CURRICULUM VITAE

Sevdzhan Hakkaev

Citizenship: Bulgarian

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Family status: Married, with 2 children

EDUCATION

M.S., B.S. Mathematics, Shumen University
Faculty of Mathematics and Informatics, 1989-1994

PhD 1998-2002
Supervised by prof. Kiril Kirchev
PhD granted in October 2004
Dr.Sci. granted 2010

PROFESSIONAL EXPERIENCE

Assistant Professor: 1995-1998, 2002-2007
Faculty of Mathematics and Informatics
Shumen University
Shumen, Bulgaria

Associate Professor
Faculty of Mathematics and Informatics
Shumen University
Shumen, Bulgaria

Post-Doctoral: August 2007-Jully 2008
Institute of Mathematics and Statistics, Sao Paulo University, Sao Paulo, Brazil

Research Visit at Zhejiang Normal University, Jinhua, China, April-May 2010

Lecturer: August 2010-December 2010
Department of Mathematics
University of Kansas
405 Snow Hall
1460 Jayhawk Blvd
Lawrence, Kansas 66045-7594
USA

2012-
Associate Professor
Department of Mathematics
Yeditepe University
Istanbul, Turkey

CURRENT POSITION

Associate Professor
Faculty of Mathematics and Informatics
Shumen University
Shumen, Bulgaria

COURSES TAUGHT

At Shumen University:
Mathematical Analysis I, II, III and IV, Complex Analysis, Ordinary Differential Equations, Functional Analysis, General Topology

Ill-posedness of integrable evolution equations (in English), Zhejiang Normal University, China

At University of Kansas:
Vector Calculus
Trigonometry

At Yeditepe University
Differential Equations
Calculus for Economics

SPECIAL COURSES

Nonlinear Partial Differential Equations and Singularities, Novi Sad, 07.02. 2003-14.02.2003

RESEARCH INTERESTS

Stability of periodic and solitary waves, Well-posedness of nonlinear dispersive equations, Inverse Scattering

HONORS AND AWARDS

- **Research Grant of MESC 1403/04(Ministry of Education and Science)**
- **FAPESP/Brazil Research Grant (2007-2008)**
- **Research Support of Shumen University (September 2008- May 2009)**
- **Research Grant of MESC DVU_10_0338 (2010-2012)**

ACTIVITIES

Member of Editorial Board of Advances in Pure Mathematics

Reviewer for AMS Mathematical Reviews

Referee for

- Journal of Mathematical Analysis and Applications-3 papers,
- Nonlinear Analysis, TMA
- Physics Letters A.
- Discrete and Continuous Dynamical Systems-Series A
- Nonlinear Analysis, RWA- 2 papers
- Applicable Analysis
- Mathematical Modeling and Analysis
- Abstract and Applied Anasysis

LIST OF PUBLICATIONS

1. **S. Hakkaev, K. Kirchev,** "Stability and instability of traveling waves solutions of complex Benjamin-Bona-Mahony type", ***Proc. of the Bulgarian Academy of Sciences 2001*****, T.55,No 6, 17-22**

2. **S. Hakkaev, K. Kirchev** ,"Positivity properties and stability of solitary waves of Benjamin-Bona-Mahony type"**,** ***Proc. of the Bulgarian Academy of Sciences*** **2001, T.55, No 7, 5-10**

3. **S. Hakkaev, Zh.Zhelev, R.Nickolov "**Subscalarity of a class of operators"**,** ***Mathematica Balcanika*****, 17 (2003), 231-238**

4. **S. Hakkaev,** "Stability and instability of solitary wave solutions of a nonlinear dispersive system of Benjamin-Bona-Mahony type"**,** ***Serdica Math.J*****. 29(2003), 337-354**

5. **S. Hakkaev,** "Instability of solitary wave solutions of a class of nonlinear dispersive systems", ***Annuaire de L'universite de Sofia*****, T 96 (2004), 105-115**

6. **S. Hakkaev,** "Scattering of small solutions of symmetric regularized-long-wave equation", ***Applications Math. (Warsaw)*** **31(2004), 313-320**

7. **S. Hakkaev, K. Kirchev ,** "Local well-posedness and orbital stability of solitary wave solutions for the generalized Camassa-Holm equation", ***Communications in Partial Differential Equations*****, 30(2005), 761-781**

8. **S. Hakkaev,** "Stability of peakons for an integrable shallow water equation"**,** ***Physics Letters A*****, 354(2006), 137-144**

9. **S. Hakkaev, K. Kirchev ,** "On the well-posedness and stability of peakons for a generalized Camassa-Holm equation*"* **,** ***International Journal of Nonlinear Science*****, 3(2006), 139-148**

10. **S. Hakkaev, K. Kirchev ,** "Stability of solitary wave solutions of nonlinear dispersive system in a critical case", ***Nonlinear Analysis TMA*****, 57(2007), 2890-2899**

11. **S. Hakkaev,** "Orbital stability of solitary waves of the Schrodinger-Boussinesq equation"**,** ***Commun. Pure Applied Analysis*****, 6(4) (2007), 1043-1050**

12. **S. Hakkaev, I. Iliev, K. Kirchev,** "Stability of periodic traveling shallow water waves determined by Newton's equation"**,** ***Journal of Physics A: Mathematical and Theoretical*****, 41(2008), no.8, 085203, 31p.(**an article chosen for IOP Select)

13. **O. Christov, S. Hakkaev,** " On the inverse scattering approach and action-angle variables for the Dullin-Gottwald-Holm equation", ***Physica D*****, 238(2009), 9-19**

14. **O. Christov, S. Hakkaev,** "On the Cauchy problem for the periodic b-family of equations and of the non-uniform continuity of Degasperis-Procesi equation" **,** ***Journal of Mathematical Analysis and Applications*****, 360(2009), 47-56**

15. **S. Hakkaev, I. Iliev, K. Kirchev,** "Stability of periodic traveling waves for the complex modified Korteweg-de Vries Equation"**, Journal of Differential Equations, 248(10)(2010), 2608-2627**

16. **J. Angulo, S. Hakkaev,** "Ill-posedness for periodic nonlinear dispersive equations" **, Electronic Journal of Differential Equations, 119(2010), 1-19**

17. **J. Angulo, A. Corcho, S. Hakkaev,** "Well-posedness and stability in the periodic case for the Benney system"**, Advances in Differential Equations, 16(2011), 523-550**

18. **J. Jiang, S. Hakkaev, "**Wave breaking and propagation speed for a class of one-dimensional shallow water equations**", Abstract and Applied Analysis, ID 647468 (2011), 15 pp.**

19. **O. Christov, S. Hakkaev, I. Iliev, "**Non-uniform continuity of periodic Hom-Staley b-family of equations**", Nonlinear Analysis, 75 (2012), 4821-4838**

20. **S. Hakkaev. M. Stanislavova, A. Stefanov, "**Transverse instability for periodic traveling waves of KP-I and Schrodinger equations**" , Indiana University Mathematics Journal, 61(2)(2012), 461-492**

21. **S. Hakkaev, M. Stanislavova, A. Stefanov,** "Orbital stability for periodic standing waves for the Klein-Gordon-Zakharov system and the beam equation", **Zeitschrift fuer Angewandte Mathematik und Physik, 64(2) (2013), 265-282**

22. **S. Hakkaev, I. Iliev, K. Kirchev "**Stability of periodic traveling waves for the quadratic and cubic nonlinear Schrodinger equations**" , International Journal of Bifurcation and Chaos, 23(5)(2013), 1350090 (20pp.), DOI:10.1142/S0218127413500909**

23. **S. Hakkaev, M. Stanislavova, A. Stefanov, "**Spectral stability for subsonic traveling pulses of the Boussinesq 'abc' system**, SIAM Journal on Applied Dynamical Systems, 12(2)(2013), 878-898**

24. **S. Hakkaev, M. Stanislavova, A. Stefanov,** "Linear stability analysis for periodic traveling waves of the Boussinesq equation and the KGZ system"**, Proceedings of the Royal Society of Edinburgh : Section A (to appear)**

25. **S. Hakkaev,** "Linear stability analysis for periodic standing waves of the Klein-Gordon equation"**, Differential Equations and Dynamical Systems, (to appear)**

26. **S. Hakkaev,** "Nonlinear stability of periodic traveling waves of the BBM system"**, Communications in Mathematical Analysis, 15(2)(2013), 39-51**

27. **S. Hakkaev, K. Kirchev, "**Orbital stability and instability of solitary waves for a class of dispersive symmetric regularized-long-wave equation**", (submitted)**

Conferences

1. "*Decay and nonlinear scattering of solutions for a dispersive system*" (witn V. Milanov, R. Nickolov, Zh. Zhelev), *Proceedings of the Second ACRMS Conference* 2005, 16-22

2. S. Hakkaev, "*Existence of solitary waves for fifth-order generalized Camassa-Holm equation via Concentration Compactness*", *Jubilee International Conference 60 years Institute of Mathematics and Informatics Bulgarian Academy of Sciences,* 2007

3. S. Hakkaev, "On the ill-posedness for nonlinear dispersive equations", **Nonlinear Dispersive Equations, Bosphorus University, Turkey, 25-28 August, 2008**

4. S. Hakkaev, "On the stability of periodic traveling waves for the BBM system", 38 International Conference Appl. Math. Eng. Econ. , June 8-13, 2012, Sozopol, Bulgaria