KEYNOTE SPEAKER

Gursimran Singh Walia

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Professional Preparation

2009. Ph.D. Computer Science, Mississippi State University, Starkville, MS
2009. Information Assurance Professional, Mississippi State University, Starkville, MS
2007. M.S. Computer Science, Mississippi State University, Starkville, MS
2004. B.Tech. Computer Science, Punjab, INDIA

Appointments

2017 - present. Graduate Coordinator of Software Engineering. North Dakota State University - Fargo, ND
2015 - present. Associate Professor - Department of Computer Science. North Dakota State University - Fargo, ND
2009 – 2015. Assistant Professor – Department of Computer Science. North Dakota State University- Fargo, ND

Research Interests

Empirical software engineering, Software errors; Software inspections and Software quality improvement, Requirements engineering, Human Cognition in Software Engineering, Managing and estimating software quality, Information Assurance, Software Engineering for computer security.

Awards and Honors

- **Best Research Paper Award** at 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Research Track. Pasadena, CA, USA.
- **Best Industry Paper Award** at 24th IEEE International Symposium on Software Reliability Engineering - ISSRE'2013, Industry Track. Pasadena, CA, USA.
- **Excellence in Teaching Award**, College of Science and Mathematics, NDSU, 2015

- **Peltier Award for Teaching Innovation** Nominee for the NDSU Development Foundation, 2015.
- **Odney Excellence in Teaching Award** Nominee for the NDSU Development Foundation, 2015-2016.
- **Best Industry Paper Award Nominee** at 27th IEEE International Symposium on Software Reliability Engineering - ISSRE'2016, Industry Track. Ottawa, Canada.
- **Exemplary CS Educational Research Paper Award** at 48th ACM Technical Symposium on Computer Science Education, SIGCSE 2017, Washington, USA
- **Odney Excellence in Teaching Award** Nominee for the NDSU Development Foundation, 2017-2018.

Research Funding

- NSF DUE-1225972 ($600K); PI: Walia at NDSU; Effective Dates (8/15/2012 – 7/31/2015); Type 2 Collaborative Project: Integrating Testing into Advanced CS/IT Courses Supported by a Cyber Learning Environment.
- Walia at NDSU; Effective Dates (8/1/2014 – 7/31/2017); Collaborative Project: Integrating Software Engineering and Human Error Models to Improve Software Quality.NSF DUE – 1525414 ($1.84M); PI:
- Walia at NDSU; Effective Dates (8/1/2015 - 7/31/2019); Collaborative Research: Engaged Student Learning - Design and Development Level II: Using a Cyber Learning Environment to Improve Student Learning and Engagement in Software Courses [This is a collaborative grant with 8 institutions]
- NSF CBET - 1401507; Consultant: Walia; Effective Dates (07/15/2014 - 06/30/2019); GARDE: Design Projects to Enable Veteran Reintegration in an Educational System

GUEST OF HONOR

Dr.Kalidas Shetty

Founding Director of Global Institute of Food Security &
International Agriculture (GIFSIA),
North Dakota State University, Fargo, USA.

Dr. Kalidas Shetty is currently the Associate Vice President for International Partnerships & Collaborations and Founding Director of Global Institute of Food Security and International Agriculture-GIFSIA & Professor of Plant Science at North Dakota State University, Fargo, ND. From 1993-2012 he was a faculty as Professor to Assistant Professor of Food Science and Biotechnology in the Department of Food Science at the University of Massachusetts-Amherst. He received his BS from the University of Agricultural Sciences, Bangalore, India majoring in Applied Microbiology and MS/PhD. from the University of Idaho, Moscow, Idaho, USA in Microbiology. He then pursued postdoctoral studies in Plant Biotechnology in Japan (National Institute of Agro-Biological Sciences, Tsukuba Science City) and Canada (University of Guelph) prior to joining the University of Massachusetts Amherst in 1993 as Assistant Professor of Food Biotechnology. In January 2013 he joined North Dakota State University in Fargo, North Dakota.

Dr. Shetty's research interests focus on critical role of cellular and metabolic basis of oxygen biology for advancing new innovations in Life Sciences and especially Agricultural and Food Innovations that advance global food security and health in a sustainable environment. His specific research interests focus on redox pathway-linked biochemical regulation of phenolic phytochemicals in food crops using novel tissue culture, biochemical, bioprocessed and fermentation systems to add value to diverse food systems. This focus is contributing to very innovative advances in the areas of crops for health, post-harvest biology, nutraceuticals, functional foods and food antimicrobial strategies as critical innovations to advance food security in addition to malnutrition and hunger challenges. In particular, he has developed an innovative "crops for health" research platform to counter diet-linked chronic diseases. The breeding and designing of crops and their food ingredients coupled to beneficial bacteria

are foundations for combating chronic diseases such as type 2 diabetes and cardiovascular disease and serve as the basis of new biochemical rationale for healthy whole food design for advancing global food security and health for quality living. The rationale of this "crops for health" platform has relevance for managing malnutrition challenges from maternal to child health needs globally.

Additionally in the context of post-harvest biology, food safety and preservation the susceptibility of bacterial food pathogens to phenolic phytochemicals at low pH (using fermented food systems) coupled through host tissue redox-linked pathways is his major interest in developing new food preservation and safety strategies and antibiotic replacement technologies with crop food ingredients coupled to probiotics. He has published over 200 manuscripts in peer-reviewed journals and over 45 as invited reviews and in conference proceedings. He holds 6 US patents. He has received Grants from government and industry since 1993 to support his research (average of $ 100,000/year from 1999 to current).

Dr. Shetty is the editor-in chief of the journal "Food Biotechnology", published by Taylor and Francis). He is also on the editorial board of 4 additional journals in the areas of Food Science and Technology, including the "Journal of Medicinal Food" and "Innovative Food Science and Emerging Technologies". He has served on peer review research panels for National Institute of Health, National Science Foundation, United States Department of Agriculture and Jefferson Science Fellows Program of the National Academies & US Department of State.

In 2004, Professor Shetty was selected by US State Department as the inaugural Jefferson Science Fellow to advice on scientific issues as it relates to International Diplomacy and International Development. This program administered by the US National Academies allowed Dr. Shetty to serve as Science Advisor at the US State Department for 1 year in 2004-05 and he has continued to serve as Science Advisor for 5 more years following his return to the University of Massachusetts. Dr. Shetty has widely traveled and has been invited to present lectures and seminars in the areas of Food Biology, Eco-Biological Basis for Evolving Healthy Food Systems for Food Security & Health, Functional Foods and Dietary Phytochemicals and Food Safety in over 30 countries in Asia, Europe, and the Americas. In 1998 he was awarded the Asia-Pacific Clinical Nutrition Society Award for his contributions to the area of phytochemicals, functional foods and human health based on his understanding of Asian food traditions and traditional food systems. At the University of Massachusetts he was awarded the College of Food and Natural Resources Outstanding Teaching Award, Certificate of Achievement for Outstanding Outreach Contributions and Outstanding Research and Creativity Award.

His current passion and commitment are to develop "Sustainable and Ecological basis for Healthy Food Systems , food choices and global food security" based on local crop and food diversity, traditional food systems and effective food imports that incorporates understanding of comparative cellular biochemistry of plant and animal systems and their interactions with prokaryotes (bacterial systems). This system based integrated model and "outside the box" research platform based on cellular basis of oxygen biology of food plants and plant-microbial interactions as the basis for new and innovative Agro-Food solutions to advance sustainable basis for food security and health based on local biodiversity. This approach has potential to transform global agriculture with healthy food systems and innovative rural development strategies that is systems based with sustainable long term solutions combined with better habitat and environment, sanitation and diversified bio-energy options.

In keeping with the above focus on new innovations to advance global food security on a "crops for health and sustainability" platform he is developing close collaborations between North Dakota State University in Fargo and institutions in several regions of the world from Asia, Africa, Europe to the Americas.

GUEST OF HONOR

Dr. Alex Radermacher
Department of Computer Science
North Dakota State University
alex.radermacher@ndsu.edu

Alex Radermacher is a lecturer in the Computer Science department at North Dakota State University who teaches courses both in introductory programming as well as software engineering and serves as one of the instructors for the senior capstone project course. His research interests include improving student learning and cognition of programming, software development processes, and pair programming. He has published his research in top computer science education conferences from both the ACM and IEEE including SIGCSE, ICSE, ICER, and CSEET.

Recently, Alex has been working with instructors and other staff members on NDSU to develop software for other departments and individuals as part of his undergraduate Principles of Software Engineering course. Student teams have developed applications for the Sugarbeet Research & Education Board of Minnesota and North Dakota, the North Dakota State University Graduate Center for Writers, and Dr. Adnan Akyuz's undergraduate Wonders of Weather course. Students continually maintain and develop new features for these applications in order to gain experience with the entire software development lifecycle.

Alex has also been working with Dr. Dean Knudson in developing an International Capstone Project Exchange to facilitate international development experience for students in computer science and other disciplines such as mechanical and computer engineering. Alex and Dr. Knudson have been offering international senior capstone projects at NDSU for the past five years and have had student teams in North Dakota work with companies in Sweden, Germany, and Australia while helping students from universities in those countries develop projects for sponsoring companies in the United States. Recently, they have worked to expand this program to other universities throughout the U.S. and around the world.