

National eScience Symposium 2017  
Science in a Digital World  
12 October 2017  
Amsterdam Arena

# Program

# Science in a Digital World —

## Discover how digital technology impacts scientific practice

Our understanding of human behavior and the brain, dealing with the challenges of climate change and discovering new energy sources, analyzing social and cultural interaction, processing sensor data from billions of devices from transportation to health - digital technology cuts through all scientific disciplines.

At this symposium we will discuss in different thematic sessions what this means for scientific research.

From the humanities to physics and beyond.

# Overview

The plenary sessions take place  
in room Amsterdam '72

- 10:00-  
10:05 **Welcome**  
Wilco Hazeleger  
Netherlands eScience Center
- 10:05-  
10:15 **Introduction**  
Paul Rullmann  
Chairman of SURF, collaborative organisation  
for ICT in Dutch education and research
- 10:15-  
10:50 **The hearts and minds  
of data science**  
Cecilia R. Aragon  
University of Washington
- 10:50-  
11:15 **Coffee & networking**  
Including eScience demo exhibition
- 11:15-  
12:45 **Thematic sessions**  
Natural Language Processing (see p.6)  
Internet of Things (see p.8)  
Energy Science (see p.10)  
Brain, Cognition and Behavior (see p.12)  
Future of Machine Learning (see p.14)

- 12:45-  
14:00 **Lunch & networking**  
Including eScience demo exhibition
- 14:00-  
15:30 **Thematic sessions**  
Natural Language Processing (see p.6)  
Internet of Things (see p.8)  
Energy Science (see p.10)  
Brain, Cognition and Behavior (see p.12)  
Future of Machine Learning (see p.14)

- 15:30-  
16:00 **Coffee & networking**  
Including eScience demo exhibition

- 16:00-  
16:15 **Young eScientist Award 2017**  
Annually the eScience Center awards a prize  
to a young researcher with a novel eScience  
idea

- 16:15-  
16:45 **Living in a scientific revolution**  
Diederik Jekel  
Science Journalist

- 16:45-  
16:50 **Closing**  
Wilco Hazeleger  
Netherlands eScience Center

- 16:50-  
18:00 **Drinks & networking**

For abstracts of the talks go to [bit.ly/2gDQmoK](http://bit.ly/2gDQmoK)

# Natural Language Processing

**Room:**  
Madrid '69

**Chairs:**  
Jan Odijk (Utrecht University)  
Jisk Attema (eScience Center)

In partnership with  
CLARIAH

## Talks

**11:15-  
12:45**     **Intelligence will be small: extracting  
meaning from tiny data**

Aurelie Herbelot  
Universitat Pompeu Fabra

**A closer look at distant reading**

Antske Fokkens  
VU University Amsterdam

**Language as social and cultural data**

Francisca de Jong  
CLARIN ERIC

**14:00-  
15:30**     **Robot writers: why and how?**

Emiel Kraemer  
Tilburg University

**The language of brains and machines**

Antal van den Bosch  
Meertens Institute

**Digital fingerprints: Can machine tell  
who wrote what?**

Malvina Nissim  
University of Groningen

*For abstracts of the talks go to [bit.ly/2gDQmoK](http://bit.ly/2gDQmoK)*

# Internet of Things

**Room:**  
Oud spelershome

**Chairs:**  
Ruben van den Brink (SURFnet)  
Rena Bakhshi (eScience Center)

In partnership with  
SURFnet

## Talks

**11:15-  
12:45** **Finding the right IoT platform: finding  
a needle in a haystack**  
Nirvana Meratnia  
University of Twente

**Living in the Internet of Things – a view  
on the impact of IoT on the society**  
Graca Carvalho  
University College London

**An itinerary for FAIR and privacy respecting  
data-driven innovation and research**  
Marlon Domingus  
Erasmus University Rotterdam

**14:00-  
15:30** **Unraveling traffic patterns in metropolitan  
areas with big data**  
Hans van Lint  
Delft University of Technology

**Building a global Internet of Things  
data network in 6 months**  
Wienke Giezeman  
The Things Network

**Where is the Internet of Things going?  
From Smart Products and Smart Places  
to Smart Platforms, but most of all  
Smart People**  
Lorna Goulden  
Cognizant Digital Business

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# Energy Science

**Room:**  
Straatsburg '88

**Chairs:**  
Kees Vuik (Delft University of Technology)  
Willem van Hage (eScience Center)

In partnership with  
NWO-Shell programme

## Talks

**11:15-  
12:45**      **Enhanced Helmholtz solver on GPUs  
for seismic imaging**  
Hans Knibbe  
EZNumeric

**The importance of supercomputing for  
nuclear reactor safety and design**  
Ed Komen  
The Nuclear Research and consultancy Group NRG

**Safeguarding the future power grid and  
integrated energy systems**  
Anne Markensteijn  
Delft University of Technology

**14:00-  
15:30**      **Modeling cyber-physical Energy Systems**  
Peter Palensky  
Delft University of Technology

**Stress testing a gas transmission network  
using combinatorics and optimisation**  
Jarig Steringa  
Gasunie Transport Services

**Het Zonnetje in Huis**  
Barry Koren  
Eindhoven University of Technology

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# Brain, Cognition & Behavior

**Room:**  
London '71

**Chairs:**  
Rob Heinsbroek (NIHC)  
Lars Ridder (eScience Center)

**Discussion moderator:**  
Paul Tiesinga

In partnership with  
NeuroLabNL

## Talks

**11:15-  
12:45**     **'Big data' for precision medicine:  
from population cohorts to individualised  
predictions**  
Andre Marquand  
Radboud University & King's College London

**Cracking the neuronal population code  
of the human brain at 7 and 9.4 Tesla**  
Rainer Goebel  
Maastricht University

**Studying the brain with an artificial brain**  
Wiro Niessen  
Erasmus MC

**14:00-  
15:30**     **Challenges in neuronal data analysis**  
Martin Vinck  
Ernst Strüngmann Institute

**Towards big data analysis of pre-clinical  
datasets to identify biomarkers  
for epileptogenesis: winning the hurdles**  
Niina Lapinlampi  
University of Eastern Finland

**Bridging the epilepsy treatment gap in  
resource-poor areas: eScience promises  
and challenges**  
Wim Otte  
University Medical Center Utrecht

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# The Future of Machine Learning

**Room:**  
Amsterdam '72

**Chairs:**  
Mannes Poel (University of Twente)  
Jason Maassen (eScience Center)

In partnership with  
Commit2Data

## Talks

**11:15-12:45** **Democratizing Machine Learning**  
Joaquin Vanschoren  
Eindhoven University of Technology

**Machine learning at petascale**  
Damian Podareanu  
SURFsara

**A neural network to catch the fastest stars in our Galaxy**  
Tomasso Marchetti  
Leiden Observatory

**14:00-15:30** **Personalized information search**  
Suzan Verberne  
Leiden University

**Trust and Transparency in Machine Learning**  
Marc Deisenroth  
Imperial College London

**Embrace the future of AI**  
Ali Bahramisharif  
Machine2Learn

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# About the eScience Center

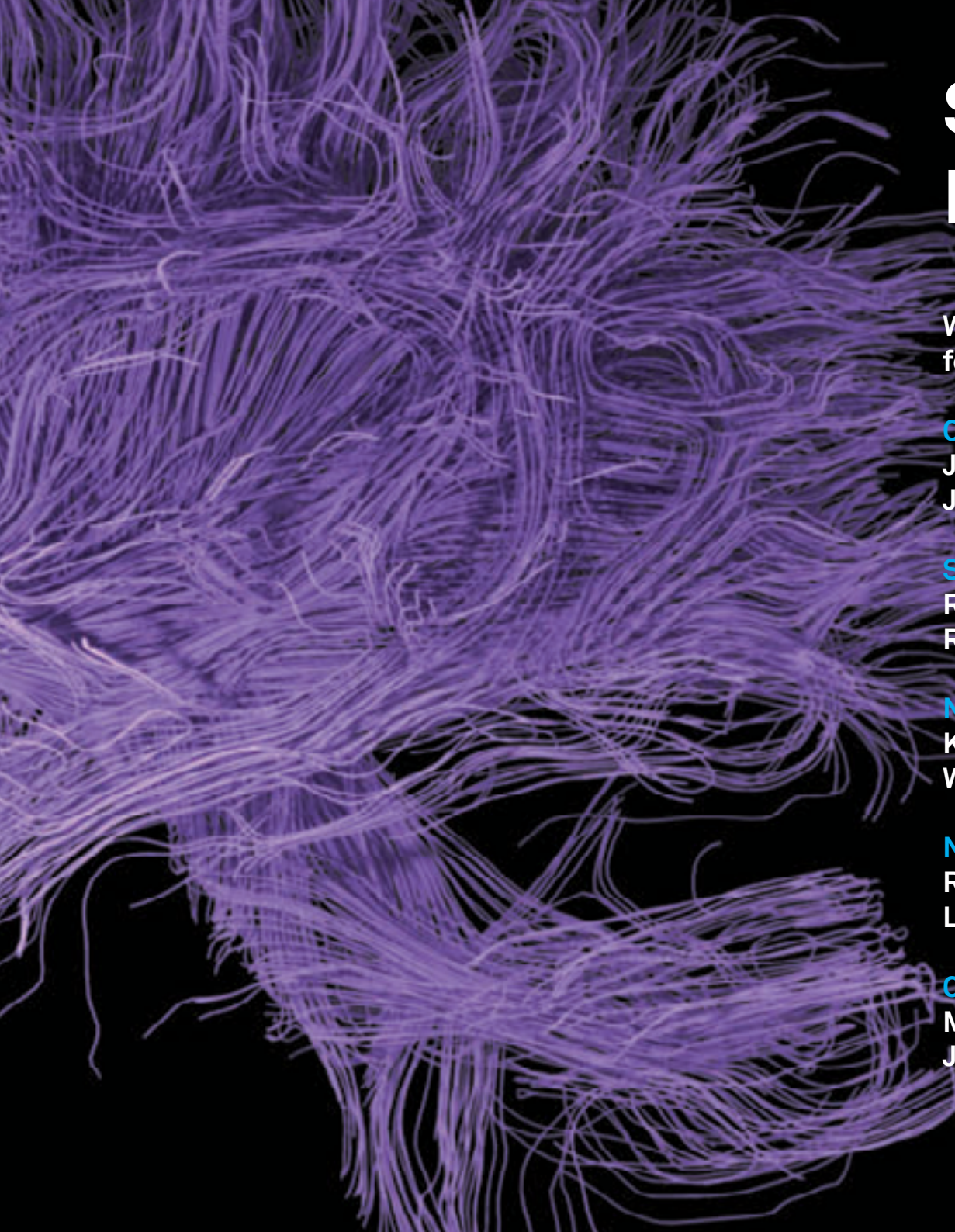
For scientific researchers wanting to take full advantage of ever growing amounts of data and increasingly powerful digital technology, research software is essential.

We are the Dutch national center of excellence for the development and application of research software.

We collaborate with scientists from all disciplines, computer and data scientists and providers of hardware infrastructure, to translate research needs into software that takes advantage of available technology.

More information about our projects and funding opportunities can be found at [www.eScienceCenter.nl](http://www.eScienceCenter.nl)





# Symposium partners & chairs

We want to thank all co-organizing partners and chairs for collaborating with us on this year's program:

**CLARIAH** - Natural Language Processing  
Jan Odijk (Utrecht University)  
Jisk Attema (eScience Center)

**SURFnet** - Internet of Things  
Ruben van den Brink (SURFnet)  
Rena Bahkshi (eScience Center)

**NWO-Shell programme** - Energy Science  
Kees Vuik (Delft University of Technology)  
Willem van Hage (eScience Center)

**NeuroLabNL** - Brain, Cognition and Behavior  
Rob Heinsbroek (NIHC)  
Lars Ridder (eScience Center)

**Commit2Data** - The Future of Machine Learning  
Mannes Poel (University of Twente)  
Jason Maassen (eScience Center)

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**#nlesc17**