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Complex Networks



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Preface

The International Workshop on Complex Networks series – CompleNet (www.complenet.org) was initially proposed in 2008 with the first workshop taking place in 2009. The initiative was the result of efforts from researchers from the *BioComplex Laboratory in the Department of Computer Sciences at Florida Institute of Technology, USA*, and the *Dipartimento di Ingegneria Informatica e delle Telecomunicazioni, Universita' di Catania, Italia*. CompleNet aims at bringing together researchers and practitioners working on areas related to complex networks. In the past two decades we have been witnessing an exponential increase on the number of publications in this field. From biological systems to computer science, from economics to social systems, complex networks are becoming pervasive in many fields of science. It is this interdisciplinary nature of complex networks that CompleNet aims at addressing. CompleNet 2012 was the third event in the series and was hosted by the *BioComplex Laboratory, Department of Computer Sciences at the Florida Institute of Technology, USA* from March 7–9, 2012.

This book includes the peer-reviewed list of works presented at CompleNet 2012. We received 98 submissions from 22 countries. Each submission was reviewed by at least 3 members of the Program Committee. Acceptance was judged based on the relevance to the workshop themes, clarity of presentation, originality and accuracy of results, and proposed solutions. After the review process, 9 papers and 18 short papers were selected to be included in this book.

The 27 contributions in this book address many topics related to complex networks and have been organized in seven major groups: (1) Network Measures and Models, (2) Agents, Communication and Mobility, (3) Communities, Clusters and Partitions, (4) Emergence in Networks, (5) Social Structures and Networks, (6) Networks in Biology and Medicine, and (7) Applications of Networks.

We would like to thank to the Program Committee members for their work in promoting the event and refereeing submissions. We deeply appreciate the efforts of our keynote speakers: Albert-László Barabási (Northeastern University), Sinan Aral (New York University), and Robert Bonneau (Air Force Office of Scientific Research); their presentation is one of the reasons CompleNet 2012 was such a success. We are grateful to our invited speakers who enriched CompleNet 2012 with

their presentations and insights in the field of Complex Networks (in alphabetical order): Julia Poncela Casasnovas (Northwestern University), Gourab Ghoshal (Northeastern University), Neil Johnson (University of Miami), Sune Lehmann (Technical University of Denmark), Nathalie “Henry” Riche (Microsoft Research), and My Thai (University of Florida).

Special thanks also go to Marco Carvalho, Eraldo Ribeiro, Ryan Stansifer and William Shoaff from the Florida Institute of Technology for their help in organizing CompleNet 2012. The next edition of CompleNet will be hosted by the Freie Universität Berlin, Germany, from March 13-15, 2013.

March 2012
Melbourne, Florida

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