

# Classification problems in singularity theory and their applications

## RIMS-Sing 4 Workshop



Date : December 12 (Monday), 2022 – December 15 (Thursday), 2022  
Venue : IMI Auditorium of Institute of Mathematics for Industry, Kyushu University, Japan.  
HP : <http://www.math.kobe-u.ac.jp/HOME/saji/math/conf2022/spmon/index.html>

### [PROGRAM]

#### December 12

- 13:40–14:30 Juan Jose Nuño Ballesteros (Universitat de València)  
**The Cone Structure Theorem I**
- 14:50–15:40 Pitotr Mormul (University of Warsaw)  
**From Engel and Cartan to Monsters in algebraic and differential geometry**
- 16:00–16:50 Katsusuke Nabeshima (Tokyo University of Science)  
**Computer algebra techniques for analyzing parametric polynomial systems 1**

#### December 13

- 10:00–10:50 Toshizumi Fukui (Saitama University)  
**A bifurcation model for nonlinear equations**
- 11:10–12:00 Juan Jose Nuño Ballesteros (Universitat de València)  
**The Cone Structure Theorem II**
- 13:40–14:30 Juan Jose Nuño Ballesteros (Universitat de València)  
**Gauss words I**
- 14:50–15:40 Juan Antonio Moya Pérez (Universitat de València)  
**Topology of fold map germs from  $\mathbb{R}^3$  to  $\mathbb{R}^5$**
- 16:00–16:50 Hiroshi Teramoto (Kansai University)  
**Classification Algorithms of Real Singularities (1)**

## December 14

- 10:00–10:50 Juan Jose Nuño Ballesteros (Universitat de València)  
**Gauss words II**
- 11:10–12:00 Katsusuke Nabeshima (Tokyo University of Science)  
**Computer algebra techniques for analyzing parametric polynomial systems 2**
- 13:40–14:30 Benoît Guerville-Ballé (RIMS, Kyoto University)  
**On the first stage of the classification process of line arrangements**
- 14:50–15:40 Juan Jose Nuño Ballesteros (Universitat de València)  
**Reeb graphs I**

## December 15

- 10:00–10:50 Hiroshi Teramoto (Kansai University)  
**Classification Algorithms of Real Singularities (2)**
- 11:10–12:00 Juan Jose Nuño Ballesteros (Universitat de València)  
**Reeb graphs II**

\* All times are Japan Standard Time (JST).

Organizers:

Kentaro Saji (Kobe University),

Masatomo Takahashi (Muroran Institute of Technology),

Minoru Yamamoto (Hirosaki University),

Takahiro Yamamoto (Tokyo Gakugei University),

Kaoru Ono (Kyoto University, Research Institute for Mathematical Sciences).