

# FBK PHD DAY – March 12<sup>th</sup>, 2021

online on Microsoft Teams

[10:00-10:05] Welcome - Bernardo Magnini

[10:05-10:15] Message from FBK President, Francesco Profumo

[10:15-10:55] Short presentations by students finishing in 2021 (Part 1/3)

- Sensor&Devices - introduction by Gianluigi Casse
  - o Di Novo, Nicolò - Surface wettability and phase changes
  - o Krik, Soufiane - Synthesis and material characterization combined with DFT calculations for low operating temperature chemoresistive gas sensors
  - o Sayginier, Osman - Modelling and Simulation of Novel Opto-acoustic Sensors for Monitoring Crack Growth in Pressure Vessel Steels
  - o Zhang, Chenfan - Development of Depleted Monolithic Active Pixel Sensors for High Energy Physics Experiments
- ISR - introduction by Marco Ventura
  - o Corsalini, Matteo - Religious and Business Autonomy in the Secular Economy. A comparative study in corporate law and religion
  - o Durante, Raphael - Anti-gender movements : A new conservative expression in democracy. The case of France and Italy
- Health Emergencies - introduction by Piero Poletti
  - o Zardini, Agnese - Modeling the transmission of viral diseases: understanding hidden processes to inform public health policies
- ISIG - introduction by Christoph Cornelissen
- ECT\* - introduction by Gert Aarts
- IRVAPP - introduction by Loris Vergolini

[10:55-11:25] Keynote talk: Polyglot Machines, Arianna Bisazza - University of Groningen

[11:25-11:35] New students' self introduction

[11:35-12:20] Short presentations by students finishing in 2021 (Part 2/3)

- Digital Industry - introduction by Alessandro Cimatti
  - o Antonini, Mattia - From Edge Computing to Edge Intelligence: exploring novel design approaches to intelligent IoT applications
  - o Biagiola, Matteo - Test Generation and Dependency Analysis for Web Applications
  - o Lakhali, Mohamed - Novel-View Human Action Synthesis
  - o Ozdemir, Emre - Point Cloud Classification for 3D Building Modeling
  - o Pincheira Caro, Miguel - A blockchain-based decentralized framework for autonomous interactions of IoT devices
  - o Tebbifakhr Amirhossein - Machine Translation for Machines
  - o Torresani, Alessandro - A V-SLAM guided mobile mapping system for photogrammetric acquisitions
- Digital Health and Wellbeing - introduction by Chiara Ghidini
  - o Astolfi, Pietro - Deep learning of brain white matter
  - o Balaraman, Vevake - Incorporating domain knowledge in task-oriented dialogue systems
  - o Franch, Gabriele - Deep Learning for Spatiotemporal Nowcasting

- o Louvan, Samuel - Low Resource Natural Language Understanding (NLU) in Task-Oriented Dialogue Systems
- o Putelli, Luca - Deep Learning for Classification of Radiology Reports with a Hierarchical Schema
- o Sheikhalishahi, Seyedmostafa - Machine learning applications in Intensive Care Unit

[12:20 -12:30] Excellence certificates

[12:30 -13:15] Short presentations by students finishing in 2021 (Part 3/3)

- Digital Society - introduction by Marco Pistore
  - o Behravesh, Rasoul - Lifecycle Management and Placement of Service Function Chains in MEC-Enabled 5G Networks
  - o Cerutti, Gianmarco - Near Sensor Artificial Intelligence on IoT Devices for Smart Cities
  - o Donini, Elena - Advanced methods for simulation-based performance assessment and analysis of radar sounder data
  - o Dost, Shahi - Linking Visual and Textual Entity Mentions with Background Knowledge
  - o Loria, Enrica - Alone with Company: Studying Individual and Social Players' In-game Behaviors in Adaptive Gamification
  - o Rutta, Carolina - Comic-Based Digital storytelling
- Cyber Security - introduction by Roberto Carbone
  - o Dashti, Salimeh - Tool-based Risk Assessment Methodology to Comply with DPI
  - o Ding, Damu - Design and Development of Network Monitoring Strategies in P4-enabled Programmable Switches
  - o Faticanti, Francescomaria - Resource Allocation in Highly Distributed and Heterogeneous Computing Systems
  - o Sharif, Amir - Mitigating Logical Vulnerabilities in Mobile Identity Management
- Sustainable Energy - introduction by Luigi Crema
  - o Praticò, Luca - Heat transfer models of a hierarchical high-temperature solar receiver for solar heated industrial processes

[13:15-13:25] Best student award

[13:25] Conclusion

**Keynote talk:** Polyglot Machines, Arianna Bisazza, University of Groningen, Netherlands

Career (and life) paths of researchers often look more like winding roads than straight lines directed to a pre-fixed goal. This is also the case for my own path. Yet if I look back on my achievements, a leading question emerges: What makes certain languages more difficult to learn than others, and can we develop machines that are equally capable of understanding a large variety of languages? In this talk I'll reflect on how my lifelong curiosity for multilingualism has led me to work in a field I didn't even know existed, but which I would never quit.

Arianna Bisazza is Assistant Professor in Computational Linguistics at the University of Groningen, Netherlands. Her research aims to identify intrinsic limitations of current language modeling paradigms, and to improve the quality of machine translation for challenging language pairs. Before moving to Groningen she worked at Leiden University and the University of Amsterdam, and spent research periods at Microsoft Research and Dublin City University. She obtained her PhD from FBK/University of Trento in 2013 and was awarded a VENI (personal talent grant from the Netherlands Organisation for Scientific Research) in 2016.