The 7th Graduate Student Workshop on Mathematics

PROGRAM

Monday 22 July
(Every talk is expected to be of 15 minute length.)

13:50–14:00 Opening
14:00–15:30 Chairperson: Seiichi Kamada
1. Tatsuya Horiguchi (Osaka City University, D1)
   Introduction of Springer variety
2. Sungwon Kwon (Kyungpook National University, M1)
   The normal braid presentation of an \( n \)-twist spun trefoil
3. Miho Hatanaka (Osaka City University, D1)
   Uniqueness of the direct decomposition of toric manifolds
4. Jieon Kim (Pusan National University, D1)
   Twisted Alexander polynomials of periodic knots with rational quotients
5. Yusuke Suyama (Osaka City University, M1)
   Transition functions of Grassmann manifolds

15:30–16:00 Thirty minute break

16:00–17:30 Chairperson: Sang Youl Lee
6. Gyu Jong Kim (Kyungpook National University, M2)
   Invariancy of the Ricci tensor in complex two-plane Grassmannians
7. Mikio Furokawa (Hiroshima University, D1)
   Ford domains of quasi-fuchsian once-punctured Klein bottle groups
8. Yewon Joung (Pusan National University, D3)
   A construction of ideal coset invariants for surface-links in \( \mathbb{R}^4 \)
9. Kengo Kawamura (Osaka City University, D1)
   On seven types of Roseman moves
10. Seongjeong Kim (Kyungpook National University, M2)
    A relationship between two different quotient structure on the Takasaki quandle
Tuesday 23 July
(Every talk is expected to be of 15 minute length.)

14:00–14:30 Chairperson: Hirotaka Akiyoshi

1. Hyungjoon Yang (Gyeonggi Science High School)
   Links of the flat plumbing basket number 4 or less

2. Yun Ki Chung (Gyeonggi Science High School)
   The flat plumbing basket number of knots with 6 crossings or less

14:30–15:00 Thirty minute break

15:00–16:30 Chairperson: Myoungsoo Seo

3. Yuta Ogata (Kobe University, M2)
   The transformation theory of surfaces in Lie geometry

4. Dong Soo Lee (Pusan National University, M2)
   The parity writhe polynomials for (flat) virtual knots

5. Megumi Sano (Osaka City University, M1)
   On the Newton potential of a uniformly continuous function

6. Minjung Seo (Kyungpook National University, D3)
   On some connections between adjacency operators and infinite directed graphs

7. Mayu Tsukamoto (Osaka City University, M1)
   Global dimensions of quasi hereditary algebras

16:30–17:00 Thirty minute break

17:00–18:30 Chairperson: Dongseok Kim

8. Hyung-rok Jo (Pusan National University, M2)
   On $p$-semisimplicity of Cayley graphs

9. Kohei Tanaka (Osaka City University, M1)
   A duality theorem in Functional Analysis – an application of Hahn-Banach Theorem –

10. Hye Yeong Yun (Kyungpook National University, D2)
    Some properties of quasi-$A(n, k)$ class operators

11. Daisuke Naimen (Osaka City University, D1)
    Positive solutions of Kirchhoff type elliptic equations involving a critical Sobolev exponent
Wednesday 24 July
(Every talk is expected to be of 15 minute length.)

14:00–15:30 Chairperson: Seiichi Kamada

1. Jieon Hong (Pusan National University, D3)
   Invariants for long virtual knots via the parity

2. Masato Hashizume (Osaka City University, M1)
   Differentiation of Radon measures on $\mathbb{R}^n$

3. Woosik Jeong (Kyungpook National University, M2)
   The colorability of theta-curve by $\mathbb{Z}_2$-family of quandles $(\mathbb{Z}_3;\{*,_0,*_1\})$

4. Yuta Tanaka (Osaka City University, M1)
   Euler-Maruyama scheme for SDE

5. Sunho Lee (Pusan National University, D3)
   Parities and invariants for virtual links

15:30–16:00 Thirty minute break

16:00–17:30 Chairperson: Young Ho Im

6. Koshiro Wada (Hiroshima University, D2)
   Quandles of cyclic type on finite fields

7. Joo Young Jin (Kyungpook National University, D2)
   On Hamburger moment sequences of weighted shifts

8. Satoshi Matsumura (Osaka City University, M1)
   Goeritz invariant of a link

9. Su Kyung Han (Pusan National University, D2)
   Bergman-Sobolev spaces with exponential weight on the unit disc

10. Kota Takahashi (Osaka City University, M1)
    Signature of a knot
Thursday 25 July
(Every talk is expected to be of 15 minute length.)

14:00–15:30 Chairperson: Taizo Kanenobu

1. Seonmi Choi (Kyungpook National University, M2)
   Surface links which are coverings over the standard Projective plane

2. Atsuhiro Hayashi (Osaka City University, M2)
   Bruhat ordering of Coxeter system

3. Sang-hyup Seo (Pusan National University, D2)
   Newton’s method for solving a QME with special coefficient matrices

4. Haozhi Zeng (Osaka City University, D1)
   Toric origami manifolds and quasitoric manifolds

5. Seung Jun Lee (Kyungpook National University, M2)
   Error corrected method for pricing American options under Merton Jump-diffusion model

15:30–16:00 Thirty minute break

16:00–17:30 Chairperson: Yongju Bae

6. Hideya Kuwata (Osaka City University, D1)
   Toric ideal and toric variety

7. Anna Park (Pusan National University, M2)
   Mathematical modeling on Inflammatory Bowel Disease

8. Takahiro Miura (Kobe University, D3)
   On relationships between canonical genus and flat Seifert surfaces

9. Munseok Kim (Kyungpook National University, D3)
   A note on obesity as epidemic in Korea

10. Megumi Hashizume (Nara Women’s University, M2)
    Coset decomposition by images of homomorphisms induced by region crossing change on 3-component link diagrams

Friday 26 July

11:45–12:00 Awards ceremony