

Ad Hoc Networks: Pushing Mobile and Wireless Communication Since 1970

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Abstract

Researchers in ad hoc networks are used to study some of the prevalent technical difficulties in networking: Without a fixed infrastructure, challenges such as mobility or wireless communication must be investigated in their purest form. As a consequence one learns a great deal about the fundamentals of networking. In my talk I will present a few exciting research questions that I learned when studying ad hoc networks: I will discuss how mobility leads to distributed complexity, why clock synchronization is unexpectedly difficult, and what difference it makes to assume a more accurate wireless model. Along my talk I will present several open questions.

ACM Classification:

C.2 [Computer-Communication Networks]

Author Keywords: Mobile Networks, Wireless Communication, Distributed Complexity, Clock Synchronization, Signal-to-interference-plus-noise-ratio

Bio

Roger Wattenhofer is a full professor at the Information Technology and Electrical Engineering Department, ETH



Zurich, Switzerland. He received his doctorate in Computer Science in 1998 from ETH Zurich. From 1999 to 2001 he was in the USA, first at Brown University in Providence, RI, then at Microsoft Research in Redmond, WA. He then returned to ETH Zurich, originally as an assistant professor at the Computer Science Department.

Roger Wattenhofer's research interests are a variety of algorithmic and systems aspects in computer science and information technology, currently in particular wireless networks, wide area networks, mobile systems, social networks, and physical algorithms. He publishes in different communities: distributed computing (e.g., PODC, SPAA, DISC), networking (e.g., SIGCOMM, MobiCom, SenSys), or theory (e.g., STOC, FOCS, SODA, ICALP). He has served as a PC chair on more than a dozen international conferences, including MobiHoc in 2005. More information can be found at www.disco.ethz.ch

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MobiHoc'14, August 11–14, 2014, Philadelphia, PA, USA.

ACM 978-1-4503-2620-9/14/08.

<http://dx.doi.org/10.1145/2632951.2633210>