INSTITUTE OF DATA SCIENCE

3rd Texas A&M Big Data Workshop – Data Driven Discovery Agenda

George P. Mitchell Physics Building – Stephen Hawking Auditorium | April 20th, 2018

Welcome

Time	Speaker	Talk Title
9:00am-9:15am	Dilma Da Silva, Nick Duffield, & Simon Sheather	Expectations for the Workshop

Session 1: Agriculture and the Environment

Time	Speaker	Talk Title
9:15am-9:30am	Seth Murray	Towards Unmanned Aerial Vehicles (Drones) Prediction of Yield for Plant Breeding
9:30am-9:45am	Alex Thomasson	Mapping Fiber Quality Variability across Cotton Fields as a Big Data Endeavor
9:45am-10:00am	Ramalingam Saravanan	Validating Rainfall Formulations in Climate Models using Predictive Analysis of Big Data
10:00am-10:15am	Simon Sheather	Discussant

Break for Refreshments – 30 minutes

Session 2: Data Science for Physical and Biological Systems

Time	Speaker	Talk Title
10:45am-11:00am	David Toback	Big Computing in High Energy Physics
11:00am-11:15am	Anjana Talapatra	Towards an Autonomous Efficient Materials Discovery Framework
11:15am-11:30am	Ulisses Braga-Neto	Pattern Recognition Applications in Bioinformatics and Materials Informatics
11:30am-11:45am	James Cai	Modelling Gene Expression Variability in the Era of Population Epigenomics
11:45am-12:00pm	Krishna Narayanan	Discussant

Break for Lunch – 1 hour 15 minutes

Session 3: Data Science Algorithms and Systems

Time	Speaker	Talk Title
1:15pm-1:30pm	Simon Foucart	Assimilating Data to Optimally Compute Quantities of Interest
1:30pm-1:45pm	Matthias Katzfuss	Gaussian-Process Approximations for Big Data
1:45pm-2:00pm	Krishna Narayanan	Pattern Matching in Large Data Sets
2:00pm-2:15pm	Sunil P Khatri	Hardware Accelerated Machine Learning
2:15pm-2:30pm	Boris Hanin	Which Neural Net Architectures Give Rise to Exploding and Vanishing Gradients?
2:30pm-2:45pm	Joseph Landsberg	Tensor Networks
2:45pm-3:00pm	James Caverlee	Discussant

Afternoon Break – 15 minutes

Session 4: Business, Language, and Humanities

Time	Speaker	Talk Title
3:15pm-3:30pm	Venky Shanker	Topic Hidden Markov Model (THMM): A New Machine Learning Approach to Make Dynamic Purchase Predictions
3:30pm-3:45pm	Ruihong Huang	Natural Language Processing for Making Sense of Unstructured Texts
3:45pm-4:00pm	Bryan Tarpley	Big Data as a Response to the Affective Turn in the Humanities
4:00pm-4:15pm	Dilma da Silva	Discussant
4:15pm-4:30pm	Dilma Da Silva & Simon Sheather	Workshop wrap up