

## **Dr. Eric H.W. van den Berg**

### **Telcordia Technologies**

1 Telcordia Drive, Room RRC1-P387, Piscataway, NJ 08854

Tel. (732) 699- 2748, Email: evdb@research.telcordia.com

#### **BIOSKETCH**

Dr. Van den Berg is a Senior Scientist in the Information Analysis and Services Department at Telcordia Technologies. He obtained his PhD in Applied Mathematics from Cornell University in 1999, after which he joined the Applied Research department at Telcordia. Initially, he focused on network management under long-range dependent traffic, and mobility management in wireless networks. He has also worked on network security. He was Principal Investigator in the DARPA Self Regenerative Systems (SRS) program, Phase-I, from July 2004 to January 2006, managing the project “Mitigating the Insider Threat using High-dimensional Search and Modeling”, which detects insider attacks via a novel use of high-dimensional search techniques. His current interests include learning and cognitive systems, particularly in the context of (wireless, ad-hoc, cognitive) network management and network monitoring. He has an enduring interest in modeling self-similar (network) phenomena. He has mentored several Ph.D. students and an industrial post-doc at Telcordia.

#### **EDUCATION**

- Ph.D., Applied Mathematics, Cornell University, 1999
- M.S. Applied Mathematics, Cornell University, 1997
- M.S. (Ir.) Technical Mathematics, Delft University of Technology, Netherlands, 1994

#### **RELEVANT IMA EXPERIENCE**

- Collaborated with Christine Cheng, IMA Industrial Postdoc 2000-2002
- Mentor in IMA Mathematical Modeling in Industry: A Workshop for Graduate Students, 2005, 2009.

#### **SELECTED PUBLICATIONS**

- E. van den Berg, P. Gopalakrishnan, B. Kim, B. Lyles et al., “Dynamic Network Selection using Kernels”, Proceedings IEEE ICC 2007 (2007).
- S. Muthukrishnan, E. van den Berg, Y. Wu: Sequential Change Detection on Data Streams. ICDM Workshops 2007 (2007)
- R. Chinchani, E. van den Berg, “A Fast Static Analysis Approach to Detect Exploit Code Inside Network Flows“, Proceedings Recent Advances in Intrusion Detection (RAID) 2005, pp. 284-305, (2005)
- Zhang, T., Van den Berg, E. and Madhani, S., “Peer-to-Peer Network and User Information Discovery and Sharing for Mobile Users and Devices”, 61st IEEE Vehicular Technology Conference, Stockholm, Sweden, May 29- June 1 (2005).
- Cheng, C. and Jain, R. and Van den Berg, E., in Handbook of Wireless Internet, Chapter: Location-prediction for mobile wireless systems, (2003).
- Cheng, C., Lemberg, H.L., Philip, S.J., Van den Berg, E., and Zhang, T., “SLALoM: A Scalable Location Management Scheme for Large Mobile Ad-hoc Networks”, Proceedings WCNC (2002).
- Zhang, T., Van den Berg, E., Chennikara, J., Agrawal, P., Chen, J-C., and Kodama, T. “Local Predictive Resource Reservation for Handoff in Wireless IP Networks”, IEEE Journal of Selected Areas in Communications, 19 (10), pp.1931-1941 (2001).
- Van den Berg, E., “Parameter Estimation for Long Range Dependent Data: Single Fine vs. Multiple Coarse Measurements,” Proc. 13th ITC Specialist Seminar on IP Traffic Measurement, Modeling and Management (2000).
- Resnick, S. and Van den Berg, E., “Weak convergence of high-speed network traffic models,” Journal of Applied Probability 37 (2), pp. 575-597 (2000).
- Resnick, S. and Van den Berg, E., “A Test for Nonlinearity of Time Series with Infinite Variance,” Extremes 3 (2), pp. 145-172 (2000).
- Resnick, S. and Van den Berg, E., “Sample Correlation Behavior for the Heavy Tailed General Bilinear Process,” Stochastic Models 16 (2), pp. 233-258 (2000).