Special Issue in memory of Prof Danny Segal (1960–2015)

This special issue, on *Quantum Optics, Cooling and Collisions of Ions and Atoms*, is dedicated to the scientific interests of our much-loved and respected friend and colleague Danny Segal, whose research spanned many aspects of quantum and atomic physics, from PhD studies of atomic collision dynamics using pulsed dye lasers to his ultimate expertise with the long-lived coherence of cold trapped ions, which Danny hoped would one day lead to practical quantum information processing. The papers in this issue accordingly address topics ranging from precision laser spectroscopy to nonlinear optics, and from quantum optics to atom chips; its particular focus though is naturally upon trapped ions, their technologies, and the exciting science that they enable.

Danny was well known for his enthusiasm, dedication, generosity and patience, and he was an energetic supporter of international links and collaborations, so it is no surprise that a number of authors have included reminiscences and personal comments within their scientific contributions. In addition, this issue includes Keith Burnett's recollections of Danny's early career, and an obituary by Danny's colleague for the last 24 years, Richard Thompson.

Danny's intellect and humanity touched the many researchers and students who met him. Like them, we remember him with great respect and deep fondness.

Almut Beige
Tim Freegarde
Richard Thompson