▶ SERGEY SUDOPLATOV, *Classification of countable models of complete theories and its applications.*

Sobolev Institute of Mathematics, Novosibirsk, Russia; Novosibirsk State Technical University, Novosibirsk, Russia; Novosibirsk State University, Novosibirsk, Russia.
E-mail: sudoplat@math.nsc.ru. http://math.nsc.ru/∼sudoplatov/.

We consider a survey of results on classification of countable models of complete theories [1] in terms of Rudin–Keisler preorders, distributions of limit and other countable models, as well as their applications to simple theories [2], quite o-minimal theories [3, 4] and disjoint unions of theories with few countable models [5].

We use this general approach studying combinations of structures [6], families of theories, their closures [7], e-spectra [8], ranks and related characteristics [9, 10], as well as dynamics under natural operations. We apply the general context to the class of theories of abelian groups [11].

[1] S.V. SUDOPLATOV, **Classification of countable models of complete theories: monograph in two parts**, Novosibirsk, Edition of NSTU, 2018. 326 + 394 pp.

[2] B.S. BAIZHANOV, S.V. SUDOPLATOV, V.V. VERBOVSKIY, *Conditions for non-symmetric relations of semi-isolation*, **Siberian Electronic Mathematical Reports**, vol. 9 (2012), pp. 161–184.

[3] B.Sh. KULPESHOV, S.V. SUDOPLATOV, *Vaught's conjecture for quite o-minimal theories*, **Annals of Pure and Applied Logic**, vol. 168, issue 1 (2017), pp. 129–149.

[4] B.Sh. KULPESHOV, S.V. SUDOPLATOV, *Distributions of countable models of quite o-minimal Ehrenfeucht theories*, **Eurasian Mathematical Journal** (to appear). arXiv:1802.08078v1 [math.LO], 2018, 13 pp.

[5] S.V. SUDOPLATOV, *On distributions of countable models of disjoint unions of Ehrenfeucht theories*, **Russian Mathematics**, vol. 62, no. 11 (2018), pp. 76–80.

[6] S.V. SUDOPLATOV, *Combinations of structures* , **The Bulletin of Irkutsk State University. Series "Mathematics"**, vol. 24 (2018), pp. 65–84.

[7] S.V. SUDOPLATOV, *Closures and generating sets related to combinations of structures*, **The Bulletin of Irkutsk State University. Series "Mathematics"**, vol. 16 (2016), pp. 131–144.

[8] S.V. SUDOPLATOV, *Relative e-spectra and relative closures for families of theories*, **Siberian Electronic Mathematical Reports**, vol. 14 (2017), pp. 296–307.

[9] N.D. MARKHABATOV, S.V. SUDOPLATOV, *On ranks for families of all theories of given languages*, **International Conference "Mal'tsev Meeting", November 19–22, 2018, Collection of Abstracts**, Novosibirsk: Sobolev Institute of Mathematics, Novosibirsk State University, 2018, p. 213.

[10] S.V. SUDOPLATOV, *On ranks for families of theories and their spectra*, **International Conference "Mal'tsev Meeting", November 19–22, 2018, Collection of Abstracts**, Novosibirsk: Sobolev Institute of Mathematics, Novosibirsk State University, 2018, p. 216.

[11] I.I. PAVLYUK, S.V. SUDOPLATOV, *Families of theories of abelian groups and their closures*, **Bulletin of the Karaganda University. Mathematics Series**, vol. 92, no. 4 (2018).