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Roch Guérin's Curriculum Vitae

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Academic Background

- Ph.D. Electrical Engineering, California Institute of Technology, Pasadena 1986
- M.S. Electrical Engineering, California Institute of Technology, Pasadena 1984
- Diplôme d'Ingénieur, École Natle. Sup. des Télécomm., Paris, France 1983

Current Research Interests

- Network economy and its impact on technology adoption
- Network robustness and scalability
- Networked applications and peer-to-peer systems
- Routing and traffic engineering in IP networks

Professional Appointments

- Harold B. and Adelaide G. Welge Professor 2013–
  Department of Computer Science and Engineering
  Washington University in Saint Louis
- Department Chair 2013–
  Department of Computer Science and Engineering
  Washington University in Saint Louis
- Alfred Fitler Moore Professor of Telecommunications Networks 1998–2013
  Department of Electrical and Systems Engineering
  University of Pennsylvania
- Founder and CEO and then Chief Scientist 2001–2004
  Ipsum Networks (on leave from U. Pennsylvania)
  Ipsum Networks pioneered the concept of Route Analytics and its use in the next generation of performance and service management software for IP networks.
- Director, Telecommunications and Networking 1999–2001
  Professional Master's Program, University of Pennsylvania

- Manager, Network Control and Services 1997–1998
  Security and Networking Systems Department
  IBM T. J. Watson Research Center
  Responsible for a department working on networking and distributed applications. This included topics such as advanced reservations, policy support for RSVP, QoS routing algorithms and protocols, integrated switch and scheduling designs, etc. Many of the department's contributions were incorporated in commercial IBM routers, i.e., NWays 2210, 2212, and 2216.
- Manager, Broadband Networking 1994–1997
  Security and Networking Systems Department
  IBM T. J. Watson Research Center

  Led a group of $10+$ people carrying out research in the area of design, architecture, and analysis of broadband networks. The group designed and built a QoS capable Router in collaboration with other IBM divisions.
- Manager, Network System Design 1992–1993
  IBM High Performance Computing and Communications Department
  (On assignment from IBM Research)

  Supervising a group of researchers investigating new network algorithms and architectures. Technology developed by the group was deployed in the AURORA testbed, and incorporated in IBM's NWays switches.
- Research Staff Member 1990–1991
  IBM High Performance Computing and Communications Department
  (On assignment from IBM Research)

  Engaged in an architecture and development effort to deploy a leading-edge, integrated, broadband network. The effort involved modeling, design and implementation of network components, and participation in a number of field trials.
- Research Staff Member 1986–1990
  Communications Dpt., IBM T.J. Watson Research Center

  Involved in the design, architecture, and performance evaluation of high-speed switches and networks. Key contributions included the development traffic management capabilities for IBM's new networking architecture. This work was recognized by an IBM Outstanding Innovation Award.
- System Engineer 1983
  Société AERO, Paris, France

  Worked on the design and modeling of a jamming resistant satellite communication system. This involved comparing various modulation and coding schemes for different types of power budgets and jamming strategies.

Awards and Honors

- 2010 IEEE INFOCOM Achievement Award for "Pioneering Contributions to the Theory and Practice of QoS in Networks."

- IEEE INFOCOM 2010 Best Paper Award for the paper entitled "On the Feasibility and Efficacy of Protection Routing in IP Networks," co-authored with K.-W. Kwong, L. Gao and Z.-L. Zhang.
- IEEE Technical Committee on Computer Communications (TCCC) Distinguished Service Award 2009
- ACM Fellow 2006
- IEEE Fellow 2001
- INFOCOM'2000, Distinguished Program Committee Member 2000
- IBM Seventh Invention Achievement Award 1997
- IBM Research Division Technical Group Award 1997
  For design and development of Integrated Switch Router - Early Vehicle
- IBM Research Division Outstanding Innovation Award 1994
  For major contributions to the traffic management and congestion control capabilities of the Networking BroadBand Services architecture.
- IBM AS Division Award 1993
  For contributions to the architecture of interactive CATV systems.
- IBM AS Division Award 1993
  For comparison of shared buffer switch architectures.
- Philip Merlin Memorial Guest Lecturer 1992
  Technion, I.I.T., Haifa, Israel
- IBM Research Division Award 1990
  For comparison of switching platforms for communications systems.

Advisory Boards, Consulting, and Related Activities

- Member Scientific Advisory Board - SITI, University Lusofona (2012–)
- Member Scientific Advisory Board - Simula Research (2010–)
- Board member, Iptivia Inc. (2006–2009)
- Member Technical Advisory Board - Samsung Electronics (2003–2004)
- Member Scientific Advisory Board - France Telecom (2001–2006)
- Technical consultant for AT&T (1999-2000), Growth Networks (acquired by Cisco Systems, 2000), IBM (1998-1999), Lucent Technologies (1999), ReefEdge (2001), Moses & Singer (2007), Iptivia (2005–2008), Thomson Research (2007).
- Expert witness working with Kirkland & Ellis, New York, NY (1999); Fish & Richardson, Washington, D.C. (2005–2006, 2008, 2011–2013); Orrick, Menlo Park, CA (2006), Crowell & Moring (2007); Sterne, Kessler, Goldstein & Fox (2010); Holland & Knight (2011).

Professional Activities

- TPC member, ACM SIGMETRICS (2014)
- Guest editor, ACM Transactions on Internet Technology - Special Issue on Pricing and Incentives in Networks and Systems (2013-2014)
- TPC member W-PIN/NetEcon (2013, 2014)

- Member ACM MobiHoc Best Paper Award selection panel (2012)
- TPC member ACM EC, IEEE ICNP, W-PIN, (2012)
- Member IEEE INFOCOM Life Time Achievement Award selection committee (2011–2012)
- Member IEEE TCCC Outstanding Service Award selection committee (2011–2012)
- Team lead "Network" category, ACM Computing Classification System (CCS) revision project (2011)
- Chair ACM SIGCOMM Test-of-Time Award (2010)
- Chair ACM CoNEXT Steering Committee (2010–2012)
- Editor-in-Chief, IEEE/ACM Transactions on Networking (2009–2013)
- Senior TPC Member ACM SIGCOMM'09
- Area TPC chair IEEE INFOCOM'09
- TPC Member ACM Electronic Commerce'09
- Panelist and external expert for: National Science Foundation – multiple times since 1990; Agence Nationale de la Recherche (ANR - French NSF) – 2009–2011; Institut Telecom (Paris, France) – 2009
- TPC member ACM HotMetrics'08 and IMC'08
- Member ACM CoNEXT Steering Committee (2008–2009)
- Technical Program co-Chair, ACM CoNEXT 2007.
- General Chair, ACM SIGCOMM'2005.
- TPC member, ANCS 2005.
- Member, Editorial Board of Foundations and Trends in Networking (2005–).
- Area Editor, ACM Computer Communications Review (2005–2006).
- Member ACM SIGCOMM Technical Advisory Board (2001–2005).
- Technical Program co-Chair, ACM SIGCOMM'2001.
- Participant, NSF ANIR Committee of Visitors, June 2000.
- Guest-Editor for Dec. 2000 IEEE JSAC issue on *Internet QoS*.
- Editor, Journal of Computer Networks (2000–2001).
- Technical Co-Chair, 1st joint conference of IEEE Com. Soc. and Russian POPOV Society on Internet Technologies and Services (ITS'99).
- Elected Member-at-Large of the Board-of-Governors of the IEEE Communications Society (1999-2002).
- General Co-Chair IWS'99.
- Editor, ACM Computer Communications Review (1998–2001).
- General Chair, IEEE INFOCOM'98.
- Area Editor, IEEE Communications Surveys (1998–2000).
- Chair, IEEE Technical Committee on Computer Communications (1997-1999).
- Technical Editor, IEEE/ACM Trans. Networking (1994–2000).
- SIGCOMM conference PC member, 1996–2000, 2006.
- TPC member, Global Internet 1996 and 1999.
- TPC member, High Speed Networks 1999.
- INFOCOM conference TPC and Area TPC member, 1995–1997, 2000, 2001.
- Technical Editor, Journal of High-Speed Networks (1994–1996).
- Technical Editor, the IEEE Trans. Commun. (1992–1993).
- Member of the CNRI AURORA Testbed management team (1993–1994).

- Member of Sigma Xi

Courses Taught

- Modeling and Performance Evaluation of Interconnected Computer Systems (CSE 538) - Spring 2014
  Dept. Comp. Sci. & Eng., Washington University in St. Louis
  Graduate entry level course
- Advanced Networking Protocols (TCOM 502) - Spring and Fall 1999, Fall 2000, Fall 2003-2004, Spring 2006-2012
  Dept. Elec. & Sys. Eng., University of Pennsylvania
  Graduate entry level course.
- Introduction to Networking and Protocols (ESE 404/TCOM 500) - Fall 2005-2011
  Dept. Elec. Eng., University of Pennsylvania
  Senior level undergraduate and entry level graduate course.
- Networking Fundamentals (TCOM 501) - Spring 2000-2001, Spring 2003-2005
  Dept. Elec. & Sys. Eng., University of Pennsylvania
  Graduate entry level course.
- Computer Communication Networks - Fall 1993
  Dept. Elec. Eng., Columbia University
  Graduate entry level course.

List of Publications [h-index = 50 - Google Scholar]

Theses

T.2 Doctoral Thesis (1986): Queueing and Traffic in Cellular Radio. (Caltech)
T.1 Diplôme d'Ingénieur Thesis (1983): Study and Modelling of an Antijam Satellite System. (ENST, Paris)

Book Contributions

B.3 "Network Quality-of Service" Book chapter (with H. Schulzrinne) in *The Grid: A Blueprint for the New Computing Infrastructure,* edited by Ian Foster and Carl Kesselman, published by Morgan-Kaufman, August 1998.
B.2 "plaNET Routing:" Book chapter (with I. Cidon) in *Routing in Communications Networks,* edited by Martha Steenstrup and co-published in 1994 by Manning Publication and Prentice-Hall.
B.1 "Performance Model of a Shared Medium Packet Switch:" Case Study for *Computer Networks and Systems: Queueing Theory and Performance Evaluation, 2nd Ed.,* by T. G. Robertazzi, Springer Verlag, 1993, pp. 13–18.

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Sync your system to PACER to automate legal marketing.