SPARC Interest Areas

Rural Wellness

Physical Activity

       Allison Barry: physical activity among LEO/firefighters (SHCS)
       Geb Bastian: nutrition and physical activity (SHCS)
       Jessica Meendering: physical activity in school environments (SHCS)
       Marni Shoemaker: physical activity and skeletal/muscle health (SHCS)
       Elizabeth Tofte: place-making, walkability (SOD)

Rural Healthcare

       Robin Arends: access, telehealth (CON)
       Abdallah Badahdah: telehealth, stigma, disparities (SPSRS)
       Mary Isaacson: palliative/end-of-life care and health disparities in tribal communities (CON)
       Becky Kuehl: women's health (COJO)
       Joshua Reineke: disparities, telehealth (DPS)
       Christopher Robbins: diabetes/cardiovascular disease, telehealth (DAPH)

Mental Health

       Jenn Anderson: mental health & stigma (COJO)
       Robin Arends: substance abuse (CON)
       Hayden Barber: mental health among students/young people (COJO)
       Andrea Bjornestad: mental health among farmers and rural women (SECHD)
       Sean Ervin: built environment and mental health (SOD)
       Patrick Hales: schools and mental well-being (SECHD)
       Stephanie Hanson: women's mental health (perinatal) (DAPH)
       Christopher Robbins: substance use, depression (DAPH)

Community Revitalization

       Pat Crawford: quality of life indicators (SOD)
       Aileen Garcia: quality of life of immigrants in SD (SECHD)

Environmental Exposure and Human Health

Saikat Basu: fluid dynamics modeling (DME)
Zach Smith: reducing environmental pollutants (DAS)
Xufei Yang: odor nuisance; particulate matter and bioaerosols (DABE)

Agricultural Technology

Fertilizers/Nutrients

Aritra Banerjee: enhancing soil fertility with biofilms (CCEE)
Volker Brozel: nitrogen fixing bacteria (DBM)
Cliff Hall: nutritional composition of commodities (DDFS)
John McMaine: nutrient loss (DABE)
Mazhar Sher: soil nutrient testing (DABE)
Lin Wei: smart controlled release fertilizer production (DABE)
Xufei Yang: biofertilizers using wastewater (DABE)

Sensors

Young Chang: greenness sensor for biomass and plant/field parameters; sensor fusion system for agriculture and aquaculture Cybersecurity (DABE)
Zhengrong Gu: biosensors for pathogens of crops and animals (DABE)
Mazhar Sher: biosensors for detection of NPK in soil samples (DABE)
Zach Smith: cattle sensors and precision feeding (DAS)
Sean Toporek: plant disease sensing (DAHPS)
Xufei Yang: gas sensors (e.g., NH_3 and CH_4) (DABE)
Hangkui Zhang: intersection of remote sensing and deep learning (DGGS)

Bioprocessing

Aritra Banerjee: enhancing soil fertility with biofilms (CCEE)
Zhengrong Gu: bioprocessing for value-added products (DABE)
Cliff Hall: valorization of pulse co-products to enhance life cycle value (DDFS)
Bishnu Karki: change-drivers in processes and products (DBM)
Zach Smith: use of bioprocessing by-products in ruminant diets (DAS)
Lin Wei: renewable smart food packaging systems (DABE)