

Explore sessions

# World of Watson 2016

October 23 - October 27 | Mandalay Bay, Las Vegas, NV

## RES-3922: The Future of AI

Special Activities

Research

### Breakout Session

🕒 24 October 2016 , 10:00 AM – 10:20 AM

It is finally time to stop saying that "AI will show value in 10 years." AI is showing value now. What has been remarkable to observe is: 1) The routine adoption of basic AI techniques like machine learning; 2) The emergence of the phrase "We use deep learning in our shop." as a legitimizer; and 3) The consequent talent war that we are seeing industry-wide. Basic signal processing techniques like machine learning, which have shown a lot of promise historically on speech and image processing, are beginning to show promise for language classification and even limited summarization and generation. But what is important to talk about are the kinds of problems that AI needs to be applied to.

### Speaker

👤 Michael Karasick, IBM

### Industry

👥 Not Industry Specific

## RES-3923: The Future of AI: Embodied Cognition

Special Activities

Research

## Breakout Session

 **24 October 2016** , 10:30 AM – 10:50 AM

Imagine unleashing Watson in the physical world. Give it eyes, ears, and a sense of touch. Then let it act in that world—not just as an action of force, but also as an action of influence. This is embodied cognition: by placing the cognitive power of Watson in a robot, an avatar, an object in your hands, or even in the walls of an operating room, conference room, or spacecraft, we take Watson's ability to understand and reason and bring it closer to the natural ways in which humans live and work.

### Speaker

 **Grady Booch**, IBM

### Industry

 **Not Industry Specific**

## RES–3924: The Next Frontier of AI: Visual Comprehension

Special Activities

Research

## Breakout Session

 **24 October 2016** , 11:00 AM – 11:20 AM

Huge amounts of images and video are being generated and consumed in all industries. For decades, this type of visual data eluded our ability to effectively understand it. This is no longer the case. Recent developments in computer vision, machine learning and cognitive computing are producing dramatic advances in the ability to accurately recognize, describe, and answer questions about images and video. As we apply cognitive computing to industries such as healthcare, M&E and others, the ability to see, comprehend and interact with visual data is critical. IBM Research is developing new technologies that enable a broad set of capabilities for visual recognition, interpretation and understanding of graphics, images and video.

### Speakers

### Industry

 **Tal Drory, IBM**
 **Not Industry Specific**
 **John Smith, IBM**

## RES-3925: Conversing with Computers: Computational Argumentation: Cognitive Assistance for Decision-Making

 **Special Activities**
 **Research**

### Breakout Session

 **24 October 2016**, 12:30 PM – 12:50 PM

Many decisions people make do not have simple answers. Rather, they involve weighing the pros and cons of various options, and finding evidence to support the decision. Many decisions are made collaboratively, requiring persuasion abilities. Computational Argumentation is an evolving field aiming at developing automatic techniques to support such decision-making processes. In this talk, we describe a system we have developed that, given a point of view about a controversial topic, automatically generates arguments supporting and contesting it, phrased in natural language. We will demonstrate the system in two use cases.

### Speaker

 **Aya Soffer, IBM**

### Industry

 **Not Industry Specific**

## RES-3926: Conversing with Computers: Conversational Systems and Automated Knowledge Experts

 **Special Activities**
 **Research**

### Breakout Session

 **24 October 2016** , 12:00 PM – 12:20 PM

Unstructured information retrieval systems such as IBM Watson are pointing to the new world of cognitive computing. The demand for highly contextual mobile applications, and the need for automation of complex enterprise applications, are among key business drivers. The existing precise and accurate computing paradigm that relies on a structured flow of data and user interaction need to be transformed to more human-like, conversational interaction where unstructured flows of knowledge and imprecise language are the norm. This talk will provide examples, state challenges, and discuss technological innovations for building conversational systems and automated knowledge experts.

## Speaker

 **David Nahamoo**, IBM

## Industry

 **Not Industry Specific**

# RES–3928: Cognitive Compliance: From Regulations and Policies to Computational Understanding

Special Activities

Research

## Breakout Session

 **24 October 2016** , 02:30 PM – 02:50 PM

Compliance—with governmental regulations, and enterprise contracts—is becoming increasingly central for enterprises across a wide variety of industrial sectors. Today, tens of thousands of highly qualified professionals are responsible for understanding regulations and contracts, figuring out consequences for lines of business, designing policies and procedures, establishing frameworks for monitoring compliance. We believe advances in cognitive technology can dramatically change the landscape.

## Speaker

## Industry

 **Vijay Saraswat, IBM**
 **Not Industry Specific**

## RES–3931: Core Development of AI: Combining the Advantages of the Cloud with the Power of Deep Learning

 **Special Activities**
 **Research**

### Breakout Session

 **24 October 2016**, 02:00 PM – 02:20 PM

Neural network-based AI models have become the gold standard in deriving insights from real-world data. However, building and training such models is expensive, time-consuming, and fraught with complexities. Join us in this session to get a sneak peak under the hood of DLaaS, IBM's Deep Learning-as-a-Service! See how you can run a DL training job on popular open frameworks like Caffe, Torch and TensorFlow in the IBM Cloud, taking advantage of GPUs and built-in distribution capabilities for automatic scaling and performance. Submit your job in seconds, then monitor, visualize and control the training as it progresses. DLaaS combines the flexibility and scalability of the cloud with the power of Deep Learning.

### Speakers

 **Rania Khalaf, IBM**
 **Ruchir Puri, IBM**

### Industry

 **Not Industry Specific**

## RES–3936: The Next Frontier of AI: Language Advancements Accelerated by Deep Learning

 **Special Activities**
 **Research**

### Breakout Session

🕒 **24 October 2016** , 11:30 AM – 11:50 AM



Watson's language capabilities are at the core of myriad cognitive applications ranging from engagements to discoveries. Our recent research and developments of deep learning have led to improved natural language understanding, reading comprehension, factoid and non-factoid question answering, and even natural language generation to narrate tables, to write news headlines or to summarize articles, to name a few. These exciting technical advancements around Watson could enhance a conversational system's IQ or help professionals more productive to explore and discover the information they need.

### Speaker



**Bowen Zhou**, IBM

### Industry



**Not Industry Specific**

## RES-3937: Transforming Industries with AI: Cognitive Computing and IoT

Special Activities

Research

### Breakout Session



**24 October 2016** , 03:00 PM – 03:20 PM

The Internet of Things is changing the way we interact with our surroundings. It is estimated that the number of connected devices will reach 6.4 billion in 2016 and grow to 21 billion by 2020. This comes with an explosion of sensor data, yet 90% of it is not utilized. Increasingly, more of the information collected is unstructured and requires sophisticated techniques to analyze, interpret and predict the behavior of the system. Furthermore, we expect systems to self-learn and adapt to changing environments. We can only keep up with the complexity and unpredictability of this information via the application of cognitive computing. Through examples, we will highlight the differentiation and power of cognitive computing in the IoT space.

### Speaker

### Industry

 Eleni Pratsini, IBM

 Not Industry Specific

## RES–3938: Transforming Industries with AI: Cognitive Solutions for the Elderly

 Special Activities

 Research

### Breakout Session

 **24 October 2016** , 03:30 PM – 03:50 PM

The world is aging at historic rates, and in many countries there are more elderly people than children for the first time in history. Our parents and grandparents represent one of the most complex societal and economic challenges facing nations as they struggle with increasing costs of healthcare and decreasing numbers of caregivers. Leveraging a network of connected devices and sensor-based monitoring, we can harness the power of cognitive technology to address the needs of the aging population through personalized insights and timely recommendations. Cognitive solutions for elders will enable this booming demographic to better manage life’s vital decisions—health, wealth and lifestyle—as physical and cognitive abilities decline.

### Speaker

 **Susann Keohane**, IBM

### Industry

 Not Industry Specific

## RES–3939: Transforming Industries with AI: Advances in Cognitive Commerce and Marketing

 Special Activities

 Research

### Breakout Session

 **24 October 2016** , 04:00 PM – 04:20 PM

Cognitive technologies, with the ability to process information like a human, and learn from vast amounts of data, is transforming marketing, commerce and supply chain. In marketing, we have cognitive capabilities to understand content and offers and match them to what is learned about individual consumers' behavior. In commerce, we can improve demand prediction by including effects of external factors such as weather, events and social media. For omni-channel retailing, cognitive systems are providing significant financial benefits by learning how to best price, stock and ship between various local stores and online.

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## Speaker



**Rakesh Mohan, IBM**

## Industry



**Not Industry Specific**

# RES-3941: Transforming Industries with AI: The Evolution of Business and Financial Networks Using Blockchain

Special Activities

Research

## Breakout Session



**24 October 2016**, 04:30 PM – 04:50 PM

Blockchain is an emerging new technology primitive that promises to dramatically transform the way multi-party transactions are specified and executed in business networks. This talk will introduce the notion of permissioned distributed ledgers and smart contracts that execute business logic on such ledgers. We will describe how Blockchain technology enables creation of such ledgers with strong guarantees for security, privacy, confidentiality, and data immutability. A number of use cases in the financial services sector—internal IBM applications and worldwide client engagements—will be used to illustrate how Blockchain technology can significantly reduce cost, reduce risk, accelerate time-to-value, and drive new business models.

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## Speaker



**Sriram Raghavan, IBM**

## Industry



**Financial Markets**