

# Combinatorial and Algorithmic Aspects of Networking and the Internet

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August 5–7, 2004

The workshop, Combinatorial and Algorithmic Aspects of Networking and the Internet (CAAN04), was dedicated to exploring the combinatorics and algorithmics of networking. This interdisciplinary field is a rapidly expanding one, primarily due to the influence of the Internet. The Internet is a global network of 700 million users. An additional 300,000 users are added each day. The Internet itself is in constant flux, with connections and content being added and deleted continuously. How does one study, predict, or even model such an entity? This is the challenge addressed by research in large-scale networks. The unique nature of these networks calls for a variety of techniques from a variety of disciplines. The primary goal of this workshop is to bring together this expertise and provide a snapshot of the cutting edge research in this field.

The workshop was a great success on a number of fronts. First, it brought together a diverse cross-section of researchers in an already scattered and distinctive community. Among the participants were mathematicians, computer scientists in theory and algorithms, computer scientists in networks, physicists, and engineers, as well as researchers from Europe and North America, participants from industry and academia, students and established researchers.

The papers presented were of high quality. The decision was taken to put out a call for papers and select speakers by peer review. The refereeing process led to twelve papers, and up-to-date research was presented. We further took the decision to bracket these cutting-edge talks with two invited survey talks—an opening talk by Ashish Goel and a closing talk by Andrei Broder—that set the area in context and presented an overview of the field. In one of the refereed talks the presenter proposed a solution to a major outstanding problem in the field and there is now ongoing work to further evaluate the correctness of the solution. The Springer-Verlag series, *Lecture Notes in Computer Science* (LNCS) has expressed interest in publishing a volume dedicated to the workshop and consisting of the presented papers along with a number of invited survey papers. We anticipate that this volume would become a standard reference or graduate text in this emerging field.

New collaborations are another possible outcome of the workshop. There was clear interest among the participants for further discussions and collaborations, and, although the format, which included large periods for discussion, was useful, the interaction of the participants was somewhat limited by the short duration of the two-day format.

This workshop may also spawn an annual series of similar workshops. There was also clear interest in future workshops on this topic and the organizers had a number of inquiries from participants

about the possibility of CAAN05. One proposal under discussion is to mount it as a satellite workshop of the Workshop on Algorithms and Data Structures (WADS05) to be held in August 2005 in Waterloo, Ontario.

The workshop was also greatly enhanced by the wonderful facilities at BIRS, in particular the accomodation, the meeting and collaboration rooms, the easy access to computers, and the proximity to the town of Banff itself.