



京都大学  
KYOTO UNIVERSITY



大阪大学  
OSAKA UNIVERSITY



鳥取大学  
Tottori University

## PROGRAM AND ABSTRACTS

Premises: Seminar of the Department of Applied Physics I, G0-81. ETSI Informática, Avda. Reina Mercedes s/n, 41012-Sevilla

URL: <http://institucional.us.es/hyperconductivity/JSLoc2019/>

Contact JFR Archilla <archilla@us.es> for inquiries

Organizers: JFR Archilla (Universidad de Sevilla) and Yusuke Doi (Osaka University).

## PROGRAM:

**Monday, 23/09/2019**

**Presentation** 9:40-10:00: JFR Archilla and Yusuke Doi

### Plenary speakers: Theory

10:00-10:30 Masayuki Kimura, Moving Intrinsic Localized Modes in a Mixed Model of Fermi-Pasta-Ulam and Nonlinear Klein-Gordon Lattice

10:30-11:00 J Cuevas, Travelling waves in the Fermi-Pasta-Ulam-Tsingou model: existence and stability

11:00-11:30 Kazuyuki Yoshimura, Existence of odd and even discrete breathers in infinite Fermi-Pasta-Ulam lattices

### Coffe Break

12:00-12:30 Juan F.R. Archilla, Pterobreathers: wing and breather frequencies in the moving frame

12:30-13:00 Yusuke Doi, Numerical Study on Discrete Breathers in 3D Crystals.

13:00-13:30 Bernardo Sánchez-Rey, Ratchet of kinks induced by fluctuations among symmetric sine-Gordon potentials.

### Lunch

### Posters and short talks: 15:00-16:00

María J.G. Calero, Study of the Vicsek model on phase transition in a system of self-driven particles.

Joël Tsoplefack . Discrete breathers in an electrical transmission line

Yamato Mogi. Localized modes in magnetically coupled resonant circuit array induced by a locally distributed impurity

### Coffe Break

### Plenary talks: Experimental

16:30-17:00 Santiago Medina-Carrasco, Mica group structure and hyperconductivity

17:00-17:30 Yosuke Watanabe, Observation of excited modes in a mechanical coupled oscillator array

17:30-18:00 Faustino Palmero, Discrete breathers in electrical lattices

### Panel Discussions

Tuesday to Friday: Morning 10:30-13:30, Afternoon: private discussions

24/09/2019: Charge transport by breathers and kinks. Chair: Juan FR Archilla

25/09/2019: Existence proofs of moving breathers. Chair: Kazuyuki Yoshimura

26/09/2019: Breathers in 3D. Chair: Yusuke Doi

27/09/2019: Experiments on breathers. Chair: Yosuke Watanabe

28/09/2019: Breathers in 2D. Chair: Masayuki Kimura (At University Bldg Rector Stanislao del Campo).