LEHIGH UNIVERSITY | College of Business

QUANT/FINANCIAL ENGINEERING CONFERENCE AGENDA

Friday, November 15, 2019

Wood Dining Room, Iacocca Conference Center

Bethlehem, PA

SPONSORS:

Perella Department of Finance

Center for Financial Services

Institute for Data, Intelligent Systems and Computation (I-DISC)

8:00-9:00 AM Continental Breakfast

Introduction | Dean Georgette Phillips

9:00- 9:45 AM **Session 1: Deep Learning Application in Finance**
Moderator | Dr. Hector Munoz
Panel |Dr. Daniel Scansaroli, Dr. Neal Snow, Jeffrey Anthony

- Reinforcement and deep learning applications in finance and accounting.
- Deep learning is being applied to image analysis (counting), NLP, and stock prices
- Reinforcement learning is being used for trading strategies.
- Machine Learning

9:45-10:30 AM **Session 2 : Parallelization and Data Management**
Moderator | Dr. Troy Adair
Panel | Jeffrey Anthony, Denis Halvadzhiev

- How parallelization comes into play with data growing beyond our ability to manage and understand
- Moore's Law Limitation reached
- Technology has reached its limits
- How do you manage the analysis in such environment?

10:30-10:45 AM Break

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10:45 - 11:30 AM **Session 3: Data Analytics in Securities Enforcement**
Moderator | Stephen Strombelline
Panel | Dr. Kathleen Hanley

- Regulators' data capabilities and expectations
- Applicability of machine learning and AI in current environment
- Use of data analytics for supervisory oversight
- Identifying high risk activities and risk ranking financial advisors
- How to leverage big data to meet regulatory expectations
- Methodology for extracting data for regulatory purposes

11:30 AM - 12:30 PM **Lunch**
Presentation | Dr. Kathleen Hanley
How regulation and technology are sometimes misaligned in both directions?

12:30 - 1:15 PM **Session 4: Impact of Technology on Hiring in the Financial Industry**
Moderator | Dr. David Zhang
Panel | Dr. Rebecca Wang, Michael Liebman, Dr. Troy Adair, Dr. Aziz Lookman, Dr. Daniel Scansaroli, John Savage

- Is tech replacing or creating jobs at the same time for the financial industry? If so, which is faster?
- Who will benefit (or lose) the most from this wave of tech advancement?
- What do future finance jobs look like?
- How can we (or should we) prepare our students?
- Should everyone learn coding in the future?

1:15 - 2:00 PM **Session 5: Impossibility and Possibility Results in Distributed Computing: What is legit to request, and what cannot be achieved?**
Moderator | Dr. Roberto Palmieri
Panel | Jeffrey Anthony, Harsh Jain

- Distributed Computing
- Parallelism Vs Concurrency
- Correctness of data processing in the presence of concurrent manipulations
- CAP theorem
- Application Semantics
- Performance and Scalability of data repository

2:00 - 2:15 PM **Break**

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2:15 - 3:00 PM **Session 6: Blockchain- Potential Disruptor of Finance and Payments**
Central Bank Issued Digital Currencies and CB Blockchain Supported Currencies
Moderator | Dr. Hank Korth
Panel | Jeffrey Anthony, Frank Van Gansbeke

- Blockchain and Database management
- Disintermediation of payment systems using blockchain: how it works, who controls the underlying cryptocurrency and how that matters
- Enablement of "private" currencies that aggregate or eliminate transactions with traditional payment systems (e.g. credit/debit cards); Foreign currency exchange using Ripple or Stellar versus the traditional SWIFT system.
- Business applications that are moving to blockchain
- How data (including financial data) from those applications integrates with traditional enterprise databases
- How blockchain-based decentralization and irrefutability impacts accountability and control of information systems

3:00 - 3:45 PM **Session 7: Data Science vs Data Engineering**
Moderator | Michael Liebman
Panel | Dr. Troy Adair, Dr. Daniel Scansaroli, Denis Halvadzhiev, John Savage, Dr. Aziz Lookman

- Data Science
- Advanced analytics with engineering skills and/or business context/expertise is more effective than just the techniques
- Some real-life problems and why not everything is a data science problem
- Data Engineering
- What is Data Engineering and why are people coming out of school falling short?
- What is the difference between Data Engineer, Insight Engineer, Platform Engineer, and Data Scientist?
- Big Data
- What skills are necessary when working with Big Data sets?
- What are the real-life challenges?

3:45 PM **Closing Remarks**

4:00 - 5:00 PM **Networking/Cocktail Reception**