

PREFACE

Spectral and transport properties of quantum systems: in memory of Pierre Duclos (1948–2010)

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PREFACE

Spectral and transport properties of quantum systems: in memory of Pierre Duclos (1948–2010)

This issue is devoted to our colleague and friend Pierre Duclos who passed away suddenly and prematurely in Prague on 12 January this year. We want to honour his memory in the way he would have liked, by collecting fresh and original work from his area of interest.

Pierre Duclos was born on 8 January 1948 in Paris. He started as an engineering student but also attended graduate courses at the Centre de Physique Théorique (CPT) in Marseille, which inspired him to change his path and pursue the professional career of a researcher. He joined the Mathematical Physics team at CPT and obtained a position at the University of Toulon, where he later became a full professor. He was never solitary; always being full of energy and a smart and sociable person, he started and maintained many international collaborations and organized numerous conferences and seminars. In the early eighties he had strong ties with the Free and Technical Universities of Berlin. From the beginning of the nineties, he collaborated with colleagues in Prague, Bucharest, Santiago de Chile, and more recently also in Aalborg and Dublin.

His scientific interests were wide, with a focus on mathematical methods of quantum theory. He made important contributions to our understanding of multiple-well Schrödinger operators, geometrically-induced properties of quantum waveguides, spectra of Wannier–Stark systems, dynamics with time-periodic perturbations, and transport in mesoscopic systems, to name his most significant results. We choose for this issue the title ‘Spectral and transport properties of quantum systems’ which cover the subjects of most papers to which his colleagues, and often coauthors, contributed. We have also included a few other papers with topics related to Pierre’s work.

We are glad we were able to gather a numerous collection of papers which in our view represent interesting new developments. A few of them are works which bear Pierre’s signature and have been completed by his collaborators. Moreover, we are aware of several other works which their authors dedicated to Pierre’s memory but which for some reason or another did not make it to this issue. A list of these papers can be found at the end of the preface.

This multitude of memorial papers shows that Pierre was popular not only as a colleague, coauthor, and teacher, but also as a person. Those who had the good fortune to work with him will always recall his blend of hard-working habits, strong views, and human warmth, which made him so unique. He will be remembered with gratitude and admiration by all who knew him well. We will miss him a lot.

Jean-Michel Combes, *Université du Sud Toulon-Var and Centre de Physique Théorique, CNRS Marseille, France*

Pavel Exner, *Doppler Institute and Department of Theoretical Physics, Nuclear Physics Institute, Czech Academy of Sciences*

Valentin A Zagrebnov, *Université de la Méditerranée and Centre de Physique Théorique, CNRS Marseille, France*

Guest Editors

Other works dedicated to Pierre's memory:

Aschbacher W, Barbaroux J-M, Faupin J and Guillot J-C 2010 Spectral theory for a mathematical model of weak interactions: the decay of the intermediate bosons $W^{+/-}$. II *Annales Henri Poincaré* at press

Bellissard J and Palmer I 2009 The Jewett–Krieger construction for tilings [arXiv:0906.2997](#)

Gesztesy F and Zinchenko M 2010 Symmetrized perturbation determinants and applications to boundary data maps and Krein-type resolvent formulas [arXiv:1007.4605](#)

Kostykin V, Potthoff J and Schrader R 2010 Brownian motions on metric graphs: Feller Brownian motions on intervals revisited [arXiv:1008.3761](#)

Stollmann P 2010 From uncertainty principles to Wegner estimates *Math. Phys. Anal. Geom.* **13** 145–57