

LIST OF PUBLICATIONS

- M18. S. Almi, M. Kružík, and A. Molchanova. Linearization in Magnetoelasticity. *Preprint arXiv*, 2024. <https://arxiv.org/abs/2401.09586>
- M17. A. Doležalová, S. Hencl, and A. Molchanova. Weak limit of homeomorphisms in $W^{1,n-1}$: invertibility and lower semicontinuity of energy. *ESAIM: Control, Optimisation and Calculus of Variations*, **30** (2024), 37. <https://doi.org/10.1051/cocv/2024006>
- M16. A. Doležalová and A. Molchanova. Differentiability almost everywhere of weak limits of bi-Sobolev homeomorphisms. To appear *Pure and Applied Functional Analysis* (2023). <https://arxiv.org/abs/2302.07578>
- M15. S. Almi, S. Krömer, and A. Molchanova. A new example for the Lavrentiev phenomenon in Nonlinear Elasticity. *Zeitschrift für Angewandte Mathematik und Physik*, **75**, 2 (2024). <https://doi.org/10.1007/s00033-023-02132-4>
- M14. S. Vodopyanov and A. Molchanova. Boundary correspondence of $\mathcal{Q}_{q,p}$ -homeomorphisms. *Izvestiya: Mathematics*, **87**:4 (2023), 683–725. <https://doi.org/10.4213/im9376e>
- M13. E. Davoli, A. Molchanova, and U. Stefanelli. Equilibria of charged hyperelastic solids. *SIAM J. Math. Anal.* **54**:2 (2022), 1470–1487. <https://doi.org/10.1137/21M1413286>
- M12. A. Molchanova, T. Roskovec, and F. Soudský. Regularity of the inverse mapping in Banach function spaces. *Math. Nachr.* **294**:12 (2021), 2382–2395. <https://doi.org/10.1002/mana.201900374>
- M11. A. Menovschikov, A. Molchanova, and L. Scarpa. An extended variational theory for nonlinear evolution equations via modular spaces. *SIAM J. Math. Anal.*, **53**:4 (2021), 4865–4907. <https://doi.org/10.1137/20M1385251>
- M10. P. Jain, A. Molchanova, M. Singh, and S. Vodopyanov. On grand Sobolev spaces and pointwise description of Banach function spaces. *Nonlinear Anal.*, 202 (2021), 112100. <https://doi.org/10.1016/j.na.2020.112100>
- M9. O. Bouchala, S. Hencl, and A. Molchanova. Injectivity almost everywhere for weak limits of Sobolev homeomorphisms. *J. Funct. Anal.* **279**:7 (2020), 108658. <https://doi.org/10.1016/j.jfa.2020.108658>
- M8. A. O. Molchanova and S. K. Vodopyanov. Injectivity almost everywhere and mappings with finite distortion in nonlinear elasticity. *Calc. Var. Partial Differential Equations* **59**, 17 (2020). <https://doi.org/10.1007/s00526-019-1671-4>
- M7. L. Klepřík, A. Molchanova, and T. Roskovec. Example of a smooth homeomorphism violating the Lusin \mathcal{N}^{-1} condition. *Sib. Math. J.* **60**:5 (2019), 886–895. <https://doi.org/10.1134/S0037446619050100>
- M6. A. Molchanova. A note on continuity of minors in grand Lebesgue spaces. *J. Fixed Point Theory Appl.* **21**, 49 (2019). <https://doi.org/10.1007/s11784-019-0686-y>
- M5. F. Soudský, A. Molchanova, and T. Roskovec. Interpolation between Hölder and Lebesgue spaces. *J. Math. Anal. Appl.* **466**:1 (2018), 160–168. <https://doi.org/10.1016/j.jmaa.2018.05.067>
- M4. A. O. Molchanova. A variational approximation scheme for the elastodynamic problems in the new class of admissible mappings. *Sib. J. Pure and Appl. Math.* **16**:3 (2016), 55–60 (Rus). <https://doi.org/10.17377/PAM.2016.16.305>

- M3. S. K. Vodop'yanov and A. O. Molchanova. Lower semicontinuity of mappings with bounded $(\theta, 1)$ -weighted (p, q) -distortion. *Sib. Math. J.* **57**:5 (2016), 778–787.
<https://doi.org/10.1134/S0037446616050062>
- M2. S. K. Vodop'yanov and A. O. Molchanova. Variational problems of nonlinear elasticity in certain classes of mappings with finite distortion. *Dokl. Math.* **92**:3 (2015), 739–742.
<https://doi.org/10.1134/S1064562415060320>
- M1. S. K. Vodop'yanov and A. O. Molchanova. Stokes' theorem for differential forms of an arbitrary summability. *Bulletin of Kemerovo State University*, 2011, **3**:1, 239–243 (Rus).

THESES

- A. O. Molchanova.
Mappings with finite distortion and their applications in elasticity theory.
PhD Thesis Novosibirsk, 2016 (Rus.)
- A. O. Molchanova.
Solution of variational problems in certain classes of mappings with finite distortion
Master Thesis Novosibirsk, 2013 (Rus.)
- A. O. Molchanova.
The Stokes theorem and the Poincare inequality for Sobolev-type differential forms
Bachelor Thesis Novosibirsk, 2011 (Rus.)