

**Personalia**



**50th birthday of Ralph Kenna**

On August 27th, 2014 Ralph Kenna — member of the Editorial Board of “Condensed Matter Physics” and renowned expert in the fields of statistical physics and complex systems — celebrated his 50th birthday.

Ralph Kenna was born in Athlone, County Westmeath, Ireland. After obtaining a BSc and Master’s degree at Trinity College Dublin in 1988, he won a scholarship for postgraduate studies in Austria funded by the European Council. His PhD studies at the University of Graz (with Professor Christian Lang) were further supported by the Austrian Research Fund. He was awarded by the University of Graz and defended his dissertation (Dr. rer. nat., with distinction) in 1993. Subsequently, he was an EU Marie Curie Research Fellow at the University of Liverpool (1994–1997) and at Trinity College Dublin (1997–1999). He began lecturing in Trinity College from 1998–2002. Since 2002 he is affiliated to Coventry University (England), first as a senior lecturer, then a reader, and since 2012 as a full professor. In 2005 he co-founded the Applied Mathematics Research Centre in Coventry University.

The scientific interests of Ralph Kenna mainly concern field theory, statistical physics of phase transitions and complex systems. In particular, he has solved long-standing problems regarding the question of the properties of the BKT (Berezinskii–Kosterlitz–Thouless) phase transition in the 2d XY model and the scaling behaviour of partition function zeroes. He attracted the attention of the community in 2006 with his remarkable work (with two collaborators from Edinburgh and Leipzig) on scaling relations for logarithmic corrections at continuous phase transitions. This research includes the important problem of scaling behaviour at the upper critical dimension, where it is well known that there are multiplicative logarithmic corrections to scaling. Ralph Kenna and his coworkers have achieved a remarkable tour de force in the analysis of the standard scaling laws between critical exponents and they have proposed new general scaling relations among the correction exponents. These were totally unknown and unexpected relations which led to a major clarification of physics right at the upper critical dimension. These new

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scaling relations will surely find their place in future textbooks on critical phenomena. He later provided a remarkable analysis of the site-diluted variant of the canonical 2d Ising model. The pure model has a logarithmic divergence of the specific heat, and so is marginal regarding the effect of dilution according to the “Harris criterion”. Ralph Kenna and co-workers showed that the site-diluted systems obey strong scaling, but with accurately determined multiplicative logarithmic corrections. Once again this work resolved an outstanding controversy. He recently contributed to the clarification of the so-called dangerous irrelevant variables mechanism above the upper critical dimension. In a paper published in this journal, a new exponent  $\nu$  (koppa) was introduced that governs the emergence of mean-field theory. More recently he also turned his attention to non-equilibrium models in low dimensions.

Ralph Kenna’s work is always characterised by elegance and precision, which allow him to reach clear conclusions leading to milestone advances in the comprehension of hard statistical physics problems. He has combined incisive physical insight with expert technical analysis so as to overcome barriers to understanding and move frontiers forward.

In recent times, Ralph Kenna used his deep background in statistical physics and experience with efficient methodologies to conduct scientometric analyses of management and policy of science and even studies of humanities through complexity theory and sociophysics. With a collaborator from Nancy he developed a theory for critical mass of research groups and measured these for a multitude of academic disciplines. This work on measuring research quality has made significant impact in the media and with policy makers all over the world. He has also pioneered the application of network theory to investigate societies depicted in mythological narratives, opening the way to quantitative research in comparative mythology. In this respect his research might be considered as the origin of a well-defined direction in the interdisciplinary field of “mythematics” (as aptly noted by one of his students). His studies in this field have evoked numerous discussions in academic papers and in the popular press. The results obtained and the methods proposed have been positively recognized by academics, science policy makers and the general public. A further important feature of these studies in sociophysics is that they put the results obtained into the broader context of complex systems, where the social characteristics are seen as emergent features of a society and where quantitative characteristics of social relations are used to classify different groups according to their universal properties.

Ralph is an excellent lecturer, knowing how to explain complicated things in a simple way, a person who has a good ability to lead the work of a group as well as to carry out individual research, and a gifted scientist. These features are immediately apparent to everyone who knows him. Those who know him closer admire his attentiveness to people and readiness to help, his excitement by new ideas and his engagement in their realization, his broad erudition, his active position in different situations. As a research partner he is very stimulating, always bringing new developments and new ideas. A good sportsman, he uses his running marathons to attract attention to health problems and to raise money for cancer research and support.

Due to his devoted work, Coventry University is increasingly recognised as one of the leading international centres in the field of statistical physics of complex systems and the group he leads participates in prestigious European projects and collaborative initiatives. The CMP Editorial board, numerous colleagues and friends sincerely congratulate Ralph Kenna on the occasion of his jubilee and wish him further success on his way.