



## 「可微分写像の特異点論とその応用」

### Singularity theory of differentiable maps and its applications

日時: 2024 年 12 月 16 日 – 2024 年 12 月 18 日

会場: 京都大学数理解析研究所 420 号室

HP: <https://www.fit.ac.jp/~fukunaga/conf/sing202412.html>

## プログラム

### 12 月 16 日 (月)

- 10:30 – 11:20 島田 瑠奈 (神戸大学)  
カスプ的  $S_1$  特異点の幾何学的変形
- 13:30 – 14:20 Liang Chen (Northeast Normal University)  
TBA
- 14:40 – 15:30 服部祐樹 (横浜国立大学)  
(3, 4)–カスプ辺の内在的不変量
- 15:50 – 16:40 山内 優太 (横浜国立大学)  
特異点を持つ部分多様体の絶対全曲率

### 12 月 17 日 (火)

- 9:30 – 10:20 矢代 海音 (新潟大学)  
Morse bipersistence modules and rectangle barcodes
- 10:40 – 11:30 田島 慎一 (新潟大学)  
Holonomic D-modules and singularities of holomorphic map germs
- 13:30 – 14:20 石川 剛郎 (北海道大学)  
Phase singularity and criticality
- 14:40 – 15:30 中津山希 (室蘭工業大学)  
Bertrand framed surfaces in the Euclidean 3-space and its applications
- 15:50 – 16:40 Yongqiao Wang (Dalian Maritime University)  
On envelopes created by circle families in the plane

## 12月18日(水)

- 9:30 – 10:20 北澤 直樹 (九州大学)  
Constructing real algebraic functions explicitly and their Reeb graphs
- 10:40 – 11:30 奥田喬之 (工学院大学)  
Morsification for degenerations of Riemann surfaces of genus 6
- 13:30 – 14:20 佐治 健太郎 (神戸大学)  
Normal form of  $D_4$  minus singularity of fronts and its applications
- 14:40 – 15:30 平松篤樹 (埼玉大学)  
Parallel Surface of Cuspidal Cross Cap
- 15:50 – 16:40 小林真人 (秋田大学)  
Some pictorial reconstructions of the Boy surface

支援: 京都大学 RIMS 共同研究 (公開型)

世話人: 土田旭 (滋賀大学) 福永知則 (福岡工業大学)



# Singularity theory of differentiable maps and its applications

Date: December 16th, 2024 – December 18th, 2024

Venue: Room 420, Research Institute for Mathematical Sciences,  
Kyoto University, Japan

HP : <https://www.fit.ac.jp/~fukunaga/conf/sing202412.html>

## [Program]

### December 16th (Monday)

- 10:30 – 11:20 Runa Shimada (Kobe University)  
Geometric deformations of cuspidal  $S_1$  singularities
- 13:30 – 14:20 Liang Chen (Northeast Normal University)  
TBA
- 14:40 – 15:30 Hattori Yuki (Yokohama National University)  
Intrinsic invariants of  $(3, 4)$ –cuspidal edges
- 15:50 – 16:30 Yuta Yamauchi (Yokohama National University)  
The total absolute curvature of submanifolds with singularities

### December 17th (Tuesday)

- 9:30 – 10:20 Yashiro Kanon (Niigata university)  
Morse bipersistence modules and rectangle barcodes
- 10:40 – 11:30 Shinichi Tajima (Niigata university)  
Holonomic D-modules and singularities of holomorphic map germs
- 13:30 – 14:20 Goo Ishikawa (Hokkaido University)  
Phase singularity and criticality
- 14:40 – 15:30 Nakatsuyama Nozomi (Muroran Institute of Technology)  
Bertrand framed surfaces in the Euclidean 3-space and its applications
- 15:50 – 16:40 Yongqiao Wang (Dalian Maritime University)  
On envelopes created by circle families in the plane

**December 18th (Wednesday)**

- 9:30 – 10:20 Naoki Kitazawa (Kyushu University)  
Constructing real algebraic functions explicitly and their Reeb graphs
- 10:40 – 11:30 Takayuki OKUDA (Kogakuin University)  
Morsification for degenerations of Riemann surfaces of genus 6
- 13:30 – 14:20 Kentaro Saji (Kobe University)  
Normal form of  $D_4$  minus singularity of fronts and its applications
- 14:40 – 15:30 Atsuki Hiramatsu (Saitama University)  
Parallel Surface of Cuspidal Cross Cap
- 15:50 – 16:40 Mahito Kobayashi (Akita University)  
Some pictorial reconstructions of the Boy surface

Sponsors: RIMS Symposia (open)

Organizers: Asahi Tsuchida (Shiga University) ,  
Tomonori Fukunaga (Fukuoka Institute of Technology)