#### 2019

## 代数幾何学シンポジウム

### 記録

- 2019年度科学研究費補助金 基盤研究(S) (課題番号 15H05738、代表 金銅誠之)
- 2019年度科学研究費補助金 基盤研究 (S) (課題番号 16H06337、代表 高橋篤史)
- 2019年度科学研究費補助金 基盤研究 (S) (課題番号 17H06127、代表 齋藤政彦)

於 城崎国際アートセンター (2019 年 10 月 21 日~10 月 25 日)

## Index

Program
Hideo Kojima (Niigata University)
Some results on open algebraic surfaces of logarithmic Kodaira
dimension zero
Masaru Nagaoka (University of Tokyo)
Compactifications of affine homology 3-cells into quadric fi-
brations
Shihoko Ishii (Tsinghua University/University of Tokyo) A description of divisors by arcs and its applications 2
Joonyeong Won (Korea Institute for Advanced Study)
Sasaki-Einstein rational homology 5-spheres
Takuzo Okada (Saga University)
Birationally superrigid Fano threefolds of codimension 4 3
Ken-ichi Yoshikawa (Kyoto University)
Enriques $2n$ -folds and analytic torsion - a summary 4
Gregory Kumar Sankaran (University of Bath)
Locally symmetric varieties and holomorphic symplectic man-
ifolds
Takayuki Koike (Osaka City University)
Gluing construction of K3 surfaces and complex analysis on a
neighborhood of a complex submanifold 6
Ivan Cheltsov (University of Edinburgh)
Tutorial on local intersection inequalities
Hirokazu Nasu (Tokai University)
Obstructions to deforming curves on an Enriques-Fano 3-fold . 8
Adrien Dubouloz (Université de Bourgogne)
$\mathbb{A}^1$ -cylinders over smooth $\mathbb{A}^1$ -fibered affine surfaces 9
Tatsuro Kawakami (The University of Tokyo)
Bogomolov-Sommese type vanishing on globally $F$ -regular three-
folds
Yusuke Sato (The University of Tokyo)
Multi-dimensional continued fractions for Gorenstein cyclic quotient singularities
Yuri Shimizu (Tokyo institute of technology) Relative $A^1$ -homology and its applications
relative A -hollology and its additions

Takanori Nagamine (Niigata University) A note on retracts of polynomial rings in three variables 10	07
Yuki Tsutsui (The University of Tokyo) Radiance obstructions of tropical Kummer surfaces and their quotients	08
Shou Yoshikawa (The University of Tokyo)  Kawaguchi-Silverman conjecture on smooth rationally connected varieties admitting an int-amplified endomorphism 10	09
Yusuke Yoshida (Hiroshima University) Curves whose automorphism groups are $A_6$	10
Toshi Sugiyama (Gifu Pharmaceutical University)  The Moduli Space of Polynomial Maps and Their Fixed-Point  Multipliers	11
Hiroto Akaike (Osaka University) Slope inequalities for irregular cyclic covering fibrations 12	12
Tomoya Ohnishi (Kyoto University)  Arakelov geometry over a trivially valued field	13
Keisuke Miyamoto (Osaka University)  The Sarkisov program on log surfaces	14
Riku Kudou (Waseda University) Generalized Zariski cancellation problem and principal $\mathbb{G}_a$ bundles over prevarieties	15
Rikito Ohta (Osaka University) Seshadri constants of non-principal abelian varieties 12	16
Niklas Lemcke (Waseda University)  Duality for Witt sheaves	17
Yuta Kambe (Saitama University)  Computable Bialynicki-Birula decomposition of the Hilbert scheme	18
Takahiro Nagaoka (Kyoto university)  The universal cover of hypertoric varieties and Bogomolov's decomposition	19
Taiki Takatsu (Tokyo Institute of Technology)  On the geometry of singular K3 surfaces with discriminant 3,  4 and 7	20
Yuto Yamamoto (IBS Center for Geometry and Physics) Periods of tropical Calabi-Yau hypersurfaces	21

# Kinosaki Algebraic Geometry Symposium 2019 (Revised)

Date : 2019 October 21 (Mon) – 2019 October 25 (Fri)

Venue : Kinosaki International Arts Center

: (Yushima 1062, Kinosaki, Toyo-oka, Hyogo 669-6101) Phone : +81-796-32-3888 (Tsutaya-Seirantei : +81-796-32-2511)

#### Program

Oct. 22 (Tue)	
$9:30 \sim 10:30$	Hideo Kojima (Niigata University) Some results on open algebraic surfaces of logarithmic Kodaira dimension zero
$10:45 \sim 11:45$	Masaru Nagaoka (University of Tokyo) Compactifications of affine homology 3-cells into quadric fibrations
$13:30 \sim 14:30$	Shihoko Ishii (Tsinghua University/University of Tokyo) A description of divisors by arcs and its applications
$14:45 \sim 15:45$	Joonyeong Won (Korea Institute for Advanced Study) Sasaki-Einstein metrics on simply connected rational homology 5-spheres
$16:00 \sim 17:00$	Poster session
$18:00 \sim 20:00$	Banquet
Oct. 23 (Wed)	
$9:15 \sim 10:15$	Takuzo Okada (Saga University) Birationally superrigid Fano threefolds of codimension 4
$10:30 \sim 11:30$	Ken-ichi Yoshikawa (Kyoto University) Enriques $2n$ -folds and analytic torsion
$12:00 \sim 17:00$	Free discussion

## Oct. 24 (Thu)

 $9:15 \sim 10:15$  Gregory Kumar Sankaran (University of Bath) Locally symmetric varieties and holomorphic symplectic manifolds

 $10:30 \sim 11:30$  Shigefumi Mori (Kyoto University Institute for Advanced Study) Extremal contractions of 3-folds with fiber dimension 1

 $13:30 \sim 14:30$  Takayuki Koike (Osaka City University) Gluing construction of K3 surfaces and complex analysis on a neighborhood of a complex submanifold

 $14:45 \sim 15:45$  Ivan Cheltsov (University of Edinburgh) Local (intersection) inequalities

 $16:00 \sim 17:00$  Hirokazu Nasu (Tokai University) Obstructions to deforming curves on an Enriques-Fano 3-fold

Oct. 25 (Fri)

 $8:50 \sim 9:50$  Adrien Dubouloz (Université de Bourgogne)  $\mathbb{A}^1$ -cylinders over smooth affine surfaces of negative Kodaira dimension

Trains from Kinosaki Station

 $10{:}39$ : Kinosaki12 bound for Kyoto Station

11:33 : Konotori 14 bound for Shin-Osaka Station

12:32 : Kinosaki 16 bound for Kyoto Station

The symposium is partially supported by Grant-in-Aid for Scientific Research (S) 15H05738, (S) 16H06337, and (S) 17H06127.

::: Organizers :::

Hiraku Kawanoue (Chubu University)

Takashi Kishimoto (Saitama University)

Shingo Taki (Tokai University)