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## FOREWORD

The future 4G wireless systems are widely expected to deliver a much higher data transmission rate and much richer multi-media contents than current 2-3G systems. All-IP wireless architectures have been emerging as the most preferred platform for B3G wireless. The necessity to support high-speed burst-type traffic in wireless channels has already posed a great challenge to all existing air-interface technologies. Many research initiatives have been underway to investigate the issues of which type of air-interface technologies will be most suitable for 4G wireless. It has been indicated that the current CDMA-based air-interface technologies (for both 2G and 3G) are suited only for slow-speed continuous-transmissions such as voice, but not a good choice for high-speed burst-type traffic. Therefore, OFDMA has been proposed as an attractive candidate for B3G wireless systems, as suggested in recent research carried out in E-UTRAN by 3GPP. On the other hand, CDMA technology itself is undergoing a technological evolution from interference-limited to interference-resistant operation. This Special Issue (SI) serves as a stimulus to accelerate technological evolution of next generation air-interface technologies for 4G wireless communications.

The Call-for-papers of this SI has received an overwhelming response from the community. Due to the limited space, only five papers have been included. We are glad to see that they have represented the most up-to-date research work in the area and cover almost all important air-link technologies currently under consideration for 4G wireless. Due to the space limit we will not reiterate their content here and we hope that readers will find this SI very informative and useful.

We would like to thank all contributors who have submitted their quality papers to this SI. We also should thank all anonymous reviewers who have been helping us to do thoughtful and timely reviews. Finally, we would like thank Dr. Javier Gozalvez, Mobile Radio Senior Editor, and Dr. James Irvine, the Editor-in-Chief of this Magazine, for their strong support throughout the publication process of this SI.

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