Lomonosov Moscow State University

Faculty of Mechanics and Mathematics

(Department of Mathematical Logic and Theory of Algorithms)

- Valery Plisko (constructive logics)
- Vladimir Krupski (logics of proofs)
- Tatiana Yavorskaya (provability logics)

Faculty of Computational Mathematics and Cybernetics

- Vladimir Zakharov (model checking)
- Igor Konnov (model checking)
- Petr Bulychev (model checking)

Intuitionistic logic
(Brouwer, Kolmogorov, Heyting)

A sentence A is true iff it has a verification ("a proof").

Recursive realizability (Kleene),
constructive logic (Markov)

Verifications are coded by natural numbers.

Verifications of $A \to B$ are (the codes of) programs.

Plisko: Development of the predicate constructive logic based on the notion of recursive realizability and its generalizations.

Primitive recursive realizabilities (Damnjanovic, Salehi)

Verifications of $A \to B$ are primitive recursive functions.

Basic logic (Visser)

A more strict meaning of implication.

Plisko: Study of the relations between intuitionistic and basic logics on the one hand and various versions of primitive recursive realizability on the other.

Gödel: an interpretation of propositional intuitionistic logic in the modal logic S4.

$\Box$ as provability.

The Gödel – Löb logic of provability.

An implicit character of a verification.

Artemov's Logic of Proofs LP.

Krupski: Functional Logic of Proofs FLP.