This collection comprises the expanded and fully refereed versions of selected papers presented at the 18th International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX 2015) and the 19th International Workshop on Randomization and Computation (RANDOM 2015) held at Princeton University, New Jersey, U. S. A., August 24 – August 26 2015. The selection was made by the program committees of the respective meetings (listed below). Preliminary versions of the papers were presented at the workshops and the extended abstracts appeared in the proceedings of the meetings published by Dagstuhl Publishing.

The APPROX Program Committee selected 26 out of 61 submissions for presentation at the Workshop; of these, 3 were invited to this Special Issue. The RANDOM Program Committee selected 30 out of 83 submissions; of these, 2 were invited to this Special Issue. The authors of all the five selected papers accepted the invitation.

The papers selected from APPROX 2015 cover topics concerning the approximability of constraint satisfaction and scheduling problems, while the papers selected from RANDOM 2015 cover topics in streaming algorithms and random graphs.

All papers were refereed in accordance with the usual rigorous standards of Theory of Computing. We would like to thank the authors for their contributions and the anonymous referees for their hard work that helped improve the quality of this issue. It was a pleasure to edit this special issue for Theory of Computing.
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FOREWORD TO APPROX-RANDOM 2015 SPECIAL ISSUE

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