

Second edition ICT with Industry 2014

Introduction

In 2013 the first edition of Workshop ICT with Industry was organized. The workshop was well received by the research community and the participating partners. Other related workshops, e.g. Physics & Industry and Mathematics & Industry, have been already organized successfully for many years and fully supported by their own research community. To ensure the success and the embedding of the Workshop ICT with Industry in the Dutch research community NWO and STW organized the second edition in collaboration with the research schools ASCI, IPA and SIKS. This second edition Workshop ICT with Industry took place between 13-17 October 2014 at the Lorentz Center in Leiden. The main aim of the workshop is to stimulate contacts between researchers and users from industry and public organisations.

Problems & Outcome

The industrial partners presented their case study and objectives on the first day. Immediately afterwards, groups of participants began to brainstorm, to program and to look for possible solutions. The industrial partners and senior researchers guided the participants. The study cases this year were as follows:

1. CBS: D-POD; Dutch Privacy Preserving Open Data
CBS is interested in the amount of information that can be inferred from a (aggregated) dataset coming from an existing D-POD project. During the workshop there were discussions about the different approaches to the given problems. Due to time limitations there was no workshop report or follow up on the case study.
2. Combined Computer Services (CCS): Better insurance process based on unstructured data
CCS wanted to do some initial research how to improve the claim process of insurance companies by processing large data collection and by using human-assisted (semi)automated learning. During the workshop the team formulated research questions and made recommendation for CCS to improve their efficiency and their quality of services. After the workshop the researchers provided CCS a workshop report on their findings and together with CCS the researchers are now preparing a project proposal to be submitted for funding.
3. InTech: WaterData
InTech wanted to introduce a new measuring system, based on big data generated by point clouds. The recommended system should be usable to measure surface water as well as ground water. During the week the team worked on identifying research questions and formulating possible recommendations. After the workshop the team in collaboration with InTech succeeded to receive the KIEM-funding from NWO Physical Sciences and the OTP-funding from STW. The consortium is currently preparing another project proposal for funding.
4. Thales Research and Technology: Towards real trust in a digital society
Thales is looking for alternative schemes to deal with certificates on the internet as the developments in the domains of security and trustworthiness are becoming more complex and expensive. Prior to the workshop Thales identified the expertise they need, however during the workshop it turned out that none of the participants were able to work on this cases study.
5. VectorFabrics: Scalable dynamic race prediction
The case study of VectorFabrics concerns the detection of data races in multithreaded, concurrent programs. During the workshop the team came up with solutions and recommendations, which were elaborated in a workshop report presented to VectorFabrics.

On Friday October 17, the last day of the workshop, all research teams presented their results and indicated possible follow/up steps. The company InTech presented the question "how can we collect run-time data in complex water systems?" The team provided a live demonstration at the pond in front of the Lorentz Center in Leiden. Willem de Vries (director InTech) about the demonstration: *"We have to see how the sonar boat measures water depth in practice and what problems we are*

facing. By demonstrating this we would like to bridge the gap between theory and practice. In this way we hope to help the researchers in reaching the best possible solution."

How does Valeria Krzhizhanovskaya (researcher UvA) from the InTech team look back on the week? "It was very interesting. In my previous research I was doing measurements on dykes; that theory is close to the work of InTech. We have created algorithms to monitor measurements in real time. Furthermore, we have looked at how we can measure too low or too high water levels and also preferably to predict such extremes with models. I think we have helped InTech."

In short, the workshop resulted in new collaborations and research ideas, which all have the potential to be further developed into research proposals. Funding possibilities were offered by NWO and STW, e.g. Call Innovative Public Private Partnership in ICT (IPPSI) from NWO Physical Sciences and the research programme Take-off from STW. There are workshop reports on the findings as well as scientific papers on voluntary base and depending on availability of the respective researchers. The scientific advisory members assess the scientific papers and ask the participants to publish these through arXiv.org, <http://arxiv.org>, of Cornell University Library. With these publications the proceedings of the workshop will be scientifically visible.

Visibility

The workshop results were communicated through the following channels:

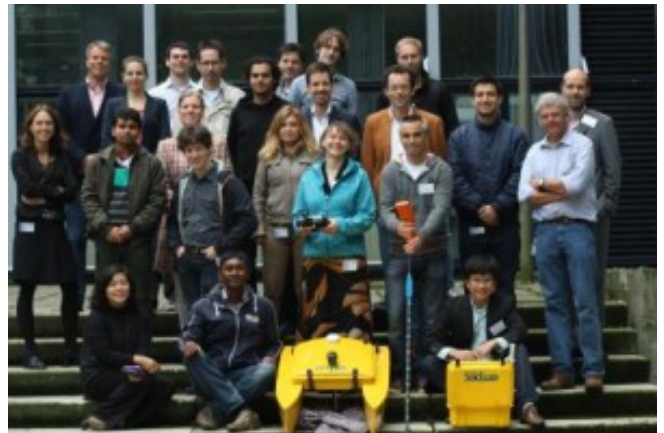
- i/O magazine – a publication of IPN (ICT-onderzoek Platform Nederland): http://www.ictonderzoek.net/binaries/content/assets/bestanden/ipn/ipn_io_jg_11_2014-12_def-p16-17-ict-with-industry-slaat-brug.pdf
- Promotion film on You Tube: <https://www.youtube.com/watch?v=ehWsQI88vZ8>
- NWO EW newsletter: <http://www.nwo.nl/actueel/nieuws/2014/ew/ict-with-industry-workshop-sluit-af-met-praktijkdemo-in-de-vijver.html>
- NWO Facebook <https://www.facebook.com/NWOCEW>
- ICT with Industry Facebook <https://www.facebook.com/events/354937611335248/>
- Weblog ICT with Industry <https://blog.nwo.nl/ict-with-industry/>

On 24 and 25 March at ICT.OPEN2015, which is the main ICT research conference in the Netherlands, the case studies were presented in a session dedicated to ICT with Industry.

Governance

The scientific advisory committee consisted of:

- Dr. Ana Lucia Varbanescu, University of Amsterdam
- Dr. Alexandru Iosup, Delft University of Technology
- Prof. dr. Arend Rensink, University of Twente
- Dr. Joaquin Vanschoren, Eindhoven University of Technology
- Dr. Jan Hidders, Delft University of Technology



NWO and STW in collaboration with the research schools, ASCI, IPA and SIKS are currently planning the third edition Workshop ICT with Industry to be organized 7-11 December 2015; the representatives from the research schools will take a more prominent role in the organisation than in the first two editions of the Workshop ICT with Industry. A Call for Case Studies will be published soon.

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