

# Tsukuba Workshop for Young Mathematician 2016

February 4–5, 2016

at Room No. 2, Tsukuba Center for Institutes  
Organized by Hiromi ISHII and Tomo MURAO

## Programme

Talk 15 mins  
Question 2 mins  
Rotation 3 mins

### Day 1, February 4th (Thu.)

09:10–09:15

**Opening**

#### Area 1: Geometry

09:15–09:35 **Satoshi ABE** (阿部諭)

Warped Products of Gromov Hyperbolic Metric Spaces (グロモフ双曲距離空間の捩れ積)

09:35–09:55 **Yusuke ARAI** (荒井佑介)

Maximal antipodal subgroups of Spinor groups (スピノル群の極大対蹠部分群)

09:55–10:15 **Eri TOBITA** (飛田英里)

Dirichlet boundary problems related to Willmore surfaces of revolution  
(Willmore 回転曲面に関する Dirichlet 境界値問題)

10:15–10:30

**Small Break**

10:30–10:50 **Yoshiki IGATA** (井形義紀)

Geometric properties of inverse limits using logistic family on the closed interval  $[0, 1]$   
(閉区間  $[0, 1]$  上のロジスティックファミリーを用いた逆極限の幾何学的性質について)

10:50–11:10 **Tomo MURAO** (村尾智)

On the Artin theorem for handlebody-braids with bind maps  
(bind map とハンドル体組み紐に対するアルティンの定理について)

11:10–11:30 **Zeng Haozhi** (曾昊智, そうこうち)<sup>\*1)</sup>

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<sup>\*1)</sup> Osaka City University

Betti numbers of toric origami manifolds

11:30–12:30

**Lunch Break**

## Area 2: Analysis

12:30–12:50 **Masashi OGUCHI** (大口将司)

Hedging of European derivatives (ヨーロッパ・デリバティブのヘッジング)

12:50–13:10 **Kazuki DOKI** (土岐一希)

Optimality of OLA stopping rule and application to the auction model

(OLA 停止規則の最適性とオークションモデルへの適用)

13:10–13:30 **Takahiro MATSUMOTO** (松本隆宏)

Monodromy at infinity of polynomial maps (多項式写像の無限遠点におけるモノドロミー)

13:30–13:45

**Small Break**

13:45–14:05 **Kanta ISHIGAKI** (石垣寛太)

On the Radon transform and a representation of the fundamental solution to the wave equation

14:05–14:25 **Masaki MIYATAKE** (宮武正希)

Error Estimates of a Pressure-Stabilized Characteristics Finite Element Scheme for Navier-Stokes Equations and numerical result

(圧力安定化特性曲線有限要素法によるナビエ・ストークス方程式の解の近似と数値実験)

14:25–14:45 **Eiji TAKAHASHI** (高橋瑛二)

On configurations of three points moving in Lissajous curve

(リサージュ曲線上を動く3点の配置について)

14:45–15:00

**Small Break**

## Area 3: Information Science

15:00–15:20 **Yuki EDURA** (江面友希)

SVM for High-Dimensional Data (高次元におけるSVM)

15:20–15:40 **Masamune NAGAO** (長尾昌宗)

A two-sample test for high-dimension, low-sample-size data

15:40–16:00 **Noriyuki HYODO** (兵藤紀幸)

## Day 2, February 5th (Fri.)

09:10–09:15

**Opening**

### Area 3: Information Science (cont.)

09:15–09:35 **Takenori KATO** (加藤丈典)

An efficient calculation of quantifier elimination with geometric invariants  
(幾何学的不変性を用いた限量子消去の効率的な計算)

09:35–09:55 **Takayuki KUNIHIRO** (國廣充之)

An extension and implementation of the White-Box algorithm in quantifier elimination  
(限量子消去における White-Box アルゴリズムの拡張と実装)

09:55–10:15 **Yumi WADA** (和田優未)

An automated deduction and its implementation for solving problems of sequence at university entrance examination  
(大学入試における数列の問題を解くための自動推論とその実装について)

10:15–10:50

**Small Break**

10:50–11:10 ~~Ryota KAKINUMA (柿沼亮太)~~ **CANCELED**

~~T.B.A.~~

11:10–11:30 ~~Yuki KOGO (向後友貴)~~ **CANCELED**

~~T.B.A.~~

11:30–11:50 **Masahiro TASAKI** (田崎雅裕)

Skew-q-gaussian distribution

11:50–13:10

**Lunch Break**

13:10–13:30 **Hiromi ISHII** (石井大海)

On Regularity Properties of Set of Reals and Inaccessible Cardinals (実数の集合の正則性と到達不能基数)

13:30–13:50 ~~Shuhei MATSUSHITA (松下周平)~~ **CANCELED**

~~A Model in Which Singular Cardinal Hypothesis Fails~~

13:50–14:05

**Small Break**

## Area 4: Algebra

14:05–14:25 **Yo OGAWA** (小川陽)

Elliptic curves over finite fields (有限体上の楕円曲線について)

14:25–14:45 **Naoki NOZAWA** (野澤直紀)

Elliptic Curve Cryptography and Lifting of Torsion point  
(楕円曲線暗号及び等分点の引き上げについて)

14:45–15:05 **Jeongwon MIN** (閔正媛, みんじょんうおん) <sup>\*2)</sup>

On Witten zeta functions and Witten  $L$ -functions  
(ウィッテンゼータ関数とウィッテン  $L$ -関数について)

15:05–15:25 **Yoshifumi NAKAURA** (中浦嘉文)

Length of radical layers having infinite projective dimension and its extension  
(無限射影次元を持つ radical layers の長さとその拡張)

15:25–15:45 **Jun MASUTANI** (舩谷淳)

$G$ -equivariant Tannaka reconstruction theorem (同変淡中再構成定理について)

15:45–15:50

**Closing**

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<sup>\*2)</sup> Tokyo Institute of Technology