

Henri Berestycki and Paul Rabinowitz

Editorial

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This issue is dedicated to the memory of our good friend Abbas Bahri (January 1, 1955–January 10, 2016). Abbas passed away on January 10, 2016 after a courageous battle against cancer.

Abbas was born in Tunisia on January 1, 1955. His parents were strong believers in the importance of education. Thus after his high school studies, Abbas left Tunisia in 1972 for Paris and spent two years preparing for the formidable and highly competitive entrance examinations for the “Grande Ecoles”. He did very well and in 1974 became one of the first Tunisian students to enter the Ecole Normale Supérieure in Paris. On completing his studies there, he went on to doctoral studies at the Université Paris VI, completing his Thèse d’Etat in 1981. After junior positions in Tunis, the University of Chicago, and the Ecole Polytechnique in France, in 1987 Abbas became a Professor at Rutgers University in New Brunswick where he spent the remainder of his career. He served as Director of their Center for Nonlinear Analysis from 1988 to 2009.

While at the ENS, Abbas developed interests in many mathematical areas. One of the first was algebraic topology and he studied the subject extensively. When the time came for him to pursue a topic for a Ph.D., he was drawn to the group of exceptional students centered around Haim Brezis. Their background was in functional analysis and partial differential equations (PDEs). Abbas’s knowledge of topology proved to be a major asset, leading him to novel insights and perspectives. He became intrigued by problems in the calculus of variations, especially problems with a lack of compactness. He made several deep and original contributions in this direction to nonlinear PDEs, Hamiltonian dynamical systems, and geometry. It also led to his important theory of critical points at infinity. Abbas’s research attracted considerable attention and gained him an international reputation. Then followed awards including the Fermat Prize and the Langevin Prize of the French Academy of Science as well as the Board of Trustees Award for Excellence, Rutgers University’s highest honor for outstanding research. Although he was based in the US, Abbas retained a great deal of affection for and interest in Tunisia and spent a considerable amount of time promoting scientific exchanges, visiting universities there, as well as teaching when he could. He had several Ph.D. students in Tunisia in addition to others he attracted from Tunisia to study at Rutgers. As a teacher and listener, he was a constant source of encouragement to students and young researchers from throughout the world.

Abbas possessed great energy, enthusiasm and curiosity and was uncompromisingly independent. He was a true scholar throughout his life. Mathematics was not his sole interest. He was a man of culture with broad knowledge of many subjects including history, politics, art, literature and philosophy. As everyone who knew the family was aware of, Abbas was immensely devoted to his beloved wife, Diana, and his four children, Thouraya, Kahena, Salima, and Mohamed El Hedi.

It was always a pleasure to discuss matters, mathematical and otherwise, with Abbas. He had strong opinions, but was open minded and fair. He was a great friend and also a very warm person. He will be greatly missed.

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