
Group 3 :

Expansivity of suspension flows

- Speaker : Bomi Shin (AORC Group 3)
- Abstract : In this talk, we study suspension flows for a homeomorphism on a metric space. We construct a kind of suspension for homeomorphisms on metric spaces in which singularities are allowed. Moreover, we introduce some results on various expansiveness for suspension flows.

[1] Bomi Shin, Expansivity of singular suspension flows. Preprint.

AORC Monthly Seminar

Mar. 26 (Fri), 2021 @ AORC (Online)

AORC Monthly Seminar

- Object : Active collaboration within and between groups, fitting the aim of SRC
- Plan : Newly-joined researchers take pivotal roles.
- Operations Committee :
 - Jang Soo Kim (Committee Chair, Principal professor)
 - Bumtlee Kang (Group 1), Juyoung Jeong (Group 2), Myunghyun Jung (Group 3)
- The Monthly Seminar of the next month will be replaced by 2021 KMS Spring Meeting.

Program

- 2:00 - 2:50 pm : Muralitharan Krishnan (AORC Group 2) & discussion
- 3:00 - 3:50 pm : Bomi Shin (AORC Group 3) & discussion
- 4:00 - 4:50 pm : Alexander Tsarev (AORC Group 1) & discussion

Abstracts

Group 1 :

Monoids, operads, and classes of algebraic systems

- Speaker : Aleksandr Tsarev (AORC Group 1)
- Abstract : Often, unary and binary operations are considered, since it is easier to work with them. However, in connection with the needs of combinatorics, a technique for working with operations of greater arity is introduced. For instance, we can mention here Operad Theory (the theory of clones of multilinear operations) and algebras over operads (so-called multioperator algebras). An operad is an algebraic tool that encodes a type of algebras. Instead of studying the properties of a particular algebra, we focus on the universal operations that can be performed on the elements of any algebra of a given type. The information contained in an operad consists of these operations and all the ways of composing them. Some open problems linked to classes of multioperator algebras associated with operads are discussed.

Group 2 :

Reinforcement Learning-based Route Optimization Approach for WSNs and IoT Applications

- Speaker : Muralitharan Krishnan (AORC Group 2)
- Abstract : Energy is one of the most critical resources for WSNs and IoTs that decides the network lifetime of the network. In many circumstances, WSNs and IoTs consume more energy for data transmission, reception, and forwarding operations. To increase the network lifetime by implementing the latest research models to reduce the deployment and operational cost. Most of the existing methods of learning require massive data with feature engineering and so it increases the learning complexity. In this talk, a reinforcement learning-based approach to route optimization for WSNs and IoTs is to be addressed in order to overcome these issues.