

## Special Issue

### Dedicated to the Memory of Miguel Ramos

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This special issue (Vol. 71, Issues 3–4) of *Portugaliae Mathematica* commemorates Miguel Ramos, our much appreciated colleague and friend, and the extension and depth of his mathematical achievements, and it was organized at the invitation of the current Editor-in-Chief of the journal. Almost two years have passed now since Miguel's untimely death, on January 3rd, 2013, 28 days before his 50th birthday. Miguel Ramos was Full Professor at the Faculty of Science of the University of Lisbon. After being in the Executive Editorial Board of *Portugaliae Mathematica* for a number of years, he became Editor-in-Chief of the journal in 2012.

Miguel Ramos obtained his Ph.D. from the University of Lisbon in 1991 after a three year internship at the Institut de Mathématiques Pures et Appliquées in Louvain-la-Neuve. Having made important contributions to boundary value problems in ODEs via topological and variational methods, earlier in his career, he soon became an expert in elliptic PDEs and critical point theory, a field in which he worked until the last days of his life. It is worthwhile recalling that Miguel has left his signature in recent advances of the variational approach to the qualitative theory of elliptic equations and systems: properties of the Fucik spectrum, a priori estimates on the basis of the Morse index, problems with sign changing nonlinearities and sign changing solutions, nodal structure of solutions, peak localization, Nehari manifolds and their variational role, all of these are topics to which he added valuable ideas and new techniques.

Miguel Ramos was a gifted scientist but also a very competent professional in all aspects of academic life. Needless to say, his early disappearance has meant a huge loss for the University of Lisbon. He taught his students a lot, and his ideas were enlightening also to his collaborators and to everyone that had an interest in the rich field of research he was engaged in. Those who met him in person or had the occasion to work with him, or just to discuss some Mathematics with him, certainly keep a remembrance of Miguel not only as a brilliant mathematician but

also as a very friendly person. If one wants to evoke his personal traits, a number of keywords come out naturally: kindness, intelligence, humour. It should be noted that he was demanding as a researcher and that he set high standards to his own work.

This memorial issue of *Portugaliae Mathematica* contains 8 research papers related to the work of Miguel. Most of the authors were his co-authors. There are contributions from senior mathematicians as well as from researchers of a younger generation. We thank all of them for having accepted to contribute to this issue. The final article, which includes a rich survey on systems of Hamiltonian type, was written by three younger colleagues that collaborated closely with Miguel and maintained discussions with him up to nearly his last days. Miguel used to find in Mathematics relief and solace for the disease and pursued research as far as his forces allowed him to do it.

Miguel was a brilliant scholar and a beloved teacher. His knowledge of Mathematics was extensive, and he communicated it with a huge enthusiasm. His dedication in each task he undertook was enormous. At the same time, he was a very nice person. We miss him for many reasons. This issue is just an expression of our gratitude.

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