

# PROGRAMME

Monday 23 November 2015

SUSTAINABLE TECHNOLOGY

GLOBAL SOURCING

AUTOMATION & ROBOTIZATION

DRIVING INNOVATION

BIOTECHNOLOGY

BIG DATA



# Introduction

On behalf of the Danish Academy of Technical Sciences, we are pleased to welcome you to ATV's Technology Day 2015.

New technologies are game changers in today's as well as tomorrow's societies. At today's conference, leading business leaders, research leaders and scientists from Denmark and abroad will provide insight into the latest technological developments and how they are applied.

The conference programme presents three key note speakers with first-hand knowledge of R&D and innovation from international companies and universities:

EVP and CSO for Research and Development **Per Falholt**, Novozymes  
Professor, Dr. **Jürgen Lehold**, Executive Director, Volkswagen Group Research  
Professor of Management Practice **Willy Shih**, Harvard Business School

In addition to the plenary sessions, you can choose to participate in one of three technology tracks. Speakers from business and academia will supplement each other in covering three of the hottest technological topics: Big Data and Internet of Things; Automation in Connection with Robotization; Sustainable Technology.

It is our aim to start a new tradition with the Technology Day: Let's meet every November to discuss and share knowledge about the newest trends in technology development. The conference is a great opportunity to get updated as well as for networking, and it is part of ATV's aspirations to promote Science and Engineering as a concept to a wider audience.

Last, but not least, we would like to warmly thank the sponsors who have provided the financial basis for the event: Novo Nordisk (main sponsor), Otto Mønstedts Fond, LEO Fondet, and Siemensfonden.

Carsten Orth Gaarn-Larsen  
Chairman, ATV



Lia Leffland  
Managing Director, ATV



# ATV's Technology Day 2015 – Programme

*Moderator: Lia Leffland, Managing Director, ATV*

**12.00 pm Registration and Sandwiches**

**1.00 pm Welcome and Introduction to the Conference**

*Carsten Orth Gaarn-Larsen, chairman of ATV*

**1.10 pm Biotechnology Development in a Global Context**



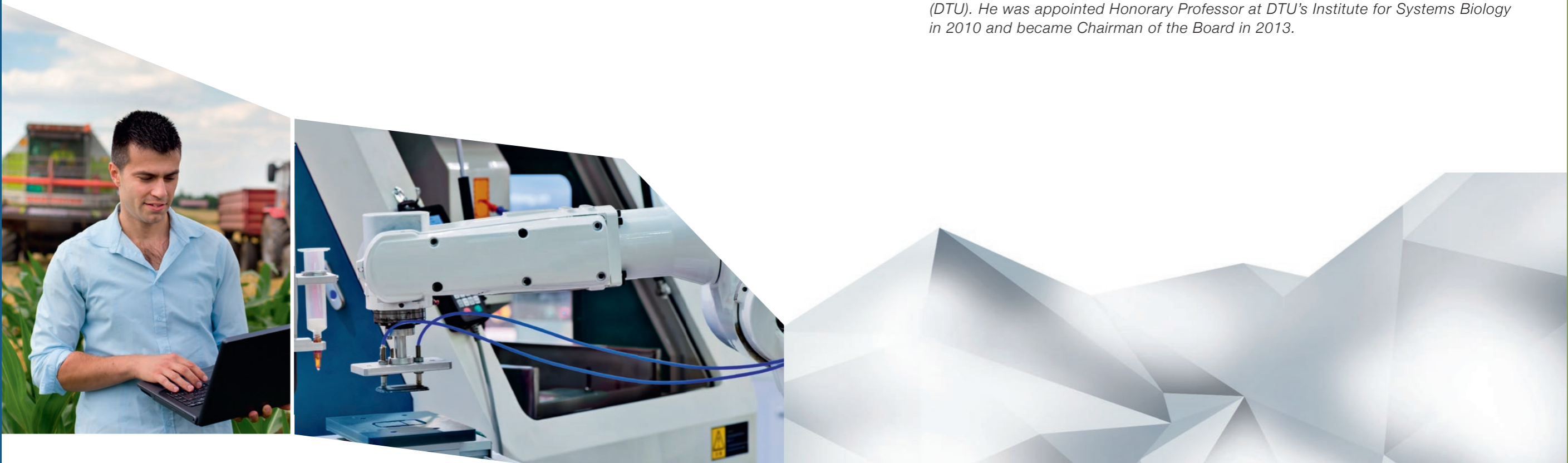
*Per Falholt, Executive Vice President, CSO for Research and Development, Novozymes; chairman of the Board of Governors, DTU*

Availability of advanced genetic editing tools and ready availability of genetic information have made drastic impact on the research flows of large companies in the recent years. Many technology developments take place in academic settings or smaller start-ups around the world. Having a global footprint with focus on scouting for technologies and collaborating with academia is key to being on forefront of the next technological shift. At Novozymes, our global research facilities are placed in close proximity with leading academic institutions to ensure cross-fertilization of ideas and to attract top talent. This strategy is also employed when establishing our new Innovation Campus close to DTU where we already have a significant collaboration.

*Per Falholt began his career as a research chemist at Novo A/S. He subsequently held several managerial positions developing products for the detergent industry and rose to Director for Application Technology in the company's new enzyme development division in 1995.*

*He moved to Raleigh, N.C., to head the company's U.S. application technology unit in 1997, returning to Denmark three years later as Corporate Vice President of the Enzyme Development and Application division. In April 2000, Per Falholt merged the Research and Development division into the newly formed Enzyme Business R&D. He assumed his current position following Novozymes' demerger from Novo Nordisk in 2000.*

*Per holds a M.Sc. in Chemical Engineering from the Technical University of Denmark (DTU). He was appointed Honorary Professor at DTU's Institute for Systems Biology in 2010 and became Chairman of the Board in 2013.*



# Programme

## 1.50 pm Driving Innovation in the Automobile Industry



*Dr. Jürgen Leohold, Professor, Executive Director, Volkswagen Group Research*  
Digitalization and connectivity are the key words of the present megatrends in the automobile industry. In his speech “Driving Innovation in the Automobile Industry” Professor Leohold will give an overview of the way of collaboration between the Volkswagen Group and universities, the approach from research to technical development. In addition, current projects on major trends will be exemplified, presented and discussed.

*Professor Leohold began his career at Volkswagen in 1987. After various positions in the Vehicle Electric/Electronics Development in January 2005 he was appointed to Division Manager of the Electric/Electronic Domain.*

*Professor Leohold is Executive Director of Volkswagen Group Research since April 2006.*

*Professor Leohold studied electrical engineering, both at the University of Hanover and from 1974 to 1980 at Georgia Institute of Technology in Atlanta, USA. He then completed his doctorate at the University of Hanover and subsequently took on a one-year postdoctoral research position at McGill University in Canada. Between 2002 and 2005, Professor Leohold resumed his academic career and was head of faculty for vehicle systems and basics of electrical engineering at the University of Kassel.*

## 2.30 pm Coffee Break

## 3.00 pm Technology Tracks

*A detailed and comprehensive agenda for each of the technology tracks is available at the conference.*

### Track 1: Internet of Things and Big Data Moderated by Lars Arge, Professor, AU



*Henrik Mørck Mogensen, Senior Vice President, Kamstrup:  
Making sense of Big Data and Internet of Things*



*Anders Rhod Gregersen, Chief Specialist, Vestas:  
Big Data and Big Compute at Vestas Wind Systems A/S*



*Søren Brunak, Professor, Programme Director,  
University of Copenhagen: Turning Big Data from Millions of  
Patients into Disease Maps for the Entire Population*

# Programme

## Track 2: Industrial Production Based on Knowledge: Automation in Connection with Robotization Moderated by Hans Nørgaard Hansen, Professor, DTU



*Ole Madsen, Professor, Aalborg University:  
Flexible Use of Robotics*



*Brian Vejrum Wæhrens, Professor, Aalborg University:  
Automation as a Source of Innovation*



*Henrik Sjøstrand, Senior Manager, Bang & Olufsen,  
and Jørgen Dam, Specialist, Bang & Olufsen:  
Automation as Innovation Driver at B&O*



*Morten K. Hansen, CEO, Siemens Flow Instruments:  
Automation and Robots – the Road to Quality Assurance*

## Track 3: Sustainable Technology Moderated by Katrine Krogh Andersen, Director of R&D, DMI



*Jørgen Olesen, Professor, Section Manager, Aarhus University:  
Technologies, Management and Governance to Support Sustainable  
Intensification in Agriculture*



*Lene Lange, Professor, Technical University of Denmark:  
New Technologies for Improved, Sustainable, and Efficient Use  
of Biological Resources*



*Simon Hoffmeyer Boas, Director, CSR, Carlsberg Group:  
Partnering to Create Sustainable Innovations*

## 5.00 pm Short Break

## 5.10 pm Summary: Highlights from the Technology Tracks

*Lars Arge, Professor, AU  
Hans Nørgaard Hansen, Professor, DTU  
Katrine Krogh Andersen, Director of R&D, DMI*

# Programme

## 5.20 pm Global Sourcing, Industrial Competitiveness, and the Future of Regional Clusters



Willy Shih, Professor of Management Practice, Harvard Business School

Building on earlier work on industrial competitiveness, Professor Shih will discuss one of his recent projects looking at the Danish life sciences cluster and the North Jutland wireless telecom cluster. What can we learn from the success of the former, and the collapse of the latter? In today's global market for knowledge and ideas, the breadth of knowledge needed to sustain competitiveness requires firms increasingly to source capabilities from wherever they can find them. This means that the long-term health of regional clusters depends on the extent to which they can attract talent, invest in leading edge capabilities, and foster cross-boundary collaboration that stays ahead of technological convergence.

Willy Shih is the Robert and Jane Cizik Professor of Management Practice in Business Administration, Harvard Business School.

Professor Shih is part of the Technology and Operations Management Unit, and he teaches in the MBA and Executive Education Programs. His expertise is in manufacturing and product development, and he has written or co-authored more than 125 cases and teaching materials in a wide range of industries.

Prior to coming to HBS in 2007, Willy Shih spent 28 years in industry at IBM, Digital Equipment, Silicon Graphics, Eastman Kodak, and Thomson SA.

He has S.B. degrees from the Massachusetts Institute of Technology, and a Ph.D. from the University of California at Berkeley.

Willy Shih is on the Board of Directors of Flextronics International, a large electronic manufacturing services provider.

## 6.00 pm Final Remarks

Carsten Orth Gaarn-Larsen, chairman of ATV

## 6.15 pm – Networking and Drinks

7.00 pm

The programme is subject to change.

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**VENUE**

Mogens Dahl Koncertsal, Snorresgade 22, 2300 Copenhagen S

**DATE**

Monday 23 November 2015