

International Workshop on Knot Theory for Scientific Objects

speaker affiliation [chairperson]
talk-title

8 March WEDNESDAY

09:00–09:50 De Witt Sumners (Florida State University) [Akio Kawauchi]
Spiral Waves in Excitable Media

10:10–11:00 Alexander Vologodskii (New York University) [Tetsuo Deguchi]
Studying Enzymatic Reactions which Change DNA Topology

11:20–12:10 Mariel Vazques (San Francisco State University) [Tetsuo Deguchi]
Tangle Analysis of the Mu Transposome

Lunch

13:40–14:30 Ki Hyoung Ko (KAIST) [Taizo Kanenobu]
A Fast Algorithm for the Conjugacy Problem on Generic Braids

14:50–15:40 Kouki Taniyama (Waseda University) [Taizo Kanenobu]
Regular Projections of Knots, Links and Spatial Graphs

16:00–16:50 Erica Flappan (Pomona College) [De Witt Sumners]
(Joint work with Dorothy Buck)
A Model of DNA Knotting and Linking

9 March THURSDAY

09:00–09:50 Jonathan Simon (University of Iowa) [Makoto Sakuma]
(Joint work with Gregory Buck)
Unified Theory of Filament Entanglement

10:10–11:00 Ayumu Sugita (Osaka City University) [Kouki Taniyama]
Quantum and Topological Entanglement

11:20–12:10 Tetsuo Deguchi (Ochanomizu University) [Ki Hyoung Ko]
*Scattering Function and Correlation Function of Random Knots:
An Application of Knot Theory to Polymer Physics*

Lunch

13:40–14:00 Javier Arsuaga (San Francisco State university) [Ki Hyoung Ko]
*DNA Knotting under Geometrical Constrains:
Organization of DNA in Phage Capsids*

14:10–14:30 Xia Hua (St. John's College, Hong Kong) [Ki Hyoung Ko]
*Random Transition of Knots:
A First Step towards Modelling Unknotting by Type II Topoisomerases*

14:50–15:10 Ichiro Torisu (Naruto University of Education) [Makoto Sakuma]
On 2-Adjacency Relation of Two-Bridge Knots and Links

15:20–15:40 Umeda Saki and Kobayashi Tsuyoshi (Nara Women's University) [Makoto Sakuma]
Realizing Pseudo-Anosov Egg Beaters with Simple Mechanisms

16:00–16:50 Jun O'Hara (Tokyo Metropolitan University) [Akio Kawauchi]
Möbius Geometry of the Set of Spheres

10 March FRIDAY

09:00–09:50 Yuanan Diao (UNC Charlotte) [Yasutaka Nakanishi]
The Ropelengths of Physical Knots

10:10–11:00 Andrej Stasiak (Université de Lausanne) [Jonathan Simon]
Natural Classification of Knots

11:20–12:10 Roger Fenn (University of Sussex) [Jonathan Simon]
*Extending the Alexander Polynomial of Knots
using Algebras Derived from Mathematics and Physics*

Lunch

13:40–14:00 Madeti Prabhakar (Harish-Chandra Research Institute) [Yasutaka Nakanishi]
Minimal Degree Sequence for Torus Links

14:10–14:30 Thomas Fleming (University of California, Berkeley) [Yasutaka Nakanishi]
(Joint with Blake Mellor (Loyola Marymount University))
Virtual Spatial Graph Theory

14:50–15:10 Ryo Nikkuni (Kanazawa University) [Kouki Taniyama]
Completely Distinguishable Projections of Spatial Graphs

15:20–15:40 Hiromasa Moriuchi (Osaka City University) [Kouki Taniyama]
A Table of Handcuff Graph with up to Seven Crossings

16:00–16:20 Youngsik Huh (Hanyang University) [De Witt Sumners]
The Stick Numbers of Lattice Knots

16:30–16:50 Akio Kawauchi (Osaka City University) [De Witt Sumners]
A Knot Model in Psychology