



2021 Texas A&M Institute of Data Science Research Conference

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

Location: Rudder 601 and online

For registration, please visit the conference site [here](#)

8:30 Check in

8:45 Jack Baldauf, Interim Vice President for Research, *Welcome Remark*

8:50 Nick Duffield, TAMIDS Director, *Overview of TAMIDS Research Programs*

Morning Session — TAMIDS Thematic Lab Program

9:00 Scientific Machine Learning Lab

- *Director's overview* (Ulisses Braga Neto, ECEN)

- *Scientific machine learning in phase field models for materials discovery* (Raymundo Arroyave, MSEN)

- *Application of scientific machine learning to radiative transfer and explosion physics* (Lifan Wang, PHYS)

- *Modeling subsurface flows for reservoir simulation using scientific machine learning* (Eduardo Gildin, PETE)

9:55 Break

10:00 Operational Data Science Lab

- *Co-Director's overview* (Nick Duffield, TAMIDS/ECEN)

- *Traffic information retrieval and analysis in major events based on monitoring visual data* (Yalong Pi, TAMIDS)

- *RDash: An organizational intelligence platform for institutional research* (Jian Tao, VIZ)

10:55 Break

11:00 Visceral Intersensory Visualization & Information Design (VIVID) Lab

- *Director's overview* (Ann McNamara, VIZ)

11:30 Data Justice Lab

- *Director's overview* (Lu Tang, COMM)

12:00 Lunch break

Afternoon Session 1 — TAMIDS Data Resources Development Program

1:00 *Classical and quantum machine learning for predictive single-cell biology* (James Cai, VIBS)

1:20 *Tracking emotion and dialog content of YouTube vlogs posted during the COVID-19 pandemic* (Kexin Feng, CSCE)

1:40 *Time series clustering for understanding social distancing effectiveness during COVID-19* (Zhe Zhang, GEOG & Ziyi Zhang, ECEN)

2:00 *Revealing social awareness and behavioral Changes during Covid-19 through geospatial big data* (Lei Zou, GEOG)

2:20 Group discussion

2:30 Coffee Break

Afternoon Session 2 — TAMIDS Post-doc Program

2:50 *Phylogenetically informed Bayesian truncated copula models for microbial networks* (Hee Cheol Chung, STAT)

3:10 *A novel scalable algorithm for Gaussian process regression* (Liang Ding, ISEN)

3:30 *Scalable Gaussian-process regression and variable selection using Vecchia approximations* (Jian Cao, STAT)

3:50 Group discussion

4:00 Wrap-up discussion and closing remarks

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