

## Barbara's Publications

### Monographs

M.J. Ablowitz, B. Prinari, A.D. Trubatch, *"Discrete and Continuous Nonlinear Schrödinger Systems"*, LMS Lecture Notes Series **302**, Cambridge University Press (2004)

### Journal Articles

1. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Towards an Inverse Scattering theory for bidimensional nondecaying potentials"*, Theor. Math. Phys. **116**, pp. 741-781 (1998)
2. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Backlund and Darboux transformations for the nonstationary Schrödinger equation"*, Proc. Steklov Institute of Math. **226**, pp. 42-62 (1999)
3. B. Prinari, *"On some nondecaying potentials and related Jost solutions for the heat conduction equation"*, Inverse Problems **16**, pp. 589-603 (2000)
4. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Towards an Inverse Scattering theory for nondecaying potentials of the heat equation"*, Inverse Problems **17**, 937-957 (2001)
5. M. Boiti, F. Pempinelli, B. Prinari and A. Spire, *"An integrable discretization of KdV at large times"*, Inverse Problems **17**, pp. 515-526 (2001)
6. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Inverse scattering transform for the perturbed 1-soliton potential of the heat equation"*, Physics Letters A **285**, pp. 307-311 (2001)
7. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Inverse scattering theory of the heat equation for the perturbed 1-soliton potential"*, Journal of Math. Phys. **43**, pp. 1044-1062 (2002)
8. M. Boiti, F. Pempinelli, B. Prinari and A. Spire, *"Integrable discretization of the sine-Gordon equation"*, Inverse Problems **18**, pp. 1309-1324 (2002)
9. M. Boiti, M. Bruschi, F. Pempinelli and B. Prinari, *"A discrete Schrödinger spectral problem and associated evolution equations"*, Journal of Physics A **36**, pp. 139-149 (2003)
10. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Extended resolvent and inverse scattering with an application to KPI"*, Journal of Math. Phys. **44**, pp. 3309-3340 (2003)
11. M.J. Ablowitz, B. Prinari, A.D. Trubatch, *"Soliton interactions in the vector NLS equation"*, Inverse Problems **20**, pp. 1217-1237 (2004)
12. M.J. Ablowitz, B. Prinari, A.D. Trubatch, *"Nonlinear Schrödinger Systems and their Soliton Dynamics"*, Dynamics of PDE **1**, pp. 239-299 (2004)
13. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *"Spectral Theory of the nonstationary Schrödinger equation with a two-dimensionally perturbed one-dimensional potential"*, Theor. Math. Phys. **144**, pp. 1100-1116 (2005)
14. J. Villarroel, M.J. Ablowitz, and B. Prinari, *"Solvability of the direct and inverse problems for the nonlinear Schrödinger equation"*, Acta App. Math. **87**, pp. 245-280 (2005)

15. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, “Spectral theory of the nonstationary Schrödinger equation with a bidimensionally perturbed one-dimensional potential”, Proc. Steklov Institute of Math. **251**, pp. 6-48 (2005)
16. M.J. Ablowitz, B. Prinari, A.D. Trubatch, “Discrete Vector Solitons: Composite Solitons, Yang Baxter Maps and Computation”, Studies in App. Math. **116**, pp. 97-133 (2006)
17. M.J. Ablowitz, B. Prinari, “Nonlinear Schrödinger equations”, Encyclopedia of Mathematical Physics, Edts. J-P Francoise, F.G. Naber, T.S. Tsun, pp. 552-560 (2006)
18. B. Prinari, M.J. Ablowitz and G. Biondini, “Inverse scattering transform for the vector nonlinear Schrödinger equation with non-vanishing boundary conditions”, Journ. Math. Phys. **47**, 063508 (2006)
19. M.J. Ablowitz, G. Biondini and B. Prinari, “Inverse scattering transform for the integrable discrete nonlinear Schrödinger equation with non-vanishing boundary conditions”, Inv. Probl. **23**, 1711-1758 (2007)
20. M. Lo Schiavo, B. Prinari and A.E. Serio, “Analysing Quality with Generalized Kinetic Models”, Math. Comp. Model. **47** 11501166 (2008)
21. K-ichi Maruno and B. Prinari, “Determinant and Pfaffian solutions of the strong coupling limit of integrable discrete NLS systems”, Inv. Probl. **24** 055011 (2008)
22. M.J. Ablowitz and B. Prinari, *Nonlinear Schrödinger systems: continuous and discrete*, invited contribution to Scholarpedia (peer reviewed encyclopedia), Scholarpedia, 3(8):5561 (2008)

**Conference Proceedings (Editor)**

1. M. Boiti, L. Martina, F. Pempinelli, B. Prinari and G. Soliani eds : “Nonlinearity, Integrability and All That: Twenty Years After NEEDS79”, World Scientific Pu.Co., Singapore (2000)
2. M.J. Ablowitz, M. Boiti, F. Pempinelli and B. Prinari eds : “Nonlinear physics: theory and experiment. II”, World Scientific Pu.Co., Singapore (2003)
3. M. Boiti, F. Pempinelli A.K. Pogrebkov and B. Prinari eds.: Proceedings of the workshop “Nonlinear physics: theory and experiment. III”, published as a special issue of Theor. Math. Phys. 144 issues 1 and 2 (2005)
4. G. Gaeta, B. Prinari, S. Rauch-Wojchiecowski, S. Terracini eds.: “Symmetry and Perturbation Theory”, Proceedings of the International Conference SPT2004, World Scientific Pu.Co., Singapore (2005)
5. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari eds.: Proceedings of the workshop “Nonlinear physics: theory and experiment. IV”, published as a special issue of Theor. Math. Phys. 151 issues 1-3 (2007)
6. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari eds.: Proceedings of the workshop “Nonlinear physics: theory and experiment. V”, to be published as a special issue of Theor. Math. Phys. (2009)

### **Conference Proceedings**

1. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *N-waves soliton solution on a generic background for KPI equation*, Proceedings of the conference Day on Diffraction 99 - St. Petersburg (Russia) (1999) p. 167 (refereed)
2. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *Wave soliton solution on a generic background for KPI equation*, CRM Proceedings and Lecture Notes vol. **25** (2000) p. 47 (refereed)
3. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *Some non decaying potentials for the heat conduction equation*, in "Nonlinearity, Integrability and All That: Twenty Years After NEEDS'79", M. Boiti, L. Martina, F. Pempinelli, B. Prinari and G. Soliani eds, World Scientific Pu.Co., Singapore, (2000) p. 33
4. M. Boiti, F. Pempinelli, A.K. Pogrebkov and B. Prinari, *Some non decaying potentials for the nonstationary Schrodinger equation*, in "Nonlinearity, Integrability and All That: Twenty Years After NEEDS'79", M. Boiti, L. Martina, F. Pempinelli, B. Prinari and G. Soliani eds, World Scientific Pu.Co., Singapore, (2000) p. 42
5. M. Boiti, F. Pempinelli, B. Prinari and A. Spire, *Discrete sine-Gordon equation* in "Nonlinear physics: theory and experiment. II", M.J. Ablowitz, M. Boiti, F. Pempinelli and B. Prinari eds, World Scientific Pu.Co., Singapore (2002) p. 30