



2021 Texas A&M Institute of Data Science Research Conference

December 9, 2021, Thursday, 8:30 am – 4 pm

- 8:45** Jack Baldauf, Interim Vice President for Research, [Welcome Remark](#)
8:50 Nick Duffield, TAMIDS Director, *Overview of TAMIDS Research Programs*,
[Slides](#), [Recording](#)

Morning Session — TAMIDS Thematic Lab Program

- 9:00** Scientific Machine Learning Lab
- *Director's overview* (Ulisses Braga Neto, ECEN), [Slides](#), [Recording](#)
- *Scientific machine learning in phase field models for materials discovery* (Dehao Liu, MSEN),
[Slides](#), [Recording](#)
- *Application of scientific machine learning to radiative transfer and explosion physics* (Lifan Wang, PHYS)
[Slides](#), [Recording](#)
- *Modeling subsurface flows for reservoir simulation using scientific machine learning* (Eduardo Gildin, PETE)
[Slides](#), [Recording](#)
- 10:00** Operational Data Science Lab
- *Co-Director's overview* (Nick Duffield, TAMIDS/ECEN), [Slides](#), [Recording](#)
- *Traffic information retrieval and analysis in major events based on monitoring visual data* (Yalong Pi, TAMIDS),
[Slides](#), [Recording](#)
- *RDash: An organizational intelligence platform for institutional research* (Jian Tao, VIZ),
[Slides](#), [Recording](#)
- 11:00** Visceral Intersensory Visualization & Information Design (VIVID) Lab
- *Director's overview* (Ann McNamara, VIZ), [Slides](#), [Recording](#)
- 11:30** Data Justice Lab
- *Director's overview* (Lu Tang, COMM), [Slides](#), [Recording](#)

Afternoon Session 1 — TAMIDS Data Resources Development Program

- 1:00** *Classical and quantum machine learning for predictive single-cell biology* (James Cai, VIBS),
[Slides](#), [Recording](#)
- 1:20** *Tracking emotion and dialog content of YouTube vlogs posted during the COVID-19 pandemic* (Kexin Feng, CSCE)
[Slides](#), [Recording](#)
- 1:40** *Time series clustering for understanding social distancing effectiveness during COVID-19* (Zhe Zhang, GEOG
& Ziyi Zhang, ECEN). [Slides](#), [Recording](#)
- 2:00** *Revealing social awareness and behavioral Changes during Covid-19 through geospatial big data* (Lei Zou, GEOG)
[Slides](#), [Recording](#)

Afternoon Session 2 — TAMIDS Post-doc Program

- 2:50** *Phylogenetically informed Bayesian truncated copula models for microbial networks* (Hee Cheol Chung, STAT),
[Slides](#), [Recording](#)
- 3:10** *A novel scalable algorithm for Gaussian process regression* (Liang Ding, ISEN)
[Slides](#), [Recording](#)
- 3:30** *Scalable Gaussian-process regression and variable selection using Vecchia approximations* (Jian Cao, STAT)
[Slides](#), [Recording](#)
- 4:00** [Wrap-up discussion and closing remarks](#)

Contact information: Ms. Jennifer South, TAMIDS, jsouth@tamu.edu