

FACULTY RESEARCH TALKS

LISTEN. LEARN. COLLABORATE.

Zoom talk | Friday, Aug. 5, 2022 | Noon to 1 p.m.

INDUSTRY PARTNER SPOTLIGHT:

Accenture Federal Services



PRESENTER 1:

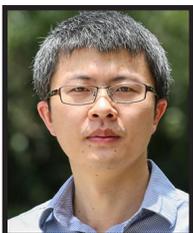
IAN McCULLOH

Chief Data Scientist,
Accenture Federal
Services

Improving the U.S. Government with Artificial Intelligence

People deserve an AI-powered government. They shouldn't have to wait long periods of time for their benefits. Military and law enforcement should have the best insights before going into harm's way. This talk will present current U.S. government applications of AI, including projects such as resolving issues related to mailing COVID test kits to improving clinical decision-making associated with organ donation. Responsible AI is of particular importance to government, and Dr. McCulloh will introduce a perspective that improves ethical delivery, while increasing performance and lowering cost.

Dr. McCulloh is the Chief Data Scientist for Accenture Federal Services, the global leader in AI and technology consulting, with more than 740K employees and consultants serving leading technology firms such as Amazon, Microsoft and Google, as well as notable organizations including Disney, Kroeger and UCF. He has led the growth of AI practitioners and data scientists supporting the U.S. federal government from 50 people in late 2018 to almost 800 today. His clients include all 20 cabinet level agencies within the U.S. government. Prior to joining Accenture, Dr. McCulloh was a faculty member at Johns Hopkins University with joint appointments in computer science and public health. He is also a retired U.S. Army officer and a veteran of Afghanistan and Iraq. He holds Ph.D. and M.S. degrees in computer science from Carnegie Mellon University, an M.S. in both industrial engineering and applied statistics from Florida State University, and a B.S. in engineering from the University of Washington.



PRESENTER 2:

FUDONG LIU

Assistant Professor,
Civil, Environmental
and Construction
Engineering,
REACT Cluster

Single Atom Catalysis for Environmental Applications

Precious metal catalysts are widely used and still show great potential in automotive exhaust control in the future due to their excellent performance. However, the in-depth understanding of intrinsic active sites and effective strategies for stabilizing precious metal sites is still lacking. In this talk, Dr. Liu will introduce the structural evolution of Pt single atoms into more robust catalytic sites and the surface defect engineering of catalyst support with greatly enhanced catalytic activity. These studies are supported by the NSF and BASF Corporation.

Dr. Liu's research interests are mainly focused on heterogenous catalysis for environmental applications. Topics include single atom catalysis, nanomaterial synthesis, automotive emission control, clean energy source conversion and CO₂ utilization. He has published 112 peer-reviewed papers with more than 8400 citations with a Google scholar H-index of 47, four book chapters, and has applied for more than 40 patents.