

CURRICULUM VITAE of

Ivan Gudoshnikov, PhD

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PERSONAL INFORMATION:

First name: Ivan

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EXPERIENCE:

Aug 2020 — Dec 2020 **Postdoctoral Research Scholar**, Arizona State University, USA. Collaboration with Dr. Yang Jiao and his Complex Materials Lab:
<https://sites.google.com/view/complexmateriallab>.

EDUCATION:

2014 – 2020 **PhD in Mathematics**, The University of Texas at Dallas, USA. Advisor: Prof. O. Makarenkov. Teaching Assistantship, Research Assistantship supported by Prof. Makarenkov's NSF CMMI-1436856 and CMMI-1916876 grants.

2012 – 2014 PhD student, Mathematics, Voronezh State University, Russia. Supervisor: Prof. M. I. Kamenskii. Teaching assistantship.

2010 – 2012 **MS in Mathematics**, Voronezh State University, Russia. Thesis Supervisor: Prof. M. I. Kamenskii.

2006 – 2010 **BS in Mathematics**, Voronezh State University, Russia. Undergraduate Thesis Supervisor: Prof. M. I. Kamenskii.

PUBLICATIONS:

- [1] **Gudoshnikov I.**, Makarenkov O. *Stabilization of the response of cyclically loaded lattice spring models with plasticity*. Accepted to ESAIM:COCV, preprint: <https://doi.org/10.1051/cocv/2020043>
- [2] **Gudoshnikov I.**, Kamenskii M., Makarenkov O., Voskovskaia N. *One-period stability analysis of polygonal sweeping processes with application to an elastoplastic model*. Math. Model. Nat. Phenom., 15 (2020) 25. <https://doi.org/10.1051/mmnp/2019030>
- [3] **Gudoshnikov I.**, Makarenkov O. *Structurally stable families of periodic solutions in sweeping processes of networks of elastoplastic springs*. Phys. D 406 (2020), 132443. <https://doi.org/10.1016/j.physd.2020.132443>
- [4] Wadippuli Achchige L. N., Makarenkov O., **Gudoshnikov I.** *Global asymptotic stability of non-convex sweeping processes*. Discrete Contin. Dyn. Syst. Ser. B, (2020) 25 (3) : 1129-1139. <https://doi.org/10.3934/dcdsb.2019212>
- [5] Kamenskii, M., **Gudoshnikov I.** *On the stability of perturbed semigroups in partially ordered Banach spaces*. J. Math. Sci. (N.Y.) 233 (2018), no. 6, 853–874. <https://doi.org/10.1007/s10958-018-3970-2>
- [6] **Gudoshnikov I.**, Kamenskii M., Nistri P. *Exponential stability of positive semigroups in Banach spaces*. J. Math. Anal. Appl. 429 (2015), no. 2, 833–848. <https://doi.org/10.1016/j.jmaa.2015.04.041>
- [7] **Gudoshnikov I.** *On the Truchet tiles and coverings*. Proceedings of the Department of Mathematics of Voronezh State University, 11 (2007) 49-68. (in Russian)

RESEARCH INTERESTS:

Nonsmooth Dynamical Systems, Moreau's Sweeping Process, Elastoplasticity, Stability Theory, Graph Theory, Contact Dynamics, Semigroups in Banach spaces, Ordered Banach spaces.

AWARDS AND ADDITIONAL EDUCATION:

- The 2nd Annual Meeting of the SIAM Texas Louisiana Section travel support, 2019
- SIAM Conference on Mathematical Aspects of Materials Science travel award, 2018
- Betty and Gifford Johnson Scholarship, 2017
- SIAM TX-LA travel grant for TAMES 2017
- A scholarship by "Informsvyaz" communications company awarded for winning a contest of projects in programming, 2012, Voronezh, Russia
- Certificate of training in embedded systems software development by DSR and OTSL companies, 2012, Voronezh, Russia
- Participant of XI Winter Diffiety School, 2011, Saint Petersburg, Russia
- Additional qualification "Network engineering and administration of information systems", Voronezh State University, Russia, 2009-2011.