

**Publikationsverzeichnis**  
**Priv.-Doz. Dr. Martin Kohlmann**

**Dislokationsprobleme für Schrödinger-Operatoren**

- mit R. Hempel: A variational approach to dislocation problems for periodic Schrödinger operators.  
*J. Math. Anal. Appl.* **381**(1) (2011) 166–178
- mit R. Hempel: Spectral properties of grain boundaries at small angles of rotation.  
*J. Spectr. Theory* **1**(2) (2011) 197–219
- mit R. Hempel: Dislocation problems for periodic Schrödinger operators and mathematical aspects of small angle grain boundaries.  
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- mit R. Hempel, M. Stautz und J. Voigt: Bound states for nano-tubes with a dislocation.  
*J. Math. Anal. Appl.* **431**(1) (2015) 202–227

**Geometrische Methoden in der Kontinuumsmechanik**

- mit J. Escher und B. Kolev: Geometric aspects of the periodic  $\mu$ -Degasperis-Procesi equation.  
*Progr. Nonlinear Differential Equations Appl.* **60** (2011) 193–209
- mit J. Escher and J. Lenells: The geometry of the two-component Camassa-Holm and Degasperis-Procesi equations.  
*J. Geom. Phys.* **61**(2) (2011) 436–452
- The periodic  $\mu$ -b-equation and Euler equations on the circle.  
*J. Nonlinear Math. Phys.* **18**(1) (2011) 1–8
- Global existence and blow-up for a weakly dissipative  $\mu$ DP equation.  
*Nonlinear Analysis* **74**(14) (2011) 4746–4753
- The curvature of semidirect product groups associated with two-component Hunter-Saxton systems.  
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- The two-dimensional periodic  $b$ -equation on the diffeomorphism group of the torus.  
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- On a two-component  $\pi$ -Camassa-Holm system.  
*J. Geom. Phys.* **62**(4) (2012) 832–838
- On initial boundary value problems for variants of the Hunter-Saxton equation.  
*Z. Angew. Math. Phys.* **63**(3) (2012) 441–452
- The two-component Camassa-Holm system in weighted  $L_p$ -spaces.  
*Z. Angew. Math. Mech.* **94**(3) (2014) 264–272
- Curvature computations for a two-component Camassa-Holm equation with vorticity.  
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**Freie Randwertprobleme**

- Necrotic tumor growth: an analytic approach.  
*Acta Biotheor.* **60**(3) (2012) 273–287
- Analysis of a mathematical model for the growth of cancer cells.  
*Math. Med. Biol.* **30**(2) (2013) 175–189
- A new model for electrostatic MEMS with two free boundaries.  
*J. Math. Anal. Appl.* **408**(2) (2013) 513–524
- On an elliptic-parabolic MEMS model with two free boundaries.  
*Appl. Anal.* **94**(9-10) (2015) 2176–2200
- The abstract quasilinear Cauchy problem for a MEMS model with two free boundaries.  
*Acta Appl. Math.* **138**(1) (2015) 171–197