



InnovationXLabSM
Artificial Intelligence Summit
The Drake Hotel
140 East Walton Place
Chicago, IL 60611

AGENDA

October 2-3, 2019

DAY 1 – October 2, 2019

CHECK-IN: 7:30 AM - 8:15 AM

7:30 AM - 8:15 AM ✧ **Technology Showcase Networking Breakfast**
Room: Gold Coast

PLENARY SESSION

Room: Ballroom

8:15 AM- 8:30 AM ✧ **Welcome Remarks**

- Robert Zimmer, President, University of Chicago
- Paul K. Kearns, Director, Argonne National Laboratory

8:30 AM - 8:50 AM ✧ **Transforming our World and Impacting People’s Lives Through DOE-Fueled AI**

- Rick Perry, U.S. Secretary of Energy
Introduced by Conner Prochaska, Chief Commercialization Officer, U.S. Department of Energy

8:50 AM – 9:00 AM ✧ **National AI Initiative**

- Michael Kratsios, Chief Technology Officer of the United States

9:00 AM – 9:10 AM ✧ **Legislative Opportunities for AI**

- Daniel Lipinski, Member, U.S. House of Representatives

9:10 AM – 10:05 AM ✧ Panel: AI Research and DOE National Labs, National AI Initiative, Opportunities for Industry Collaborations in AI

This panel highlights the breadth of research in AI across the national laboratory complex, and discusses how this research fits into the recently announced National AI Initiative; several notable collaborations in AI between companies and national labs are discussed.

Moderator: Dimitri Kusnezov, Deputy Under Secretary for AI and Technology, U.S. Department of Energy

Panelists:

- John Baldoni, Chief Technology Officer, Integral
- Theresa Christian, Manager in Corporate Strategy, Innovation and Sustainability, Exelon
- Ray Rothrock, Chairman and Chief Executive Officer, RedSeal, Inc.
- Rick Stevens, Associate Lab Director, Argonne National Laboratory

10:05 AM – 10:15 AM ✧ AI as a National Security Imperative

- Will Hurd, Member, U.S. House of Representatives

10:15 AM – 10:40 AM ✧ Computing for the Next Grand Challenges

- John E. Kelly III, Executive Vice President, IBM

BREAK

10:40 AM - 11:20 AM ✧ Technology Showcase Networking Break

Room: Gold Coast

10:40 AM - 11:20 AM ✧ Scheduled One-on-One Meetings

Room: French

These pre-scheduled meetings are an opportunity for industry, national laboratory and U.S. Department of Energy attendees to explore potential partnership opportunities.

PARALLEL SESSIONS

11:20 AM – 12:20 PM ✧ Panel: AI for Energy Grid Optimization

Room: Ballroom

Applications of AI to solving core problems in energy grid optimization are discussed, in particular AI approaches to energy grid security, flexibility, and reliability in light of future energy demands are highlighted; panel participants include representatives from major utilities.

Setting the Stage: Mark W. Menezes, Under Secretary of Energy, U.S. Department of Energy

Moderator: Steven Ashby, Director, Pacific Northwest National Laboratory

Panelists:

- Carol Adkins, Director of R&D in Energy and Earth Systems, Sandia National Laboratories
- Neva Espinoza, Director of Cross Sector Technologies and Components, Electric Power Research Institute
- Aleks Paaso, Director, Distribution Planning, Smart Grid and Innovation, Commonwealth Edison
- Baosen Zhang, Assistant Professor, Department of Electrical & Computer Engineering, University of Washington

11:20 AM – 12:20 PM ✧ **Panel: AI for Drug Discovery**

Room: Walton

State of applications of AI to transformative problems in drug discovery are discussed; ATOM Partnership is highlighted; future opportunities across disease areas are discussed with participants from life sciences companies.

Moderator: Jim Brase, Deputy Associate Laboratory Director for Computation, Lawrence Livermore National Laboratory

Panelists:

- Ed Bowen, Vice President, Artificial Intelligence and Machine Learning, GlaxoSmithKline
- Evan Feinberg, Founder and Chief Executive Officer, Genesis Therapeutics
- Ketan Paranjape, Vice President of Diagnostics Information Solutions, Roche Diagnostics
- Yue Webster, Principal Research Scientist, Eli Lilly and Company

BREAK

12:30 PM - 2:00 PM ✧ **Lunch & Technology Showcase**

Room: Gold Coast

PARALLEL SESSIONS

2:00 PM – 3:00 PM ✧ Panel: AI for Advanced Materials Discovery & Development

Room: Ballroom

Challenges of new materials discovery and development are discussed with representatives from leading and emerging manufacturing companies; national lab-developed approaches to tackling some of these challenges using AI are highlighted.

Moderator: Ian Foster, Division Director, Data Science and Learning, Argonne National Laboratory

Panelists:

- Kristin Persson, Chemist Faculty Scientist, Lawrence Berkeley National Laboratory
- James Saal, Manager, External Research Programs, Citrine Informatics
- Cristina Thomas, Senior Technical Leader, 3M
- Kevin Yager, Group Leader, Electronic Nanomaterial, Brookhaven National Laboratory

2:00 PM – 3:00 PM ✧ Panel: AI for Mobility

Room: Walton

Discussion on novel possibilities in understanding and improving transportation systems and the future of mobility by applying AI methods; examples of impactful projects from the national labs are highlighted.

Moderator: Paul Brubaker, Deputy Assistant Secretary, Cybersecurity, Energy Delivery Systems, U.S. Department of Energy

Panelists:

- David Atkinson, Head, Systems & Technology, Continental
- Charles Edward Catlett, Senior Computer Scientist, Argonne National Laboratory and Senior Fellow at the University of Chicago Mansueto Institute for Urban Innovation
- Jessika Lora, Founder & Chief Executive Officer, CarForce
- Monali Shah, Global Head of Industry Solutions, Google

BREAK

3:00 PM – 3:45 PM ✧ Technology Showcase Networking Break

Room: Gold Coast

3:00 PM – 3:45 PM ✧ Scheduled One-on-One Meetings

Room: French

PLENARY SESSION

Room: Ballroom

3:45 PM – 4:15 PM ✧ Fireside Chat: AI for Industry Leadership and in the Service of the Nation

- Dan Brouillette, Deputy Secretary, U.S. Department of Energy
- Michael Kratsios, Chief Technology Officer of the United States

Moderated by Conner Prochaska, Chief Commercialization Officer, U.S. Department of Energy

4:15 PM – 4:25 PM ✧ Demonstration: DOE Lab Partnering Service

4:25 PM – 4:45 PM ✧ Creating Scalable AI Infrastructure

AI is changing the world with applications from health care, transportation, to every aspect of our lives. AI technology continues to evolve quickly from its early success in CNNs, to the adoption of RNNs, Recommendation Systems, and Reinforcement Learning with a wide range of performance characteristics for computer systems in production environments. Dr. Li will discuss how Intel is developing the hardware and software technologies that power AI from the world's clouds, data centers to the edge.

- Wei Li, Vice President of Machine Learning Performance, Intel

RECEPTION

5:00 PM – 7:00 PM ✧ Networking Reception

Room: Gold Coast

DAY 2 – October 3, 2019

CHECK-IN: 7:30 AM - 8:15 AM

7:30 AM - 8:15 AM ✧ **Technology Showcase Networking Breakfast**

Room: Gold Coast

PLENARY SESSION

Room: Ballroom

8:15 AM- 8:45 AM ✧ **Fireside Chat: Deep Science Commercialization through Regional Partnerships**

- Paul M. Dabbar, Under Secretary for Science, U.S. Department of Energy
- Brad Henderson, Chief Executive Officer, P33

Moderated by Conner Prochaska, Chief Commercialization Officer, U.S. Department of Energy

8:45 AM – 9:10 AM ✧ **Maximizing Value with Industrial AI**

Dr. Colin Parris, GE's lead on AI and the future of all things Digital, will discuss the company's ongoing journey to integrate digital technologies and new innovative applications of AI into its vast fleets of critical infrastructure that help generate electricity for a third of the planet, power 2,200 planes that carry 300,000 passengers at any moment in time and generate 16,000 patient scans per minute. Both the challenge and opportunity is creating value, while also strengthening the security and reliability of these critical assets. It will require more innovative applications of AI and more valuable forms of unique industrial data and domain knowledge to maximize the value of industry and manufacturing.

- Colin Parris, Vice President, Software and Analytics Research, GE Research

9:10 AM – 9:20 AM ✧ **Congressional Efforts on AI**

- Bill Foster, Member, U.S. House of Representatives

9:20 AM – 9:45 AM ✧ **Federal-Academia-Industry Partnerships for U.S. Leadership in AI**

Professor Willett will discuss the opportunities and challenges of modern AI and the critical role of academic research.

- Rebecca Willett, Professor of Statistics and Computer Science, University of Chicago

PARALLEL SESSIONS

9:50 AM – 10:45 AM ✧ Panel: AI for Energy Production

Room: Ballroom

Transformative problems in energy generation from renewable energy sources to oil & gas are discussed with industry participants; applications of AI in combination with supercomputing to solving these problems are showcased.

Moderator: Randall Gentry, Chief Research Officer, National Energy Technology Laboratory

Panelists:

- Douglas Kushnerick, Technology Scouting and Ventures, ExxonMobil Research and Engineering
- Maggie Pakula, Vice President of Strategy, Invenergy LLC
- Scott Rackey, Director, PVS Product Development, First Solar
- Sridhar Sundarsan, Chief Technology Officer, SparkCognition

9:50 AM – 10:45 AM ✧ Panel: AI for Precision Medicine

Room: Walton

Potential for applications of AI to transformative problems in precision medicine and healthcare delivery are discussed; several projects including cancer and traumatic brain injury projects are highlighted; opportunities to partner with the national labs leveraging unique data sources are discussed with participants from across the healthcare ecosystem.

Moderator: Eric Stahlberg, Director Biomedical Informatics and Data Science, Frederick National Laboratory for Cancer Research

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Panelists:

- Mark Anderson, Chief Executive Officer, Pattern Computer, Inc.
- Ryan Fukushima, Chief Operating Officer, Tempus
- Michael Gaziano, Director, Massachusetts Veterans Epidemiology Research and Information Center, VA Boston Healthcare System
- Marti Head, Director, Joint Institute for Biological Sciences, Oak Ridge National Laboratory

BREAK

10:45 AM – 11:15 AM ✧ Technology Showcase Networking Break

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Room: French

PARALLEL SESSIONS

11:15 AM – 12:10 PM ✧ Panel: AI for Digital Manufacturing and Engineering

Room: Ballroom

A broad range of complex problems defining the future of manufacturing can be addressed by applying AI methods; examples including industrial IoT, digital twin, and automation are discussed with industry representatives.

Moderator: Valri Lightner, Acting Director, Advanced Manufacturing Office, U.S. Department of Energy

Panelists:

- Jeff Kent, Technical Director, Smart Platforms, Global Product Supply Engineering & Innovation, Procter & Gamble
- Mike Horrell, Director of Data Science, Uptake
- Steve Rohweder, Vice President for Technology Development, Goodyear
- Arijit Sengupta, Founder and Chief Executive Officer, Aible

12:10 PM – 12:20 PM ✧ Closing Remarks

11:15 AM – 12:10 PM ✧ Panel: AI for Urban Systems

Room: Walton

The future of urban infrastructure and systems and applicability of AI to delivering on this vision are discussed with representatives from state and local governments as well as industry partners; examples of impactful projects from the national labs are highlighted.

Moderator: Carolyn Lauzon, Deputy Director, Artificial Intelligence Technology Office, U.S. Department of Energy

Panelists:

- Raed Mansour, Director, Office of Innovation, Chicago Department of Public Health
- Meera Raja, Manager, Solution Design & Program Development, City Tech Collaborative
- Stanley Young, Advanced Transportation and Urban Scientist, National Renewable Energy Laboratory

12:10 PM – 12:20 PM ✧ Closing Remarks

OPTIONAL LABORATORY TOURS

Room: Meet in Palm Court

12:45 PM – 4:30 PM ✧ Tours of Argonne National Laboratory and Fermi National Accelerator Laboratory

Participants who registered for tours of Argonne National Laboratory or Fermi National Accelerator Laboratory should meet their tour group in the Palm Court room off the lobby of The Drake Hotel. Buses will depart promptly at 1:00 PM.