# Was this the greatest conference ever organized?



The 5<sup>th</sup> Solvay Conference on Photons and Electrons (October 1927, Brussels, Belgium)

IIC event in Austin on Sep 15-16 starts a new chapter

# THE INDUSTRIAL INTERNET CONSORTIUM – A CATALYST FOR GLOBAL ECONOMIC GROWTH

www.iiconsortium.org

#### 1953

In my story "Sally," published in 1953, I described computerized cars that had almost reached the stage of having lives of their own. In the last few years, we do indeed have computerized cars that can actually talk to the driver. (Isaac Asimov) 1987

Herbert Simon in his paper "The Steam Engine and the Computer: What makes technology revolutionary" framed his thoughts about the computer, "you have to make friends with it, talk to it, let it talk to you."

### 1991

Mark Weiser of Xerox Palo Alto Research Center suggested in 1988 that computers may "weave themselves into the fabric of everyday life" and influence the future of business (Scientific American, 1991).

### 2000

The seminal paper *The Networked Physical World* by Sanjay Sarma *et al* spread the concept of the Internet of Things (IoT) through the creation of the Auto ID Center at MIT.

#### 2013

After sixty years of *Robot Dreams*, the evolution of the internet and the industrial revolution merged to conceive and create The Industrial Internet Consortium (03/27/2014) to catalyze global economic growth (www.iiconsortium.org)

## PLEASE REGISTER ● www.iiconsortium.org/tx-14/prospects.htm ● A SENSE OF THE FUTURE

MON 09/15/2014	For members, non-members, prospective members and guests at <u>Sheraton Austin (Texas)</u>
01:30PM - 01:40PM	Welcome, Introduction, Overview and Outlook for the Industrial Internet Consortium
	Dr Richard Soley - Executive Director, Industrial Internet Consortium (IIC) and Chairman, OMG
	ABSTRACT – Why create another consortium? The challenges IIC wishes to undertake.
01:40PM - 01:50PM	Opportunity, Synergy and Convergence: Signposts on the Unchartered Path?

Mr Jeff Fedders - Chief Strategist, Intel Corporation and Founding Member, IIC

ABSTRACT – Exploring the opportunities that IIC presents. What can we expect?

01:50PM − 02:30PM As *Time Goes By* ☑

Speaker: Dr Patricia Derler - About Dr Derler • http://bit.ly/DERLER

ABSTRACT – There is a saying that a stitch in time, saves nine. Human thought is inextricably intertwined with time. We want to stay on time, arrive on time, depart on time. To guarantee time we use clocks, maps and GPS. But, does your computer actually know what time it is? The fundamental concept of time, the meaning of time is generally absent from our computational systems. What can we do about time? How does time affect the future of the internet?

02:30PM - 03:10PM The Birth of IoT  $\square$ 

Speaker: Professor Sanjay Sarma - About Dr Sarma • http://meche.mit.edu/people/?id=74

ABSTRACT – The concept of the internet of things (IoT) was seeded by thinkers including Herbert Simon of Carnegie-Mellon University and Mark Weiser of Xerox PARC. With the creation of the Auto ID Center at MIT the concept of IoT was formalized and our paper *The Networked Physical World* ushered it on the global stage. Kevin Ashton had suggested the name Internet of Things. What's next for IoT? How will connectivity, interoperability and visibility shape the future, create new products and services or should we prepare to disrupt the global enterprise?

03:10PM - 03:30PM Q & A

30 min BREAK

04:00PM − 04:30PM A Sense of the Future  $\boxtimes$ 

Speaker: Dr Keith Marzullo - About Dr Marzullo ● http://bit.ly/KM-NSF

ABSTRACT – From embedded systems and software enabled control we evolved to pursue cyberphysical system (CPS). How broad is the reach of CPS? Why is CPS predicted to garner massive momentum through shared connectivity with the internet of things (IoT)? Are we plunging even deeper into an ecosystem of systems with the advent of the industrial internet?

04:30PM – 05:00PM Transforming Vision into Reality  $\square$ 

Speaker: Dr Christopher Greer – About Dr Greer ● www.nist.gov/el/greer.cfm

ABSTRACT – The time is now to move innovations from CPS R&D from the lab and the test bed to the real world to increase efficiency, promote entrepreneurship and enhance the quality of life. The Global Cities Team Challenge pairs cities and innovators to apply Industrial Internet concepts to change the way we live, work and conduct commerce in cities around the world.

05:00PM − 05:30PM Projects in Progress ✓

Speaker: Professor Janos Sztipanovits - About Dr Sztipanovits • http://bit.ly/JS-Vanderbilt

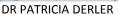
ABSTRACT – By merging the 'physical world' with the 'cyber world' and connecting machines to machines and machines to the internet, the industrial internet will result in huge productivity gains, reduce operating cost and is the key to sustainable economic growth. True or False?

05:30PM - 05:55PM Q & A

05:55 PM Vote of Thanks by Mrs Lynne Canavan, Industrial Internet Consortium ☑

About Ms Canavan ● <u>www.iiconsortium.org/staff.htm</u>







DR SANJAY SARMA



MS LYNNE CANAVAN



DR CHRISTOPHER GREER



DR KEITH MARZULLO



MR JEFF FEDDERS



**DR JANOS SZTIPANOVITS** 



DR RICHARD SOLEY

TUE 09/16/2014 CHALLENGES ON THE ROAD AHEAD (IIC members and guests) at Sheraton Austin (TX)
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Session Chair Dr Christopher Greer, Director for Smart Grid and Cyberphysical Systems (CPS), NIST ☑

Session co-Chair Mr Walton Fehr, Intelligent Transportation Systems, US Department of Transportation ✓

01:30PM-01:45PM Introduction – Mr Jeff Fedders, IIC Founding Member & Chief Strategist, Intel ✓

About Mr Fedders ● http://bit.ly/JEFF-FEDDERS

ABSTRACT – Challenges of undertaking a Grand Challenge. What is the nature of the transportation grand challenge? The overall view and the immense value to IIC members.

01:45PM-02:15PM Entering the Drone No-Hack Zone – Professor Kathleen Fisher ✓

About Dr Fisher ● http://bit.ly/TUFTS-KF

ABSTRACT – Today, even mundane objects are networked computers vulnerable to remote hacking, everything from medical devices (insulin pumps and pacemakers) to computer peripherals (scanners and printers) to vehicles (automobiles and airplanes) to household objects (televisions and refrigerators). Hackers can exploit small errors in the software on these systems to take over complete control. Can we develop new tools and techniques for writing software that can be formally proven to be invulnerable to attacks that are in common use today?

02:15PM-02:45PM The (Networked) State of the (European) Union – Dr Thibaut Kleiner ✓

About Dr Kleiner ● <a href="http://bit.ly/TK-EU">http://bit.ly/TK-EU</a>

ABSTRACT – The 28 countries of the European Union with its great diversity of cultures and plethora of natural languages presents a rigorous playground for testing standards and interoperability between standards in order to transact, communicate and disseminate. Key initiatives are underway to use the fruits of technology to further improve social harmony and connect a variety of meaningful services accessible not only in the EU but worldwide. Hence, global efforts, such as the deployment of autonomous transportation effort, is a worthy goal.

02:45PM-03:00PM Anatomy of a Challenge – Mr Walton Fehr, US Department of Transportation ✓

About Mr Fehr ● http://bit.ly/WF-ITS

ABSTRACT – The suggested scenario for the transportation grand challenge. Taking a step back and taking a look at the broad components. A glimpse of the skeleton still inside the closet.

03:00PM-03:30PM From Paradox to Paradigms and Policies – Are we ready for the driver-less uber-ized zip-car?

Professor Deborah Stine ● About Dr Stine ● www.epp.cmu.edu/people/bios/stine.html

ABSTRACT – When the driver-less rubber meets the public road how will it transform the rules of engagement? What happens to innovation when it faces the public without a coat of policy?

#### 03:30PM-04:00PM BREAK FOR TEA AND SCONES, COFFEE AND CAKE OR MILK AND COOKIES

04:00PM-04:35PM The Networked Society: Are we there yet? – Professor Dina Katabi ✓

About Dr Katabi ● http://bit.ly/DK-MacArthur ● http://bit.ly/DK-NYT ● http://bit.ly/DK-CS

Can you determine if the laptop was moved from the top shelf to the shelf just six inches below? How can you determine who is in the next room and is it alive or dead? If you cannot touch the skin of a premature baby, can you still record their heart beat or blood oxygenation level? The future of networks is much more than sensors.

04:35PM-05:10PM Not Driving Miss Daisy – Professor Raj Rajkumar ✓

About Dr Rajkumar ● http://bit.ly/RAJ-CMU-DC ● http://bit.ly/RAJ-CMU

ABSTRACT – Members of the US Congress took a driver-less Cadillac for a ride. Would you like to come along? The vision of autonomous transportation and the liability of driver-less vehicles.

05:10PM-05:45PM Once Upon A Time – Dr Patricia Derler ✓

About Dr Derler ● <a href="http://bit.ly/DERLER">http://bit.ly/DERLER</a>

ABSTRACT – Trillions of lines of legacy code adds to the dead weight of old technology which we may not be able to undo, re-write or discard, any time soon. Void of time centricity, legacy codes pose risks when and if integrated with cyberphysical systems (car, airplanes). How do we account for the semantics of time in a diverse mixed system? How do we program temporally integrated distributed embedded systems?

05:45PM-06:00PM Isaac Asimov's Sally - Fait Accompli?

Q&A with the panel of speakers and IIC members with moderators:

Mr Jeff Fedders (Chief Strategist, Intel and Founding Member, IIC)

Dr Christopher Greer (Director, NIST, US Department of Commerce)

06:00PM Vote of Thanks by Mrs Lynne Canavan, Industrial Internet Consortium ✓

About Ms Canavan ● www.iiconsortium.org/staff.htm

SUBJECT TO ADDITION – Mr Gregory Winfree (Assistant Secretary, US Department of Transportation) may join the panel

LOCATION FOR SEPTEMBER 15-16, 2014 is SHERATON AUSTIN HOTEL at THE CAPITOL

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