Ayan Roy-Chowdhury, Ph.D.

Associate

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Overview

About Ayan

Ayan Roy-Chowdhury, Ph.D., is an associate in the Washington, D.C., office of Fish & Richardson P.C. He works on patent prosecution and post-grant matters in electrical and computer engineering, mechanical engineering, software and medical devices.

The technology areas in which Dr. Roy-Chowdhury practices include telecommunications; communication networks including sensor, wireless and satellite networks; network security and cryptography; signal processing algorithms and software tools for signal processing; semiconductor devices and circuits, including memory technologies; mobile devices and applications; software user interfaces; interactive voice applications and systems; mechanical devices; medical appliances; online search infrastructure; database systems; cloud computing technologies; and business methods, among others. His experience encompasses all stages of the patent prosecution lifecycle, including application drafting; filing in the U.S. and coordinating filings in foreign jurisdictions; prosecuting applications – including office actions and patent appeals; and continuing applications. As part of this experience, Dr. Roy-Chowdhury regularly interacts with examiners at the U.S. Patent and Trademark Office, and with associates in foreign jurisdictions. In addition to patent prosecution, Dr. Roy-Chowdhury works on other intellectual property aspects in the above technology areas, including post-grant practice, such as *inter partes* reviews and patent reexaminations; due diligence; and opinions and strategic counseling.?

Prior to joining the firm, Dr. Roy-Chowdhury gained significant experience in networking and network security research, particularly for wireless and satellite networks. He has authored cited technical

publications, reviewed articles for several electrical and computer engineering journals, and served on the program committees of international technical conferences related to electrical and computer engineering and satellite technologies. He is also the inventor of a couple of U.S. patents. In addition, Dr. Roy-Chowdhury has several years of industry experience as a principal engineer in systems design and software development in communication technologies.

Focus Areas

Services

- Patent
- Post-Grant
- Patent Prosecution
- Patent Litigation

Industries

- Academic Research and Medical Centers
- Aerospace and Defense
- Cleantech
- Consumer Products
- Digital Media and E-Commerce
- Electrical and Computer Technology
- Financial and Business Services
- Internet
- Medical Devices
- Semiconductors
- Telecommunications
- Transportation

Education

J.D. *cum laude*, Georgetown University Law Center

Ph.D., Electrical and Computer Engineering, University of Maryland

M.S., Electrical and Computer Engineering, University of Maryland

B.S., Electronics and Telecommunications Engineering, Jadavpur University

Experience

Named Inventor on Patents

U.S. 8,397,062, Method and System for Source Authentication in Group Communications.

U.S. 8,671,273, Method for Performance-aware Security of Unicast Communications in Hybrid Satellite Networks.

Insights

Selected Publications

Ayan Roy-Chowdhury and John S. Baras, “Energy-efficient Source Authentication for Secure Group Communication with Low-Powered Smart Devices in Hybrid Wireless/Satellite Networks,” *EURASIP Journal on Wireless Communications and Networking – Special Issue on Security and Resilience for Smart Devices and Application*, December 2010.

Ayan Roy-Chowdhury, John S. Baras and Mitch Robinson, “VSAT Return Channel Optimizations for Broadband Internet Support in 2-Way Satellite Networks,” *Proc. 16th Ka and Broadband Communications Navigation and Earth Observation Conference*, Pg. 479-486, Milan, Italy, October 2010.

Ayan Roy-Chowdhury and John S. Baras, “Performance-aware Security of Unicast Communication in Hybrid Satellite Networks,” *Proc. IEEE International Conference on Communications 2009 (ICC 2009)* , Dresden, Germany, June 2009.

Ayan Roy-Chowdhury and John S. Baras, “A Lightweight Certificate-based Source Authentication Protocol for Group Communication in Hybrid Wireless/Satellite Networks,” *Proc. IEEE Global Communications Conference (Globecom) 2008*, New Orleans, LA, USA, December 2008.

Ayan Roy-Chowdhury, John S. Baras, Michael Hadjitheodosiou and Spyro Papademetriou, “Security Issues in Hybrid Networks with a Satellite Component,” *IEEE Wireless Communications*, December 2005.

Memberships & Affiliations

American Intellectual Property Law Association (AIPLA)

Sigma Xi – the Scientific Research Society

Institute for Electrical and Electronics Engineers (IEEE)

Golden Key International Honor Society

Formerly technical program committee member for several international conferences

Formerly reviewer for multiple technical journals and conferences

Languages

- English
- Hindi
- Bengali