

## SpeechPizza Invitees' Session

Thursday, 6 June 2024  
12:00 - 13:15, D011  
<https://lcis.grenoble-inp.fr>

**Emilio José Olivares** [emilio.olivares@sansano.usm.cl](mailto:emilio.olivares@sansano.usm.cl)

(Magister thesis candidate from University of Santa Maria, Chile within CO4SYS team working with Laurent Lefevre)

**Title: Modular port based model for a class of piezoelectric actuator.**

**Abstract:** In this presentation the derivation of the model of a piezoelectric bender will be shown using Bond Graphs and Port-Hamiltonian models.

**Jafait Junior Fodop Sokoudjou** [jfodopsokou@unav.es](mailto:jfodopsokou@unav.es)

(PhD candidate from University of Navarra, Spain within ORSYS team working with Étienne Perret)

**Title: AI for Chipless Radio Frequency Identification (RFID)**

**Abstract:** Chipless RFID is a fully passive technology based on the backscattered modulation of electromagnetic (EM) signals. Due to the lack of electronics of chipless tags and the modulation mode, they are specially suitable for some applications (very low cost applications, sensors, etc.). However, for the same reason, they can only encode a limited number of bits and transmit very low backscattered power with a short reading range. We are working on procedures based on Machine Learning algorithms for effective chipless RFID identification, which would allow for more robust chipless RFID system implementation in real-world applications.

**Antoine Bendimerad** [Antoine.BENDIMERAD-HOHL@isae-superaero.fr](mailto:Antoine.BENDIMERAD-HOHL@isae-superaero.fr)

(PhD candidate from ISAE SupAERO, Toulouse, France within CO4SYS team working with Laurent Lefevre)

**Title: Structure-preserving discretization of port-Hamiltonian systems**

**Abstract:** In the past decades, the port-Hamiltonian framework has been successfully applied to a large class of systems; its strength is the capability of interconnecting multiple dynamical while keeping the physical interpretation intact. The goal of this presentation is to gently introduce the notion of a port-Hamiltonian system (pHs) and to discuss the numerical simulations and spatial discretization that preserves the structure of the system.

### The science behind pizza!

