

The European Strategic Cluster Partnership  
for Smart Specialization Investment in Medical Technologies

S3martMed WEBINAR

# AI in medical technology

## Innovative projects across Europe

JULY 4<sup>TH</sup> 2019 , 14h00 - 15h15

# Agenda

Date: July 4th 2019

**14.00 – 14.10**     **Welcome: Introduction of the „S3smartMed“ Project**  
*by Dr. Klara Altintoprak, BioRegio STERN (Baden-Württemberg)*

**14.10 – 14.30**     **Artificial Intelligence and Medical Devices**  
*by Professor Gabriella Balestra, Politecnico di Torino (Piemonte)*

- AI means...” An historical perspective
- Examples of AI medical applications (diagnosis, treatment and patient monitoring)
- Medical Device Normative and AI
- Our work with AI methods: biomedical signal interpretation and radiomics

**14.30 – 14.50**     **DNAlytics, Data Science Expertise for the Healthcare Sector**  
*by Damien Bertrand, PhD – Business Development Officer at DNAlytics (Wallonie)*

- Presentation of DNAlytics
- Data sciences: specific needs in the healthcare context
- DNAlytics tools and methods
- Applications overview and some case studies

**14.50 – 15.10**     **Artificial Intelligence in Imaging**  
*by Dr. Johannes Stelzer, Max Planck for Biological Cybernetics (Baden-Württemberg)*

- How can AI processes improve the image quality?
- How can AI methods improve the analysis and interpretation of images?
- What new types of imaging are possible through AI procedures?

**15.10 – 15.15**     **Q&A Session**

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## Speakers

### Dr Gabriella Balestra

Electronics and Telecommunication Department – Politecnico di Torino



**Dr. Gabriella Balestra** graduated in Computer science in 1980 at the University of Torino. She obtained a PhD on Computer science and system theory in 1989 at Politecnico di Torino. In 1993 she became research assistant professor at Politecnico di Torino.

Her main research interests are focused on bioengineering and in particular on the use of machine learning and computational intelligence methods to the analysis and interpretation of biomedical data, signals and medical images; the design and development of medical software; clinical process modeling; telemedicine.

Since the 90s she has been active on technology transfer in the fields of biomedical instrumentation and medical informatics.

### Damien Bertrand, PhD

Business Development Officer at DNAnalytics



**Damien Bertrand** holds a PhD in physics from UCLouvain, Belgium. He has more than 10 years' experience in Medical Device industry, with responsibilities in product innovation and strategic partnerships. Since 2017, he is in charge of the Business Development at DNAnalytics.

## Dr Johannes Stelzer

Scientist at the Max Planck Institute for Biological Cybernetics



**Dr Johannes Stelzer** studied physics, biophysics and philosophy at the Universities of Hamburg and Leipzig and worked on neuronal growth processes. He then pursued a PhD degree at the **Max Planck Institute for Human Cognitive and Brain sciences** in Leipzig, where he investigated human brain function by means of ultra-high field functional magnetic resonance imaging (fMRI). Here, he developed novel statistical methods for interpreting machine learning results from fMRI. Currently, Johannes is employed at the **Max Planck Institute for Biological Cybernetics** in Tübingen, where he develops analysis methods for fMRI, with special focus on network methods and artificial intelligence (AI). Since 2019 he co-founded the company Colugo GmbH in Tübingen. Colugo's goal is to empower companies by transferring cutting-edge AI methods into practical applications.