editorial board member of VLDB, ACM Digital Symposium Collection, PC chair, ACM SIGMM '08

Recent Publications: Scalable filtering of multiple generalized-tree-pattern queries over XML streams (IEEE TKDE 08), Supporting OLAP operations over imperfectly integrated taxonomies (SIGMOD 08), Uncertain query by example for web service mashup (SIGMOD 08), Runtime semantic query optimization for event stream processing (ICDE 2008), Extracting relevant snippets for web navigation (AAAI 08)

Current Projects: NSF, MAISON: Middleware for Accessible Information Spaces on NSDL; NSF, AOC: Archaeological Data Integration for the Study of Long-Term Human and Social Dynamics; Mellon Foundation; Digital Antiquity: Planning a Digital Information Infrastructure for Archaeology; NSF, Design of Dense RFID Systems for Indexing in the Physical World across Space, Time, and Human Experience



James Collofello, Professor
Associate Dean for Academic and Student Affairs,
Ira A. Fulton School of Engineering

Ph.D. in Computer Science, Northwestern University, 1978

Research Interests: Software engineering, software quality assurance, software project management.

Recent Publications: What Makes Free/Libre Open Source Software (FLOSS) Projects Successful? An Agent-Based Model of FLOSS Projects (World Congress on Social Simulation 2008), A Software Product Line Process Simulator, Software Process Improvement and Practice (2006), Modeling Inspections to Evaluate Prioritization as a Method to Mitigate the Effects of Accelerated Schedules, SSAT Int'l Conf. on Reliability and Quality in Design (2006)

Current Projects: Incorporating Agile Software Development Best Practices into Mature Multi-Disciplinary Software Eng. Processes (JPL)

Partha Dasgupta, Associate Professor

Ph.D. in Computer Science, SUNY Stony Brook 1984.

Research Interests: Computer system security, distributed OS.

Visibility: Program vice chair, ICDCS03, CNIS2007

Recent Publications: Community sensor grids: virtualization for



sharing across domains (MobiSys 08). Towards more effective virus detectors (CSI 07), Vulnerabilities of PKI based smartcards (MILCOM 07), Kernel and application integrity assurance: ensuring freedom from rootkits and malware (AINAW 07), Anonymous communications on the Internet (CNIS 05)

Current Projects: Secure Computations in presence of Malware (NSF), Hierarchical Operating Systems for next generation Multi-Core Processors (SFAz), An Integrated Design Framework for Application Development on Multi-Core Processors (SFAz and Raytheon), Multi-Core Processors and Programming (Intel), Integrated Security Infrastructure for Personal Identities and Consumer Computing (NSF).

Award: Best Paper Awards (PDCS'05, ICDCS'95)

Sandeep Gupta, Professor

Ph. D. in Computer and Information Science, Ohio State University, 1995

Research Interests: Wireless networks, mobile and ubiquitous/pervasive computing, embedded sensor networks for biomedical

applications, parallel and distributed computing
Visibility: TPC chair for Third Int'l Conf. on Body Area Networks (BodyNets 2008).

Recent Publications: Wireless localization using self-organizing maps (IPSN 07), Energy-aware self-stabilization in mobile ad hoc networks: A multicasting case study (IPDPS 07), Optimal online and offline

registration techniques for location management with overlapping reg. areas (IEEE TMOG 05)

Current Projects: AYUSHMAN - A Testbed for Developing Dependable and Secure Communication Protocols for Medical Sensors (NSF), Identity Management System - A Novel System for Identity Theft Prevention for Today's Insecure Networks.

Awards: Best Paper Award in 4th Int'l Conf. on Intelligent Sensing and Information Processing, 2006

Dijiang Huang, Assistant Professor

Ph.D. University of Missouri - Kansas City 2004

Research Interests: Internet security, wireless network security, mobile ad hoc network, privacy and identity management

Visibility: TPC member of IEEE GlobeCom 2008.

Recent Publications: FPGA Implementations of elliptic curve cryptography and Tate pairing over a binary field (*Jour. Systems Architecture*), C-Mix: a lightweight anonymous routing approach (*Information Hiding 08*), SRK: a distributed RFID data

access control mechanism (*ICC 08*), Privacy preservation services: challenges and solutions (*ACM Symp. on Applied Computing 08*), Computing cryptographic pairing in sensors (*ACM SIGBED Review, Special Issue on RTSS Forum on Deeply Embedded Real-Time Computing 08*), OLAR: on-

demand lightweight anonymous routing in MANETs (4th Int'l Conf. on Mobile Computing and Ubiquitous Networking (ICMU 2008).

Unlinkability measure for IEEE 802.11 based MANETs (*IEEE Trans. on Wireless Communications 08*)



Information Assurance Research @ Arizona State University

(Including Computing Systems, Data and Network Security; Service Computing; and Software Engineering)

Awards: Best Paper Award of 4th Int'l Conf. on Mobile Computing and Ubiquitous Networking 2008



Huan Liu, Associate Professor

Ph.D. in Computer Science, University of Southern California, 1989.

Research Interests: Social computing, data/web mining, machine learning, feature selection, text classification, healthcare Informatics

Visibility: PC co-chair for SIAM Data Mining 2009,

Conference, Co-chair for PAKDD 2008, founding co-organizer of workshop series of Social Computing (SBP'08 and SBP'09), Editorial Board and Advisory Board members for handbook and journals

Recent Publications: Identifying influential bloggers (WSDM 08), Topic taxonomy adaption (ACM TKDD 08), Interacting features (IJCAI 07), Spectral feature selection (ICML 07), Semi-supervised feature selection (SDM 07)

Books: Social computing, behavioral modeling, and prediction (Springer 2008), Computational methods of feature selection (Chapman and Hall/CRC Press, 2008)

Current Projects: Modeling Group Interactions (AFOSR), BloggerTrackers (ONR), DeepSearch (AFRL), Link Mining of Textual Data (MITRE)



Hessam Sarjoughian, Assistant Professor

Ph. D. University of Arizona, 1995

Research Interests: Agent-based modeling, multi-formalism modeling, simulation-based design, software architecture

Visibility: Area Editor for SIMULATION: Transactions of The Society for Modeling and Simulation (2004-)

Recent Publications: Interoperability among parallel DEVS simulators and models implemented in multiple programming languages (SIMULATION: Trans. of Society for Modeling and Simulation International 2007), Application of combined discrete-event simulation and optimization models in semiconductor enterprise manufacturing systems (Winter Simulation Conference 2007)

Current Projects: Design of Service-based Software Systems with QoS Monitoring and Adaptation (NSF)



Wei-Tek Tsai, Professor

Ph.D. in Computer Science, University of California, Berkeley 1985

Research Interests: Software engineering, Internet, Parallel and distributed processing

Visibility: Associate Editor, IEEE Trans. on Knowledge

and Data Engineering, 2002- 06, Service-Oriented Computing and Applications, 2006-present, Program co-chair, ISADS 2007 and IEEE Int'l Conf. on E-Commerce Technology and Enterprise Computing, E-Commerce and E-Services, 2008

Recent Publications: On testing and evaluation service-oriented software (Computer 08), Teaching service-oriented computing and STEM topics via robotic games (ISADS 08), Service-oriented system engineering (SOSE) and its applications to embedded system development (SOCA 07), Simulation verification and validation by dynamic policy specification and enforcement (Simulation 06), Data provenance in SOA: security, reliability, and integrity (SOCA 07)

Books: Distributed service-oriented software dev. (Kendall/Hunt 08), Service-oriented computing (Learning & Leading 08)

Introduction to programming languages: programming in C, C++, scheme, prolog, C# and SOA (Kendall/Hunt 2006)

Current Projects: Preparing High School Teachers for Modern Service-Oriented Computing Education, (FIPSE), Process-based Ontology Design for Smart Home Application (ETRI)

Awards: Best Paper Award, Int'l Conf. on System Sciences, 1988, IEEE Meritorious Service Award 1992



Guoliang Xue, Professor

Ph.D. in Computer Science, University of Minnesota 1991

Research Interests: Resource allocation in wireless networks, QoS provisioning and survivability in networks

Visibility: Distinguished Invited Speaker, IEEE ICCCN'2008, TPC co-chair, IEEE INFOCOM'2010, IEEE ICC'2009, Symposium on Adhoc

and Sensor Networking, IEEE/ACM QShine 2007, General co-chair for IEEE HPSR 08, Associate editor, IEEE Transactions on Wireless Communications, IEEE Network, Area Editor, Computer Networks Journal

Recent Publications: Polynomial time approximation algorithms for multi-constrained QoS routing (*IEEE/ACM Trans. on Networking 08*), Faster algorithms for constructing recovery trees enhancing QoP and QoS (*IEEE/ACM Trans. on Networking 08*), Fault-tolerant relay node placement in wireless sensor networks: problems and algorithms (Infocom 07), Finding a path subject to many additive QoS constraints (*IEEE/ACM Trans. on Networking 07*), Relay node placement in wireless sensor networks (*IEEE Trans. on Computers 2007*)

Current Projects: Dynamic Spectrum Access Networks (NSF), Efficient Survivable Routing in Next Generation Networks (NSF)

Awards: Best Paper Award of IEEE Globecom'2007



Stephen S. Yau, Professor

Ph.D. in Electrical Engineering, University of Illinois at Urbana-Champaign, 1961.

Director of Information Assurance Center

Research Interests: Trust management and security, software engineering, distributed systems, service-based systems, ubiquitous/pervasive computing

Visibility: Keynote speaker, 2008 IEEE Int'l Conf. on Services Computing; Editorial Board member of IEEE Trans. on Service Computing; Steering Committee chair, IEEE Workshop on the Future Trends of Distributed Computing Systems, COMPSAC (until 2005); member of Board of Directors, Computing Research Association (1996-2000); President, IEEE Computer Society (1974-75); Editor-in-chief, IEEE Computer magazine (1981-84)

Recent Publications: Specification, decomposition and agent synthesis for situation-aware service-based systems (Jour. Systems and Software 08). An intelligent control architecture for adaptive service-based software systems with workflow patterns (COMPSAC 08), Service functionality indexing and matching for service-based systems (IEEE Int'l Conf. on Services Computing 08), A flexible trust model for distributed service infrastructures (ISORC 08), Privacy preserving keyword search (ACM ASIACCS 08), Security policy integration and conflict reconciliation for collaboration among organizations in ubiquitous computing environments (Int'l Conf. on Ubiquitous Intelligence and Computing 08)

Current Projects: Design of Service-based Software Systems with QoS Monitoring and Adaptation (NSF)

Awards: Overseas Outstanding Contributions Award of the Chinese Computer Federation (2006), Tsutomu Kanai Award of IEEE Computer Society (2002), Fellows of IEEE and AAAS

Highlights: Fellow of IEEE (Yau), Fellow of AAAS (Yau); Keynote speaker, 2008 IEEE Int'l Conf. on Services Computing (Yau); Program co-chair of ISADS 2007 and ECE 2008/EEE 2008 (Tsai); Distinguished Invited Speaker for IEEE ICCCN 2008, TPC co-chair for IEEE ICC 2007 Symp. on Wireless Ad Hoc and Sensor Networks, IEEE/ACM QShine 2007, General co-chair for IEEE HPSR 2008 (Xue); TPC chair for BodyNets 2008 (Gupta); Program vice chair for CNIS2007 (Dasgupta); Co-chair for PAKDD 2008 (Liu); General chair for PODC 2007 (Bazzi); PC chair for SIGMM 2008 (Candan); Information Director for ACM SIGSAC, Steering Committee chair for ACM SACMAT (Ahn)

Associate Editors/Editorial Board Members, IEEE Trans. on Service Computing (Yau); IEEE Trans. on Knowledge and Data Engineering, Service-Oriented Computing and Applications, 2002-06 (Tsai); IEEE Trans. on Wireless Communications, IEEE Network, Computer Networks Journal (Xue); IEEE Trans. on Mobile Computing (Sen); VLDB, ACM Digital Symposium Collection (Candan); Simulation (Sarjoughian)

Theory, Algorithms and Logic Research @ Arizona State University

The algorithms and theory group is very active in research in areas ranging from applied algorithms to fundamental research on the limits of computing. It has special strengths in combinatorics, dependability, distributed computing, and network algorithms. Our applied research focuses on combinatorial design and its application to hardware and software design. Application areas also include the use of algorithmic techniques for computational biology. Fundamental research in algorithms addresses graph algorithms as well as search techniques and approximation algorithms. Our research includes resource localization, routing, caching, and streaming algorithms for networks, in addition to combinatorial design theory, security issues, and fault tolerance in sensor networks and distributed systems.

Three of the faculty in the groups received the prestigious NSF CAREER award. Many of our faculty serve on editorial boards of top journals and serve regularly on technical program committees of top international conferences such as AAI, DISC, ICC, PODC, INFOCOM, SODA, and SPAA. Professor Colbourn is regularly invited to give keynote addresses in numerous international conferences. Professor Xue was a distinguished invited speaker at ICCCN' 2008 and professor Richa was the keynote speaker at AdHocNow'2007. In recent years, research results of the faculty and students in the algorithms and theory group appeared in top conferences with a number of papers receiving awards: Best Paper Award, IEEE Globecom'2007, 2 papers invited to a special issue of selected papers from SODA'2007, one paper invited to special issue on selected papers from OPODIS'2006, and one paper invited to special issue of selected papers from PODC'2005. Research of faculty in the group is funded by the National Science Foundation (NSF), the Army Research Office (ARO), Defense University Research Instrumentation Program (DURIP), and the Office of Naval Research (ONR).



Chitta Baral, Professor
Chair, Department of Computer Science and Engineering

Ph.D. in Computer Science, University of Maryland 1991.

Research Interests: Knowledge representation,

Temporal logics, logic programming, dynamic systems, text extraction, question answering, Natural language semantics, Bioinformatics.

Visibility: Associate Editor of Journal of AI Research, Area Editor of ACM Transactions on Computational Logic, Editorial board member of Journal of Theory and Practice of Logic Programming.

Recent Publications: Non-monotonic goal language 2 (AAAI08), From English to Answer set programming (AAAI08), Non-monotonic goal language 1 (IJCAI07), Causal and probabilistic reasoning (IJCAI 07), Maintainability (AI Journal 08), Mining Gene-disease relationships (PSB 08).

Book: Knowledge Representation, reasoning and declarative problem solving: Cambridge; 2003.

Current Projects: Modeling cell Behavior (NSF), Goal Languages (ONR-MURI), Text extraction (Science Foundation AZ), Collaborative biocuration (Science Foundation AZ), Integrating DB and IR for QA in Biology domain, From Natural language to logic programming.

Awards: NSF CAREER award 1995.



Rida A. Bazzi, Associate Professor

Ph.D. in Computer Science, Georgia Tech, 1994

Research Interests: Reliable Distributed Computing, Computer Security, Compiler-assisted reliability.

Visibility: General chair, PODC'2008; Steering Committee PODC'2008, PODC 2007; Program Committee member ICDCS'2008, PODC'2005,

PODC'2000, DISC'2001.

Recent Publications: On the Establishment of Distinct Identities in Overlay Networks (Distributed Computing 2007, special issue of selected papers from PODC 2005). Hop Chains: Secure Routing and the Establishment of Distinct Identities (Theoretical Computer Science (to appear), special issue of selected papers from OPODIS 2006).

Awards: NSF CAREER award 2000.



Charlie Colbourn, Professor

Ph.D. in Computer Science, University of Toronto, 1980

Research Interests: Combinatorial design theory and its applications in communications and networking.

Visibility: editor-in-chief of the *Journal of Combinatorial Designs*, and on the editorial boards of

Designs Codes and Cryptography; Journal of Combinatorial Theory Series A; Discrete Mathematics; Journal of Statistical Planning and Inference; Journal of Statistical Theory and Practice; and others.

Publications: Charlie Colbourn has published approximately 300 refereed journal papers on combinatorial designs and their applications since 1978.

Books: *Handbook of Combinatorial Designs* (editor), *Triple Systems* (Oxford University Press), *The Combinatorics of Network Reliability* (Oxford University Press).

Honors and Awards: The Euler Medal for Lifetime Achievement in Research (2003). Keynote/invited speaker at numerous conferences internationally; in 2007 and 2008 he presented invited talks at conferences in Singapore, Japan, China, Italy, France, Slovakia, Canada, and the United States.

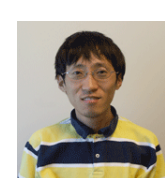


Goran Konjevod, Assistant Professor

Ph.D. in Algorithms, Combinatorics and Optimization, Carnegie Mellon University

Research Interests: approximation algorithms, finite metric spaces, distributed algorithms, polyhedral combinatorics, Computer Aided Design, Ramsey theory.

Recent Publications: Compacting cuts: a new linear formulation for minimum cut, SODA 2007 (invited for publication in ACM Transactions on Algorithms, special issue of selected papers from SODA 2007, submitted, 2007); Optimal-stretch name-independent compact routing in doubling metrics, SODA 2007 (invited for publication in ACM Transactions on Algorithms special issue of selected papers from SODA 2007, submitted 2007); On the Establishment of Distinct Identities in Overlay Networks (Distributed Computing 2007, special issue of selected papers from PODC 2005).



Seungchan Kim, Assistant Professor

(Unit head, Biocomputing Unit, Tgen)

Ph.D. in Electrical Engineering, Texas A&M University; Post-doctoral fellowship in Cancer Genetics, NIH

Research Interest: Computational Biology, Bioinformatics, Genomic Signal Processing, Statistical Machine Learning.

Visibility: Associate Editor of EURASIP Journal of Bioinformatics and Systems Biology, Guest Editor of Current Genomics Special Issue on Genomic Signal Processing, Program Committee of GENSIPS (2001-2008), ICMLA (2006-2008), DREAM (2007-2008), MLBB 2008, BioKDD 2008, NIH study section panel (2007, ZRG1 BST-D 10 B).

Recent Publications: Bioinformatics 7 (JBI, DREAM 2007 (2)), EURASIP JBSB, IJCAI 2007, CSB 2007, Biodevices) (Genomic Signal Processing 3 (GENSIPS 2007 (3)), Biomedical collaboration 3 (Molecular Cancer Therapeutics, Cancer Research, Prostate).

Current Projects: Cellular context mining and biomedical data integration (NIH/NLM, Science Foundation AZ), Biomedical collaboration (pancreatic cancer (NIH/NCI), melanoma (NIH/NCI), radiation (NIH/NIAID), breast cancer (DoD), context-specific gene regulatory network modeling and analysis.

Awards: AACR-AstraZeneca Scholarship-in-Training Award (2002), US Patent No. 7,003,403 (awarded on April 2006, Quantifying Gene Relatedness Nonlinear Prediction of Gene Expression Levels).



Joohyung Lee, Assistant Professor

Ph.D. in Computer Science, University of Texas at Austin 2005. (B.Eng. Seoul National University, 1998)

Research Interests: Knowledge representation and reasoning, logic programming, commonsense reasoning, nonmonotonic reasoning, computational semantics of natural language.

Visibility: Co-Chair: ASPOCP 2008 (collocated with ICLP 2008), Program committee member of AAI 2008, NMR 2008, Commonsense 2007, AAI 2006 Spring Symposium, NMR 2006.

Theory, Algorithms and Logic Research @ Arizona State University

Recent Publications: A new perspective on stable models (IJCAI 2007); Head-elementary-set-free logic programs (LPNMR 2007); Yet another proof of the strong equivalence (CENT 2007); A reductive semantics for counting and choice in answer set programming (AAAI 2008); On loop formulas with variables (KR 2008).

Current Projects: Grounding-independent reasoning in answer set programming, Relating nonmonotonic logics to classical logic, From natural language to logic programs.

Awards: AAAI 2004 Outstanding Paper Honorable Mention Award.



Andréa W. Richa, Associate Professor

Ph.D. in Computer Science, Carnegie Mellon University 1998 (MS, CMU, 1995, MS and BS Federal Univ. of Rio de Janeiro, Brazil, 1989 and 1992)

Research Interests: Algorithms for distributed wireless and mobile networks, Graph algorithms, Randomized algorithms, Approximation algorithms,

Combinatorial optimization, Distributed resource allocation.

Visibility: Publicity Chair, ACM SPAA, 2008. Guest Editor, ACM Baltzer Journal on Mobile Networks and Applications (MONET), Special Issue on Foundations of Mobile computing, 2004. Program Chair ACM DIALM-POMC Joint Workshop on Foundations of Mobile Computing, 2003. PC Member, ACM-SIAM SODA, 2008. ACM MobiHoc 2005, ACM DIALM-POMC, 2004, 2007, 2008, ACM SPAA 2001.

Recent Publications: An $O(\log n)$ Dominating Set Protocol for Wireless Ad-Hoc Networks under the Physical Interference Model (MobiHoc 2008), A Jamming-Resistant MAC Protocol for Single-Hop Wireless Networks (PODC 2008), Dynamic Routing and Location Services in Low Doubling Dimension (DISC 2008), Compact routing with slack in low doubling dimension (PODC 2007), Optimal scale-free compact routing schemes in doubling networks (SODA 2007).

Linearization: Locally Self-Stabilizing Sorting in Graphs (ALENEX 2007), Continuous-Time Collaborative Prefetching of Continuous Media (IEEE Trans on Broadcasting 2007), MANET Routing with Provably Low Complexity Through Constant Density Clustering and Route Request Broadcast (Wireless Personal Comm 2007), Overlay Networks for Peer-to-peer systems (Handbook of Appx. Algorithms and Metaheuristics 2007).

Current Projects: Theory of Self-stabilizing Networks (NSF CCF), Dynamic Routing and Location Services (NSF CCF).

Honors and Awards: NSF CAREER Award 2000; invited plenary speaker, AdhocNow'2007



Arunabha Sen, Associate Professor

Ph.D. in Computer Science, University of South Carolina, 1987.

Research Interests: Resource optimization in optical, Wireless and sensor networks, Video transmission over mobile ad-hoc networks, Network processors, System/Network on chip design, Combinatorial

optimization, Algorithm design and analysis;

Visibility: Associate Editor, IEEE Transactions on Mobile Computing, Program Committees of IEEE Infocom, Globecom, ICC, ACM Foundations on Mobile Computing

Recent Publications: "A New Min-Cut Problem with Application to Electric Power Network Partitioning," *European Transactions on Electrical Power*, (2008), "On Sparse Placement of Regenerator Nodes in Translucent Optical Networks," *IEEE Globecom (2008)*, "Finding a path subject to many additive constraints", *IEEE/ACM Transactions on Networking*, (2007), "Coverage Problem for Sensors Embedded in Temperature Sensitive Environments" Proc. of *IEEE SECON 2007* "Relay Node Placement in Large Scale Wireless Sensor Networks", *Computer Communications*, (2006), "Fault Tolerance in Sensor Networks: A New Evaluation Metric", Proc. of *IEEE Infocom* (2006).

Current Projects: Shared-Vision: Embedded Technology for Military Operations in Urban Terrain (ARO), VISION-SHARE System (DURIP).



Guoliang (Larry) Xue, Professor

Ph.D. in Computer Science, University of Minnesota, 1991.

Research Interests: Network science; QoS provisioning; Cross-layer design of wireless networks; Privacy, anonymity and survivability.

Visibility: TPC co-Chair of IEEE INFOCOM'2010; TPC co-Chair of IEEE ICC'2009 Symposium on Adhoc and Sensor

Networks; Associate Editor of IEEE Transactions on Wireless Communications; Associate Editor of IEEE Network Magazine; Area Editor of Computer Networks.

Recent Publications: Relay node placement in sensor networks (INFOCOM'07, INFOCOM'08); Multiconstrained QoS routing (IEEE/ACM Transactions on Networking, V15 (2007) and V16(2008)); Protection and restoration (IEEE JSAC, V21(2003), IEEE/ACM Transactions on Networking, V16(2008)), Cross-layer design in wireless mesh networks (MOBIHOC'2005, INFOCOM'2006, IEEE Transactions on Wireless Communications, 2007).

Current Projects: Dynamic Spectrum Access Networks (NSF), Efficient Survivable Routing in Next Generation Networks (NSF).

Honors and Awards: Paper Award, IEEE Globecom'2007; Distinguished Invited Speaker at IEEE ICCCN'2008.