



GROWING A HEALTHY FUTURE

FOOD • FUEL • WATER • LANDSCAPES • PEOPLE

IANR to 2025

New Hire Initiative Phase I

Priority Positions – Phase I

Core Positions

- Community Leadership Development
- Advanced Machinery Systems Engineer
- Rangeland Ecologist
- Behavioral Economist
- Micrometeorologist
- Food Allergy Risk Assessment Specialist (2)
- Cropping Systems Agronomist (2)

Science Literacy

- Life Sciences Education
- Science Literacy Coordinator
- Science Literacy Specialist

Stress Biology

- Plant Arthropod Interactions
- Plant Molecular Physiologist (2)

- Advanced Sensing Systems Scientist/Engineer
- Plant Biotic Stress Biologist
- Plant Virologist
- Animal Stress Physiologist
- Functional Genomics
- Animal Breeding Genomics
- Animal Theoretical Quantitative Geneticist
- Agroecosystems Ecologist
- Quantitative Ecologist

Computational Sciences

- 'Omics
- Organismal

Healthy Humans

- Behavioral Based Epidemiology
- Behavioral Economics & Health Disparities

- Childhood Health Behaviors
- Food Safety Risk Assessment
- Food Lipid Chemistry & Functionality
- Lipid Metabolism & Health

Healthy Systems for Agricultural Production & Natural Resources

- Beef Systems Specialist
- Biosystems Economist
- Forage/Crop Residue Systems Specialist
- Range/Forage Management Ecologist
- Dryland Cropping Systems Specialist
- Water Resource Management Engineer

Updated 3/12/2015

Lindsay Hastings



Community Leadership Development

Assistant Professor

Agricultural Leadership, Education, & Communication

Director of Nebraska Human Resources Institute

EDUCATION: Ph.D., University of Nebraska-Lincoln

START DATE: July 1, 2013

Lindsay Hastings' programmatic focus will be on the Nebraska Human Resources Institute, a leadership development organization that pairs outstanding college student leaders with outstanding K – 12 student leaders in one-to-one leadership mentoring relationships. Her research interests include generative leadership and social responsibility, examining what factors influence a leader's ability to promote and establish the well-being of future generations. Lindsay's most recent research, which received the 2012 Dr. Ron Joekel Research Award, examined generativity in college student leaders as a result of engaging in a mentoring relationship.

Santosh Pitla



Advanced Machinery Systems Engineer

Assistant Professor
Biological Systems Engineering

EDUCATION: Ph.D., University of Kentucky

START DATE: October 1, 2013

Santosh Pitla's professional specialty is development of machinery automation applications using MATLAB, VB.Net, and embedded controller programming. Santosh also develops sensing methodologies, control algorithms, and wireless communication modules for deploying highly automated agricultural machine systems in row and bio energy crop production. His doctoral research, which was patented, was funded by CNH. His postdoctoral research at The Ohio State University, on the feasibility of deploying autonomous vehicles, was also funded by CNH.

Dirac Twidwell



Rangeland Ecologist

Assistant Professor
Agronomy & Horticulture

EDUCATION: Ph.D., Texas A&M University

START DATE: November 4, 2013

Dirac Twidwell has established a broad research program that integrates rangeland ecology and management with several other disciplines in agriculture and natural resources. His research has focused on how vegetation responds to climatic and disturbance extremes, the potential advantages of extreme disturbance events in ecological restoration, wildfire threats in urban environments, and trade-offs in ecosystem services resulting from changes in land use. Dirac joined UNL following a postdoctoral research appointment at Oklahoma State University. His research output has already been incorporated into regional landowner management practices and federal agency policies.

Behavioral Economist

Assistant Professor
Agricultural Economics

EDUCATION: Ph.D., Pennsylvania State University

START DATE: August 1, 2014

Simanti Banerjee is an economist with interests in using experimental and behavioral economics to study human behavior and economic policy performance in the context of environmental and energy conservation in developed and developing countries. She is also interested in issues of individual identity and how they can motivate economic decision making in the environmental domain. She earned her Ph.D. at Pennsylvania State University in 2010, spent two years as a post-doctoral researcher at the University of Stirling, UK, and completed a year as a visiting faculty member at Oberlin College.

Simanti Banerjee



Andy Suyker



Micrometeorologist

Associate Professor
School of Natural Resources

EDUCATION: Ph.D., University of Nebraska-Lincoln

START DATE: July 1, 2013

Andy Suyker's research interests include the exchanges of carbon dioxide (CO₂) and water vapor in key agricultural and natural ecosystems. Andy's research has quantified the seasonal and inter-annual variability of net ecosystem CO₂ exchange and evapotranspiration in irrigated and rain-fed maize-soybean cropping systems. He regularly collaborates with scientists in other disciplines at UNL and is collaborating with leading scientists in the US, Canada, and Europe to advance our knowledge of the carbon and water cycles and global climate change. He has received major funding from the US Department of Energy and from NASA.

Phil Johnson



Food Allergy Risk Assessment Specialist

Assistant Professor
Food Science & Technology

EDUCATION: Ph.D., John Innes Centre - UK

START DATE: February 1, 2015

Phil Johnson read molecular biology and biochemistry at Durham University before going on to his Ph.D. at the John Innes Centre in the UK. Both his Ph.D. and early research career focused on the enzymology of starch and lipid synthesis in major crop plants. For the past 8 years he has worked on the molecular properties of food allergens, particularly their chemical and structural characterization, at the Institute of Food Research and the University of Manchester. He has expertise in techniques of protein chemistry, particularly protein mass spectrometry. He also has an interest in the application of allergen research to consumer protection, diagnosis, and regulation.

Melanie Downs



Food Allergy Risk Assessment Specialist

Assistant Professor
Food Science & Technology

EDUCATION: Ph.D., University of Nebraska-Lincoln

START DATE: January 1, 2015

Melanie Downs is a UNL alumn who did her graduate work under Dr. Steve Taylor of the FARRP lab. Her primary research interests are in food proteomics, with a specific focus on the proteomics of allergenic foods. The Downs lab utilizes protein mass spectrometry methods to examine several topics associated with allergenic foods, including: identification and molecular characterization of food allergens; evaluation of food allergen behaviors in complex systems, such as processed food products and physiological environments; and development and assessment of analytical tools for the detection of allergenic food residues.

Patricio Grassini



Cropping Systems Agronomist

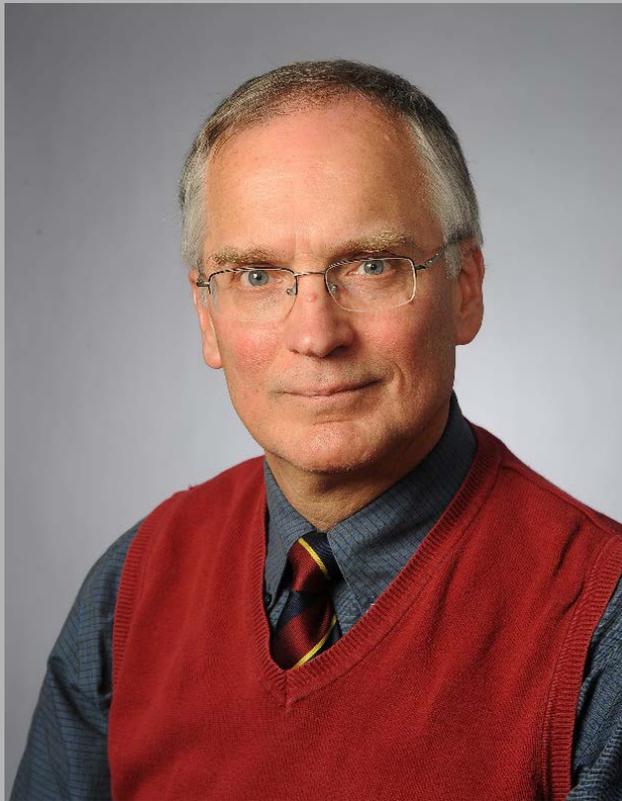
Assistant Professor
Agronomy & Horticulture

EDUCATION: Ph.D., University of Nebraska-Lincoln

START DATE: November 15, 2013

Patricio Grassini earned a B.S. in Agricultural Engineering from the University of Buenos Aires (Argentina), and a Ph.D. in Agronomy from the University of Nebraska-Lincoln. He has authored 15 journal papers, 4 book chapters, and many extension publications. His research interests center on crop physiology, crop yield potential, resource- and energy-use efficiency in cropping systems, and simulation modeling. His research has encompassed a diverse range of cropping systems including rainfed sunflower in semiarid central Argentina and high-yield irrigated maize and soybean in the U.S. Corn Belt. He is a major contributor to the development of a Global Yield Gap Atlas that will provide estimates of gaps between actual and potential yield for major cropping systems worldwide. Patricio has received a Fulbright Scholarship, a Fling Fellowship, two other fellowships, and six awards.

Roger Elmore



Cropping Systems Agronomist

Professor
Agronomy & Horticulture

EDUCATION: Ph.D., University of Illinois

START DATE: January 13, 2014

The vision of Roger Elmore's applied crop production work has always been to maintain or increase production and profitability by seeking and demonstrating environmentally sound production practices. His mission is to research, develop, teach, and extend timely and pertinent management information for farmers, agribusiness, Extension colleagues, and graduate and undergraduate students. To that end, his research program focuses on production practices that increase profit through optimizing or maximizing yield. A major recent accomplishment was the publication of Abendroth et al. 2011, *Corn Growth and Development*, Iowa State University Extension PMR 1009. Roger is a Fellow of the American Society of Agronomy.

Joe Dauer



Life Sciences Education

Assistant Professor
School of Natural Resources

EDUCATION: Ph.D., Pennsylvania State University

START DATE: August 15, 2013

During his graduate studies, Joe Dauer focused on long-distance weed seed dispersal in agroecosystems, coupling mathematical modeling with weed management. After returning to the Pacific Northwest for a postdoctoral position at Oregon State University in applied ecology, he became interested in better teaching techniques and understanding how students learn about biology. Most recently he has worked at Michigan State University where he continued invasive plant ecology research and began in earnest to pursue research on learning in undergraduate biology. At UNL Joe will contribute to teaching in the new introductory LIFE series and conduct research on how undergraduate life science students use models (conceptual and mathematical) to organize their thinking about biological systems. He has received funding for his research from USDA and BASF Corporation.

Cory Forbes



Science Literacy Coordinator

Associate Professor
School of Natural Resources

EDUCATION: Ph.D., University of Michigan

START DATE: January 2, 2014

Cory Forbes is PI on three externally-funded projects, including the NSF-funded Modeling Hydrologic Systems in Elementary Science (MoHSES) project, each of which involves regional, national, and international partnerships with education researchers, STEM faculty, and practitioners. Through these projects, Cory has pursued an active discipline-based educational research program, including studies of 3rd-grade students' learning about biological structure and function and hydrologic systems, as well as elementary teachers' enactment of science curriculum modules, implementation of formative assessment practices to support students' learning about water, and pedagogical reasoning about food systems. Cory is actively involved in science teacher education, leading efforts to implement reform-based programs and courses that prepare elementary teachers to support students' science learning.

Jenny Melander



Science Literacy Specialist

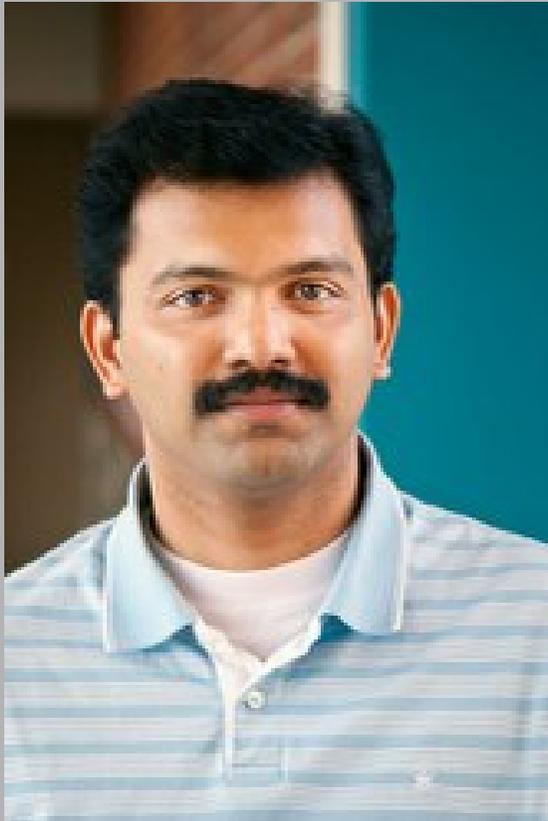
Assistant Professor
Biological Systems Engineering

EDUCATION: Ph.D., University of Missouri-Kansas City

START DATE: August 1, 2013

Jenny Melander's past research focused on developing and testing new biomaterials for dental and orthopedic applications. Her dissertation title was *Evaluation of Silorane System for Use in Stabilization of Traumatic Bone Injuries*. In her new role Jenny will focus on developing biomedical engineering youth programs, and on expanding non-formal STEM education through outreach programming in the areas of food, fuel, and water. She will empower youth through STEM creativity.

Joe Louis



Plant Arthropod Interactions

Assistant Professor
Entomology & Biochemistry

EDUCATION: Ph.D., University of North Texas

START DATE: October 7, 2013

Joe Louis, has completed a postdoctoral scholar at the Department of Entomology at Pennsylvania State University, and has authored 14 peer-reviewed publications including three book chapters. Joe is the recipient of numerous awards and recognitions, including the John Henry Comstock Graduate Student Award from the Entomological Society of America and ICINN Student Recognition Award in Insect Physiology, Biochemistry, Toxicology, and Molecular Biology from the Entomological Foundation. His responsibilities will include contributing to IANR's Stress Biology team; understanding the molecular biology and physiology of plant responses to arthropod feeding; and developing graduate and/or undergraduate courses in an identified area of specialization.

Daniel Schachtman



Plant Molecular Physiologist

Professor
Agronomy & Horticulture

EDUCATION: Ph.D., Australian National University

START DATE: February 3, 2014

The main aim of Daniel Schachtman's research is to improve crop yields under abiotic stress by elucidating the mechanisms that are important for adaptation to stressful soil conditions including drought, salinity and low nutrients. His research uses new omics technologies and integrates molecular with physiological approaches to modify root functional properties and response to stress. His research has led to seminal findings on the mechanisms of salt tolerance in wheat, the molecular identification and functional characterization of sodium, potassium and auxin transporters and the signal transduction networks controlling root response and adaptation to low nutrient conditions.

Rebecca Roston



Plant Molecular Physiologist

Assistant Professor
Biochemistry

EDUCATION: Ph.D., University of California, Davis

START DATE: July 1, 2014

Rebecca Roston earned her Ph.D. at the University of California, Davis studying protein targeting to chloroplasts. As a post-doctoral researcher she explored chloroplast lipid metabolism with Christoph Benning's group at Michigan State University. At UNL she is studying the role of membranes during freezing tolerance and biogenesis of the thylakoid membranes. The focus of her group is to understand the underlying molecular mechanisms in each process so that they can be used as the basis for translational crop studies.

Yufeng Ge



Advanced Sensing Systems Scientist/Engineer

Assistant Professor
Biological Systems Engineering

EDUCATION: Ph.D., Texas A&M University

START DATE: January 1, 2014

Yufeng Ge's research interests are in proximal and remote sensing for agriculture and natural resources. His belief is that, through advanced sensing and automation, production agriculture can be much more efficient and sustainable. He is PI and Co-PI of several federal, state, and industry funded projects, and has authored 23 refereed journal articles. One of his articles received a superior paper award from the American Society of Agricultural and Biological Engineers. He also received the Young Engineer of the Year award from the ASABE Texas Section and the Distinguished Graduate Student Award for Excellence in Doctoral Research from Texas A&M University.

Lirong Zeng



Plant Biotic Stress Biologist

Assistant Professor
Plant Pathology

EDUCATION: Ph.D., Ohio State University

START DATE: July 1, 2014

Lirong Zeng is a molecular plant pathologist. His research has focused on the identification and characterization of genes and signal transduction pathways involved in plant immunity against microbial pathogens, particularly the roles and mechanism by which the ubiquitination system regulates plant defense responses. Given that plant immunity is inextricably connected to plant development and environmental factors, his research also involves understanding the signaling crosstalk that orchestrates plant responses to different intrinsic and extrinsic signals. Lirong's long-term goal is to elucidate and eventually manipulate for crop improvement the key molecular mechanisms that plants use to defend themselves against different biotic stresses. Before joining UNL Lirong was a faculty member at University of Arkansas at Little Rock (UALR) where his research program has been funded by NSF and USDA.

Hernan Garcia-Ruiz



Plant Virologist

Assistant Professor
Plant Pathology and Nebraska Center for Virology

EDUCATION: Ph.D., University of Wisconsin-Madison

START DATE: July 1, 2014

Hernan Garcia-Ruiz is a virologist interested in the molecular mechanisms of viral RNA replication and in antiviral RNA silencing. Hernan came to UNL from the Donald Danforth Plant Science Center, where he was a research scientist. He completed his postdoctoral work at the Oregon State University Center for Genomics and Biocomputing, with support from a Helen Hay Whitney fellowship. At UNL Hernan is the State Virologist and teaches a Molecular Virology class. Initial research focuses on the interconnection between RNA replication and RNA silencing mechanisms in viruses using yeast and plants as model systems in combination with genomic and bioinformatics approaches.

Dustin Yates



Animal Stress Physiologist

Assistant Professor
Animal Science

EDUCATION: Ph.D., New Mexico State University

START DATE: March 15, 2014

Dustin Yates's current research interests center on fetal programming events that lead to low-birthweight offspring and affect life-long muscle growth and metabolism in livestock. Metabolic programming during prenatal stress is an area of physiology that is not well-understood but that could explain why many animals underperform in the feedlot and produce smaller, lower quality carcasses. Dustin's long-term goal is to determine how prenatal stress programs lower skeletal muscle growth and metabolic dysfunction after birth and to develop a practical method that would allow livestock producers to identify affected animals at birth. He completed a postdoctoral research appointment at the University of Arizona and has received postdoctoral fellowship awards from the USDA and the NIH.

Jessica Petersen



Functional Genomics

Assistant Professor
Animal Science

EDUCATION: Ph.D., University of California-Davis

START DATE: January 1, 2014

Jessica Petersen's research interests include the use of genetic and genomic information to identify markers important to production and disease traits with the goal of applying this knowledge to better manage animal populations and understand biological processes. Jessica came to UNL from the University of Minnesota where her post-doctoral work focused upon equine genomics. Leading a collaboration of international researchers, her recent research has resulted in a comprehensive understanding of the genetic relationships among horse breeds as well as the identification of regions of the genome that have been targets of selective breeding. Her work identified a genetic variant that functions to determine muscle characteristics important to race horses; she has also played a significant role in unraveling the genetic basis behind horse gait. She is an author on 14 refereed journal articles, and has received research funding from the USDA and from industry.

Ron Lewis



Animal Breeding Genomics

Professor
Animal Science

EDUCATION: Ph.D., Virginia Polytechnic Institute and State University

START DATE: January 6, 2014

Ron Lewis's research focus is in animal genetics. It has two main themes: (i) defining pragmatic strategies to improve the reliability of genetic evaluation in livestock species, and thereby enhancing selection response; and, (ii) understanding how animals, changed through artificial selection, are influenced by and interact with their environment. This work involves a mixture of theory, simulation and field studies, with close collaborations nationally, in Great Britain and in Norway. Beginning in 2008, Ron initiated and has since led a national graduate-level distance-delivery curriculum integrating quantitative genetics and genomics in animal breeding. As part of that curriculum he developed CyberSheep, an online simulation game, to provide experiential learning in undergraduate and graduate instruction in animal genetics. He has authored more than 200 articles and has received more than \$15 million in extramural funding to support his research.

Gota Morota



Animal Theoretical Quantitative Geneticist

Assistant Professor
Animal Science

EDUCATION: Ph.D., University of Wisconsin-Madison

START DATE: August 1, 2014

Gota Morota is a quantitative geneticist interested in incorporating statistics, machine learning, and bioinformatics to the study of animal breeding in the omics era. The core line of his research is connecting the quantitative genetics and animal breeding theories to currently available molecular information. His doctoral dissertation mainly addressed statistical learning procedures for genome-assisted prediction of yet-to-be observed phenotypes. In particular, he has worked on statistical models that make predictions by capturing total genetic variation, integrating genomic annotation information into a whole-genome regression framework, and estimating genome-based variance components of both additive and non-additive genetic effects. These studies have been carried out using a broad range of agricultural species.

Julie Peterson



Agroecosystems Ecologist

Assistant Professor
Entomology

EDUCATION: Ph.D., University of Kentucky

START DATE: March 3, 2014

Julie Peterson came to UNL after serving as a post-doctoral research associate in the Entomology Department at the University of Minnesota. She has been very active in the Entomological Society of America both at the branch and national levels. Julie is the recipient of several awards and fellowships, including the John Comstock Award from the Entomological Society of America, and the Robert O'Neil Outstanding Ph.D. Student in Biological Control Award from the International Organization for Biological Control. Her initial duties will include contributing to IANR's Stress Biology team by developing a research program in Integrated Pest Management and Resistance Management of arthropod pests of field crops, and in developing proactive educational programs of excellence in these areas.

Sydney Everhart



Quantitative Ecologist

Assistant Professor
Plant Pathology

EDUCATION: Ph.D., University of Georgia

START DATE: August 18, 2014

Sydney Everhart specializes in molecular epidemiology of fungal plant pathogens. Her interests are in characterizing the spatiotemporal dynamics of pathogen populations and investigating the role of stress in generating novel mutations that may enable faster evolution of fungicide resistance. Sydney has a background in quantitative epidemiology and population genetics and genomics. Her doctoral research utilized a 3-dimensional approach to characterize the spatial pattern of brown rot disease epidemics within peach tree canopies, and she developed molecular tools to examine the corresponding pathogen population. She received the R.J. Tarleton Fellowship from the American Phytopathological Society while a doctoral student, as well as a USDA Postdoctoral Fellowship. Sydney came to UNL from Oregon State University where her postdoctoral work utilizes whole-genome sequencing to examine population variation in *Phytophthora ramorum*, causal agent of Sudden Oak Death.

James Schnable



Computational Sciences

Assistant Professor
Agronomy & Horticulture

EDUCATION: Ph.D., University of California-Berkeley

START DATE: May 1, 2014

Our current understanding of gene regulatory sequences lags far behind our knowledge of protein coding sequences. James Schnable uses comparative genomic approaches to study the DNA sequences that control the expression patterns of genes in grasses. A portion of his doctoral research was supported by a Tien Graduate Fellowship in Environmental Science and Biodiversity. James comes to UNL from the Donald Danforth Plant Science Center where he is an NSF-PGRP fellow studying the multiple independent origins of C4 photosynthesis within grasses. He has secured support from JGI to sequence and assemble the genomes of five grass species selected to increase the effectiveness of comparative genomic approaches for studying grain crops, turfgrasses, and ecologically important grasses.

Tomáš Helikar



Computational Sciences

Assistant Professor
Biochemistry

EDUCATION: Ph.D., University of Nebraska Medical Center

START DATE: September 9, 2013

Tomáš Helikar's research focus is three-fold: 1) using large-scale computational models to better understand the dynamics of molecular and cellular mechanisms in complex networks under healthy as well as diseased conditions; 2) development of technologies to enable more efficient and integrated utility of computational systems biology; and 3) implementation of interactive computational modeling in life science courses to improve STEM education. Tomáš' recent contributions to life sciences research include discovery of new evidence of cellular decision-making (Helikar et al., 2008. *Proc Natl Acad Sci U S A*), as well as development of a community-based platform for the construction, simulation, and analysis of large-scale computational models of biological systems (Helikar et al., 2012. *BMC Syst Biol*).

Virginia Chaidez



Behavioral Based Epidemiology

Associate Professor
Nutrition & Health Sciences

EDUCATION: Ph.D., University of California, Davis

START DATE: January 1, 2015

Virginia Chaidez came to UNL after serving as the lead Evaluation Analyst for the University of California CalFresh Nutrition Education Program (UC CalFresh NEP), State office. CalFresh Nutrition Education is the brand name in California for the Supplemental Nutrition Assistance Program Education or SNAP-Ed. Her research on child-feeding practices in the context of obesity prevention has provided new insight into common parenting styles of Latino families which have been shown to affect outcomes. Her research in autism has provided a better depiction of autism spectrum disorders (ASD) and diagnosis disparities in Latinos; a better estimate in the prevalence of gastrointestinal (GI) problems in children; and established a link between GI problems and problematic behaviors in children with ASD.

Christopher Gustafson



Behavioral Economics and Health Disparities

Assistant Professor
Agricultural Economics

EDUCATION: Ph.D., University of California, Davis

START DATE: September 1, 2013

In his research, Christopher Gustafson has used experimental economics techniques and behavioral economic principles to study consumer valuation and choice in the American wine market. Chris returned to UNL from south-central Tanzania where he lived and worked as a Post Doctoral Scholar with the One Health Institute of the University of California, Davis. On the project, funded by USAID, he worked on a project to provide pastoralist communities in the area with education on livestock health and human nutrition.

Dipti Dev



Childhood Health Behaviors Extension Specialist

Assistant Professor
Child, Youth and Family Studies

EDUCATION: Ph.D., University of Illinois-Urbana

START DATE: January 1, 2014

Dipti Dev's research and Extension focuses on policy and environmental approaches to childhood obesity prevention. Her programming targets young children and adult caregivers, focusing on the child care environments. She is developing a web-based interactive curriculum for adult care-givers with low cost and easily implementable feeding strategies using behavioral economics principles to encourage healthier food choices in preschoolers. She has partnered with the NE Department of Health Human Services and NE Department of Education for state-wide evaluation of the Step-Up to Quality Program. By focusing on Head Start and other federal food assistance programs Dipti hopes to serve low income and minority children and their families at a higher obesity risk.

Bing Wang



Food Safety Risk Assessment

Assistant Professor
Food Science & Technology

EDUCATION: Ph.D., Iowa State University

START DATE: January 1, 2014

Bing Wang is a human health risk analyst, focused on applying risk assessment approaches in addressing food safety issues. Her primary research interests center around human health risk assessment, epidemiology, and evidence synthesis. Bing has applied the principles of those disciplines to a diversity of fields, including characterizing the risks of sparsely tested chemicals, assessing the risk imposed by foodborne pathogens and risk-benefit trade-offs of nutrient fortification in grain food, and improving the use of scientific information in regulatory decisions. Prior to joining the faculty at UNL, she completed Post-doctoral research appointments at George Washington University and the University of Maryland.

Ozan Nazim Ciftci



Food Lipid Chemistry & Functionality

Assistant Professor
Food Science & Technology

EDUCATION: Ph.D., University of Gaziantep, Turkey

START DATE: April 1, 2014

Ozan Nazim Ciftci came to UNL from the University of Alberta, Canada where he was a postdoctoral fellow in Bioresource and Food Engineering. Ozan's research has focused on the use of green chemistry and green technologies for the processing of lipids to produce value-added products. His focus is on the development of a green biorefinery based on rapidly growing supercritical fluid technology for value-added processing of lipids containing renewable feedstocks. He is also interested in the development of novel supercritical processes for the formation of natural lipid-based micro- and nanoparticles as controlled delivery systems of bioactives and functional food ingredients to improve the product quality and health effects of foods.

Soonkyu Chung



Lipid Metabolism & Health

Assistant Professor
Nutrition & Health Sciences

EDUCATION: Ph.D., University of North Carolina-Greensboro

START DATE: January 1, 2014

Soonkyu Chung's primary research focus is in obesity and lipid metabolism. Her research includes searching for bioactive compounds effective in preventing and/or treating obesity and insulin resistance, understanding epigenetic regulation of obesity such as histone modification and miRNA, and establishing a new dietary strategy by utilizing thermoenergetics of brown fat. By establishing unique human adipocyte models from adipose-derived stem cells, Soonkyu's research is dedicated to attenuate obesity epidemics. Her current research is funded by the American Heart Association; she has also received a Postdoctoral Fellowship and two Young Investigator awards from that organization.

Mary Drewnoski



Beef Systems Specialist

Assistant Professor
Animal Science

EDUCATION: Ph.D., North Carolina State University

START DATE: April 1, 2014

Mary Drewnoski earned her B.S. Degree in Agriculture and Natural Resources from Berea College. While at Berea, she managed a cow/calf operation in which her major focus was improving grazing management and reducing winter feeding costs. After completing her Ph.D. at North Carolina State University, she took a position as a Post-Doctoral Research Associate at Iowa State University where she worked on elucidating metabolic explanations for the toxicity of excess sulfur in cattle, researching compounds that may decrease ruminal hydrogen sulfide production and developing management strategies that will reduce the risk of sulfur toxicity in feedlots. Before coming to UNL she was an Assistant Professor at the University of Idaho investigating nutritional strategies for improving reproductive performance of cows and for decreasing young calf morbidity and mortality.

Jay Parsons



Biosystems Economist

Associate Professor
Agricultural Economics

EDUCATION: Ph.D., Colorado State University

START DATE: July 1, 2014

Jay Parsons's research spans the fields of agricultural production economics, operations research, risk management, and decision analysis. He attended Hastings College and Colorado State University earning bachelor's and master's degrees in mathematics and a Ph.D. in agricultural economics. His recent projects include: the development of the Ag Survivor simulation software and the Risk Navigator Strategic Risk Management curriculum with the RightRisk Education Team; the development of integrated systems models for ranching; and the development of multi-criteria decision support systems for agricultural land use decisions and wheat variety selection decisions. Dr. Parsons has over 20 years of experience teaching university-level courses that include calculus, linear programming, business planning, marketing, and production economics. He is currently teaching Advanced Farm Management and Linear Programming at UNL.

Daren Redfearn



Forage/Crop Residue Systems Specialist

Associate Professor
Agronomy & Horticulture

EDUCATION: Ph.D., University of Nebraska-Lincoln

START DATE: June 16, 2014

Daren Redfearn joined Oklahoma State University in 2000 as the Extension Forage and Pasture Management Specialist. His program at Oklahoma State University was directed towards the development of forage management strategies to improve forage yield, seasonal forage yield distribution, forage nutritive value, and forage utilization and integrated management of existing grazinglands resources for cow/calf production on bermuda grass and/or tall fescue over-seeded with legumes and stocker calf production on small grain and perennial, cool-season grass pastures. Additionally, he taught upper-level undergraduate and courses in Forage and Grazinglands Resource Management, Cropland Ecosystems and Plant-Environment Interactions.

Range/Forage Management Ecologist

Assistant Professor
Agronomy & Horticulture

EDUCATION: Ph.D., New Mexico State University

START DATE: April 1, 2015

Mitch Stephenson received a M.S. degree from the University of Nebraska-Lincoln in Range Science in 2010 evaluating the effect of rotational grazing methods and time of grazing on livestock performance and vegetation characteristics in the eastern Nebraska Sandhills. Following his time at UNL, Mitch worked as a rangeland ecologist in Wyoming and Nevada where he assisted livestock producers in developing sustainable grazing management plans and range vegetation monitoring reports. He completed his Ph.D. in Range Science in December 2014 from New Mexico State University where his research focused on targeting cattle grazing with low-stress herding and low-moisture block protein supplement. While at New Mexico State University, Mitch also evaluated factors that affect cattle grazing distribution behavior, grazing site selection, and social association patterns within cattle herds.

Mitchell Stephenson



Cody Creech



Dryland Cropping Systems Specialist

Assistant Professor
Agronomy & Horticulture

EDUCATION: Ph.D. pending April 2015, University of Nebraska-Lincoln

START DATE: May 1, 2015

Cody Creech is a 2015 graduate of UNL who conducted research primarily at the West Central Research and Extension Center in North Platte. He conducted studies evaluating herbicide application technologies that can be used to improve weed control. Additionally, he has also worked with regulated trials, herbicide evaluation trials, hybrid and variety evaluation under dryland and irrigated conditions, plant nutrition, fungicide evaluations, seed treatments, and planting dates. Prior to arriving at UNL, Cody received a M.S. degree from Utah State University in Plant Science where he studied factors that influence the germination of forage kochia. His research will focus on efficiency, profitability, and environmental management of dryland cropping systems in the High Plains. His research interests are applied aspects of weed control, water management, crop rotations, and soil conservation.

Amir Haghverdi



Irrigation/Water Management Specialist

Assistant Professor
Biological Systems Engineering

EDUCATION: Ph.D., Ferdowsi University of Mashhad, Iran

START DATE: July 1, 2015

Amir Haghverdi's research is in agricultural water management with irrigation engineering, soil hydrology, and spatio-temporal data mining as the main themes. He earned his first Ph.D. degree in Irrigation Engineering in Iran. He has studied spring wheat deficit-saline irrigation using advanced statistical analysis and machine learning approaches. Currently, he is pursuing his second Ph.D. in the Department of Biosystems Engineering and Soil Science at the University of Tennessee, Knoxville, where he expanded his research to precision agriculture. His major subject is optimizing site-specific irrigation for cotton through remote sensing, GIS and GPS technologies, on-the-go sensors, and site-specific wireless sensing systems. He received the outstanding graduate student award from the International Society of Precision Agriculture. He has been collaborating with scientists in Belgium, Turkey, Spain, Germany, and Iran. Amir's goal is to conduct an integrated research-extension plan, that incorporates computer modeling and laboratory/field experiments.