

Third Workshop on Digitalization: online, June 28 - July 2, 2021, Novosibirsk and Kazan, Russia

The main goals of the WDCM workshop series include:

- Providing a venue for leading researchers in computability theory and computer science to meet and discuss the latest trends in their areas.
- Providing an opportunity for younger researchers to present their work.
- Encouraging joint projects of interdisciplinary nature.

WDCM-2021 is organized by [Sobolev Institute of Mathematics](#) (Novosibirsk) and [Kazan Federal University](#).

[The recordings of the talks.](#)

- [Paul-Elliot Anglès d'Auriac](#) (ENSIMAG, Grenoble, France)

The computable strength of Milliken's Tree Theorem and applications. [\[abstract\]](#) [\[slides\]](#)

- [Vasco Brattka](#) (Universität der Bundeswehr München, Germany)

Duality in Weihrauch complexity [\[abstract\]](#) [\[slides\]](#)

- [Ekaterina Fokina](#) (Technische Universität Wien, Austria)

Bi-embeddability and computable structures [\[abstract\]](#) [\[slides\]](#)

- [Noam Greenberg](#) (Victoria University of Wellington, New Zealand)

A dynamic taxonomy of Borel Wadge classes [\[abstract\]](#) [\[slides\]](#)

- [Mathieu Hoyrup](#) (LORIA, France)

Descriptive complexity of topological invariants [\[abstract\]](#) [\[slides\]](#)

- [Takayuki Kihara](#) (Nagoya University, Japan)

Lawvere-Tierney topologies for computability theorists [\[abstract\]](#) [\[slides\]](#)

- [Margarita Korovina](#) (A.P. Ershov Institute of Informatics Systems, Russia)

The ksmt for solving non-linear constraints [\[abstract\]](#)

- [Karen Lange](#) (Wellesley College, USA)

Complexity of root-taking in power series fields & related problems [\[abstract\]](#) [\[slides\]](#)

- [Keng Meng Ng](#) (Nanyang Technological University, Singapore)

Are the rationals dense? [\[abstract\]](#)

- [André Nies](#) (University of Auckland, New Zealand)

Duality between topological groups and approximation groupoids [\[abstract\]](#) [\[slides\]](#)

- [Alexander Okhotin](#) (Saint Petersburg State University, Russia)

Recent studies on formal languages over $GF(2)$ [\[abstract\]](#) [\[slides\]](#)

- [Ludovic Patey](#) (Institut Camille Jordan, Lyon, France)

Classifications of Ramsey-like theorems [\[abstract\]](#) [\[slides\]](#)

- [Arno Pauly](#) (Swansea University, UK)

A computable analysis perspective on (verified) machine learning [\[abstract\]](#) [\[slides\]](#)

- [Svetlana Selivanova](#) (KAIST, Republic of Korea)

Complexity classification of linear partial differential equations [\[abstract\]](#) [\[slides\]](#)

- [Alexei Semenov](#) (Lomonosov Moscow State University, Russia)

Definability theory. Geometry view and open problems [\[abstract\]](#) [\[slides\]](#)

- [Alexander Shen](#) (LIRMM, France)

Automatic complexity, normality and finite-state dimension revisited [\[abstract\]](#) [\[slides\]](#)

- [Mariya Soskova](#) (University of Wisconsin–Madison, USA)

The e-verse [\[abstract\]](#) [\[slides\]](#)

- [Frank Stephan](#) (National University of Singapore, Singapore)

A survey of the structures realised by positive equivalence relations [\[abstract\]](#) [\[slides\]](#)

- [Linda Westrick](#) (Pennsylvania State University, USA)

Existential properties in algebraic extensions of the rationals [\[abstract\]](#) [\[slides\]](#)

- [Martin Ziegler](#) (KAIST, Republic of Korea)

Logic in Computer Science for Continuous Data [\[abstract\]](#)