Guest Editorial: Special Issue on Wireless Personal Multimedia Communications

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The paradigm of research is changing rapidly as new necessities of spectrum and new ways of efficiently use this scarce resource are being thought of. The increased capacity demand born on the extensive penetration of smartphones and innovative services and applications have brought the wireless community to the brink of finding new intelligence in the way networks are operated and exploited.

The challenges beyond us are new ways of exploring the radio interface, the extensive use of MIMO, the introduction of cognitive radio systems and cooperation in heterogeneous networks including smart cells.

The series of international symposia on Wireless Personal Multimedia Communications (WPMC) constitutes a particular good occasion for academia and industry, manufacturers and regulators to discuss business and technical issues to push this widened community into defining what the next decade will become in wireless communications.

This special issue was planned to include some of the best papers in a wide range of research areas timely when WPMC 2011 was held in Brest, France on October 3–7, 2011.

It contains thirteen papers which were accepted after strict peer review. Twenty-five papers have been selected among the excellent papers originally presented at WPMC 2011, including awarded papers. The papers were then revised and resubmitted to this special issue.

This issue covers several different topics of research, starting with papers addressing the use of MIMO schemes and new OFDM techniques based on trellis shaping and coordinated

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precoding techniques. Then, the middle section of this special issue is devoted to the aspects of cooperation (COMP) systems and the development of new opportunistic and cognitive systems. The issue is finalized with a set of papers on data push services over LTE, a watermarking scheme for detection improvement, a WSN application specific in shipboard systems and a high bitrate optical wireless system. We hope that this issue, bringing a very interesting set of papers will allow the reader to find new topics for their own research.

The editors would like to express their sincere thanks to all the authors that helped in the construction of this special issue, to the reviewers who provided us with their revision reports and, in particular, we would like to thank Anthony Doyle and Christine Velarde, for their assistance in the editing of this special issue.

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