

**Proceedings of the OCNMP-2024 Conference:  
Bad Ems, 23-29 June 2024**

## Foreword

This Special OCNMP Issue contains the Proceedings of the OCNMP Conference that took place in Bad Ems, Germany, during June 23 to 29, 2024, organized by Marianna Euler, Norbert Euler, Giuseppe Gaeta and Giorgio Gubbiotti. It is the first conference by the learned society, the *International Society of Nonlinear Mathematical Physics* (IS-NMP), which was founded in Bad Ems in November 2023. The conference was attended by 38 participants, who presented their latest research results in the subject of Nonlinear Mathematical Physics, resulting in 10 publications that are collected in the current Proceedings. Submissions for this Special OCNMP issue were open from November 1st, 2023 until September 1st, 2024. We point out that 8 out of the 10 corresponding authors submitted their papers for this Proceedings before the start of the conference. The articles were subsequently published on a continuous basis, that is, as soon as accepted after the peer review.

The main topics of the conference were on continuous and discrete integrable equations, their algebraic and geometrical properties and solution methods for nonlinear equations. This Proceedings consists of the following 10 contributions, ordered, as already mentioned, according to their dates of acceptance:

1. *Algebraic curves as a source of separable multi-Hamiltonian systems* by M. Blaszak and K. Marciniak;
2. *Two-fold degeneracy of a class of rational Painlevé V solutions* by H. Aratyn, J. F. Gomes, G. V. Lobo and A. H. Zimerman;
3. *Singularities and growth of higher order discrete equations* by R. Willox, T. Mase, A. Ramani and B. Grammaticos;
4. *SKdV, SmKdV flows and their supersymmetric gauge-Miura transformations* by Y. F. Adans, A. R. Aguirre, J. F. Gomes, G. V. Lobo and A. H. Zimerman;
5. *On an equation arising by reduction of the Drinfeld-Sokolov hierarchy* by R. Conte;
6. *Lagrangian multiform structure of discrete and semi-discrete KP systems* by F. W. Nijhoff;
7. *Wind-wave interaction in finite depth: linear and nonlinear approaches, blow-up and soliton breaking in finite time, integrability perspectives* by A. Latifi, M. A. Manna and R. A. Kraenkel;

8. *On 2nd-order fully-nonlinear equations with links to 3rd-order fully-nonlinear equations* by M. Euler and N. Euler;
9. *Solitons in 4d Wess-Zumino-Witten models – Towards unification of integrable systems* by M. Hamanaka and S-C. Huang;
10. *Kontsevich’s star-product up to order 7 for affine Poisson brackets: where are the Riemann zeta values?* by R. Buring and A. V. Kiselev.

Besides the scientific talks, the conference contained a Session on *Open Access Publishing* in which Raphaël Tournoy, who is the Episciences platform Manager at the *Center for Direct Scientific Communication*, France, gave a talk entitled *Episciences overlay journals and their place in the open access landscape*. This led to an open discussion by the audience about *Open Access* publication in general and the *Diamond Open Access Publishing Model* in particular.

Further details about this OCNMP Conference and about the society ISNMP can be found on the website [isnmp.de](http://isnmp.de). Access to this Proceedings is available at the journal’s website [ocnmp.episciences.org](http://ocnmp.episciences.org) with the direct link to *Special Issue 2, 2024* at [ocnmp.episciences.org/volume/view/id/924](http://ocnmp.episciences.org/volume/view/id/924).

We thank Mr. Laszlo Jozsa and his staff at the Häcker’s Grant Hotel in Bad Ems for their friendly and professional service that contributed to making this conference enjoyable a successful. We also thank *Episciences* and its staff for their support and dedicated services for our journal OCNMP. Finally we thank the University of Milan for allowing us to use their Zoom subscription during the ISNMP Members Meeting at the Häcker’s Grant Hotel on June 26th, 2024.

Marianna Euler (*Bad Ems*), Norbert Euler (*Bad Ems*) and Giuseppe Gaeta (*Milan*)

December 5th, 2024