

Editorial

This special issue comprises the papers accepted for presentation at the 20th Annual International Conference on Intelligent Systems for Molecular Biology, an official conference of the International Society for Computational Biology (ISCB; <http://www.iscb.org>). ISMB 2012 (<http://www.iscb.org/ismb2012/>) will take place in Long Beach, California, USA, from July 15–17, 2012; preceded during July 13–14 by eleven 1 or 2 day Special Interest Group (SIG) meetings, two satellite meetings and two half-day tutorials.

The 35 papers in this volume were selected from 268 submitted papers. Submitted papers were assigned to 13 areas. Area Chairs led each topic area by selecting their area's program committee and overseeing the reviewing process. Many area chairs were new compared with 2011. Fourteen papers for which area chairs were in conflict were reviewed under a 'Conflicts Management' section headed by the Proceedings Chair; five such papers were accepted. Areas, co-chairs and acceptance information are listed in Table 1.

Compared with prior years, five mature topic areas had steady submissions, 'Evolution and Comparative Genomics', 'Gene Regulation and Transcriptomics', 'Protein Structure and Function', 'Protein Interactions and Networks' and 'Sequence Analysis'. The latter's rose by 30% with many strong submissions. Two areas newer to ISMB had a good showing this year, 'Bioimaging' and 'Disease Models and Epidemiology'. One area more than doubled, 'Disease Models', partly as a result of taking some of 'Population Genomics' load; and one quadrupled, 'Bioimaging'. 'Databases and Ontologies', 'Massspec' and 'Text Mining' each received roughly six submissions.

Across the areas, 224 members of the bioinformatics community provided reviews. Most papers received three reviews and several received four or more. There was significant discussion of the merits of the papers first between referees and the area chairs, and then between area chairs and the proceedings chair. Initial decisions to accept papers were made during a comprehensive conference call with the area chairs, and several papers underwent a further evaluation by additional area chairs before acceptance decisions

were finalized. We appreciate that in several cases reviewers' opinions might have changed with additional input or further clarifications from the authors; because the ISMB 2012 timeline did not allow for a second round of reviews, however, only papers where referees suggested minor revisions could be accepted.

For several papers where referee comments might have been unclear to the authors, area chairs added additional comments and explanations. In total, 36 papers were conditionally accepted, pending revision. After acceptance notices were sent, the authors had two weeks to modify their papers according to the suggestions made by the reviewers and to respond to reviewers' comments. Modified papers and authors' responses were re-examined during the next week to ensure each paper was modified appropriately in response to the reviewers' comments. We were pleased that 35 conditionally accepted papers were finally accepted for the conference.

The final acceptance rate was 13%, significantly lower than rates of 20 and 19% in the two prior years, based on the decision to accept fewer proceedings papers. Collectively, the 35 accepted papers had 133 authors from 12 countries across 5 continents, with 89 authors from North America, 25 from Europe, 7 from Asia, 2 from Israel and 10 from Australia.

We thank the area chairs and reviewers for their hard work and dedication to maintaining a professional review process. We thank all authors of submitted papers and authors of accepted papers for their diligences in responding to reviewer comments within two weeks. We thank Steven Leard's team for extensive technical support with the EasyChair submission and reviewing system; Mona Singh, Joel S. Bader, Terry Gaasterland and Martin Vingron for sharing their experiences from prior years; the team at Oxford University Press for type-setting the papers; Conference Chairs, Terry Gaasterland, Richard H. Lathrop, Burkhard Rost and Sydney Brenner (Honorary Chair), as well as the ISMB 2012 Steering Committee, for their valuable input; and Steven Leard for helping us oversee the process.

Bonnie Berger (ISMB Proceedings Chair)

Table 1. Areas, co-chairs and acceptance information

Topic area	Area co-chair	2011 No. of submitted papers	2011 No. of accepted papers	2012 No. of submitted papers	2012 No. of accepted papers
Applied Bioinformatics	Anna Tramontano and Marie France-Sagot	30	5	24	2
Bioimaging and Data Visualization	Robert F. Murphy and Sean O'Donohue	5	0	20	3
Databases and Ontologies	Alex Bateman and Suzanna E. Lewis	12	2	6	1
Disease Models and Epidemiology	Simon Kasif and Isaac Kohane	8	2	19	4
Evolution and Comparative Genomics	Teresa Przytycka and Dannie Durand	13	4	11	1
Gene Regulation and Transcriptomics	David Gifford and Donna Slonim	38	6	33	3
Mass Spectrometry and Proteomics	Knut Reinert and Nuno Bandiera	5	1	6	1
Population Genomics	Russell Schwartz and Eran Halperin	11	3	13	2
Protein Interactions and Molecular Networks	Mona Singh and Carl Kingsford	41	8	28	2
Protein Structure and Function	Lenore Cowen and Nir Ben-Tal	38	8	30	5
Sequence Analysis	Serafim Batzoglou and S. Cenik Sahinalp	31	6	43	6
Text Mining	Hagit Shatkay and Alfonso Valencia	7	2	5	0
Conflicts Management	Bonnie Berger	6	1	14	5
Other		0	0	16	0