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INTERNAL SEMINAR 2024

Tuesday, 26 November 2024
9:30 - 17:00

Émilie du Châtelet Amphitheater
SUPMICROTECH ENSMM

FEMTO-ST's internal scientific seminar provides an excellent platform for in-depth discussions on the institute's diverse research areas. This year, we are placing a special emphasis on our PhD students, with seven final-year students delivering oral presentations and over 60 posters being presented by first-year PhD students.

The invited speakers will address three cross-cutting themes: Science and Technology for Health, Science and Technology for Sustainable Development, and Artificial Intelligence and Digital Science. The latter two themes are currently being structured by the scientific council, making this seminar an invaluable opportunity for the entire FEMTO-ST community to contribute to these discussions.

The executive team and scientific council of FEMTO-ST wish you a productive and engaging scientific day, full of insightful meetings and stimulating discussions.

femto-st
SCIENCES &
TECHNOLOGIES

9h30 **Welcome coffee**

9h45 **Science & technology for sustainable development axis**

- Invited speaker : Marc Clausse, CETHIL, Lyon
  « Contribution of environmental criteria to the optimisation of energy systems »

- Internal speaker : Florian Boutenel, DMA department
  « Bio-sourced materials »

11h00 **PhD students' presentation**

- AS2M : Manal Benaissa, supervised by Jean Marc Nicod
  « Standalone Datacenter Sizing Powered by Renewable Energy. »

- Energy : Clotilde Robert, supervised by Daniel Hissel
  « Eco-design of a hydrogen-electric powertrain for heavy-duty mobility. »

11h15 **Science and technology for health axis**

- Invited speaker : Charlotte Rivière, ILM, Lyon
  «Microsystems to unravel cancer cell dynamic and therapeutic efficacy»

- Internal speaker : Zeina Al Masry, AS2M department
  « Connected device and signal processing for breast cancer diagnosis. »

12h30 **Lunch**

13h15 **Poster session**

14h45 **PhD students' presentation**

- DMA department : Simon Vauthier, supervised by Emmanuelle Jacquet :
  « Measuring mechanical behaviour of grip-activated hand muscles »

- MN2S : Hamidreza Gerami, supervised by Nicolas Martin :
  « Electronic transport mechanisms in nanostructured bimetallic thin films. »

15h00 **Artificial intelligence and digital science axis**

- Invited speaker: Giovanni Volpe, Univ. of Gothenburg, Sweden
  « Deep Learning for Microscopy. »

- Internal speaker: Jean-François Couchot, DISC department
  «Enabling Machine Learning with Differential Privacy for Sensitive Medical Data. A Case Study of Automated CIM-10 Code Association.»

16h15 **PhD students' presentation**

- DISC : Daniel Sotoforero, supervised by Julien Henriet
  « Stochastic recommendation model for AI-VT. »

- Optics : Romain Lance, supervised by Daniel Brunner
  « All optical neural network for optical telecommunications applications. »

- TF : Carlos Rivera, supervised by Rodolphe Boudot
  « Light-shift mitigation in microcell clocks using pulsed interrogation sequences.»

16h35 **A few words from the director of FEMTO-ST**

16h45 **Award ceremony**