

LIST OF PUBLICATIONS OF JOHANNA MICHOR

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RESEARCH MONOGRAPH

1. F. Gesztesy, H. Holden, J. Michor, and G. Teschl, *Soliton Equations and Their Algebraic-Geometric Solutions. Volume II: (1+1)-Dimensional Discrete Models*, Cambridge Studies in Advanced Mathematics, Volume **114**, Cambridge University Press, Cambridge, 2008, 450 pages.

PUBLICATIONS IN REFEREED JOURNALS AND PROCEEDINGS

1. “Reconstructing Jacobi matrices from three spectra”, with G. Teschl, in “Spectral Methods for Operators of Mathematical Physics”, J. Janas, P. Kurasov, and S. Naboko (eds.), 151–154, *Oper. Theory Adv. Appl.* **154**, Birkhäuser, Basel, 2004.
2. “Scattering theory for Jacobi operators with quasi-periodic background”, with I. Egorova and G. Teschl, *Comm. Math. Phys.* **264-3**, 811–842 (2006).
3. “Trace formulas for Jacobi operators in connection with scattering theory for quasi-periodic background”, with G. Teschl, in “Operator Theory, Analysis, and Mathematical Physics”, J. Janas, et al. (eds.), 69–76, *Oper. Theory Adv. Appl.* **174**, Birkhäuser, Basel, 2007.
4. “Inverse scattering transform for the Toda hierarchy with quasi-periodic background”, with I. Egorova and G. Teschl, *Proc. Amer. Math. Soc.* **135**, 1817–1827 (2007).
5. “Scattering theory for Jacobi operators with steplike quasi-periodic background”, with I. Egorova and G. Teschl, *Inverse Problems* **23**, 905–918 (2007).
6. “Algebraic-geometric finite-band solutions of the Ablowitz–Ladik hierarchy”, with F. Gesztesy, H. Holden, and G. Teschl, *Int. Math. Res. Notices* **2007**, no. 20, Art. ID rnm082, 55 pp (2007).
7. “The Ablowitz–Ladik hierarchy revisited”, with F. Gesztesy, H. Holden, and G. Teschl, in “Methods of Spectral Analysis in Mathematical Physics”, J. Janas et al. (eds.), 139–190, *Oper. Theory Adv. Appl.* **186**, Birkhäuser, Basel, 2008.
8. “Scattering theory for Jacobi operators with general steplike quasi-periodic background”, with I. Egorova and G. Teschl, *Zh. Mat. Fiz. Anal. Geom.* **4-1**, 33–62 (2008).
9. “Local conservation laws and the Hamiltonian formalism for the Ablowitz–Ladik hierarchy”, with F. Gesztesy, H. Holden, and G. Teschl, *Stud. Appl. Math.* **120-4**, 361–423 (2008).

10. “Soliton solutions of the Toda hierarchy on quasi-periodic backgrounds revisited”, with I. Egorova and G. Teschl, *Math. Nachr.* **282-4**, 526–539 (2009).
11. “On the equivalence of different Lax pairs for the Kac–van Moerbeke hierarchy”, with G. Teschl, in “Modern Analysis and Applications”, V. Adamyan (ed.) et al, 437–445, *Oper. Theory Adv. Appl.* **191**, Birkhäuser, Basel, 2009.
12. “Inverse scattering transform for the Toda hierarchy with steplike finite-gap backgrounds”, with I. Egorova and G. Teschl, *J. Math. Physics* **50**, 103522 (2009).
13. “The algebro-geometric initial value problem for the Ablowitz–Ladik hierarchy”, with F. Gesztesy, H. Holden, and G. Teschl, *Discrete Contin. Dyn. Syst.* **26-1**, 151–196 (2010).
14. “On the spatial asymptotics of solutions of the Ablowitz–Ladik hierarchy”, *Proc. Amer. Math. Soc.* **138**, 4249–4258 (2010).

PREPRINT

15. “Scattering theory with finite-gap backgrounds: transformation operator and characteristic properties of scattering data”, with I. Egorova and G. Teschl, 23 pages, 2012. arXiv:1201.5768, submitted to *Math. Phys., Anal. and Geom.*

THESES

- i. *Trace formulas and inverse spectral theory for finite Jacobi operators*, Diploma thesis, University of Vienna, 2002
url: <http://www.mat.univie.ac.at/~jmichor/ftp/theses/michordiplom.pdf>
- ii. *Scattering theory for Jacobi operators and applications to completely integrable systems*, Doctoral thesis, University of Vienna, 2005
url: <http://www.mat.univie.ac.at/~jmichor/ftp/theses/michordiss.pdf>
- iii. *Algebro-geometric solutions and their perturbations*, Habilitationsschrift, University of Vienna, 2012
url: <http://www.mat.univie.ac.at/~jmichor/ftp/theses/michorhabil.pdf>

Vienna, February 29, 2012

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