

Curriculum Vitae

Dr. Pramode Verma

Professor Emeritus of Electrical and Computer Engineering
The University of Oklahoma
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Education

- Master of Business Administration (1984)
Wharton School of the University of Pennsylvania, USA.
- Doctor of Philosophy, Electrical Engineering (1970)
Concordia University - Montreal, Quebec, Canada.
Dissertation Title: Some Properties of Integrals of Network Functions.
- Bachelor of Engineering, Telecommunication (1962)
Indian Institute of Science, Bangalore, India.
- Bachelor of Science (Honors), Physics (1959)
Patna University, India.

Professional Employment

a. Academics:

- Professor Emeritus of Electrical and Computer Engineering, The University of Oklahoma (2017--).
- Professor of Electrical and Computer Engineering, The University of Oklahoma (1999-2016).
- Adjunct Professor, Concordia University, Montreal, Canada (1983- 1988).
- Part-time Lecturer, University of Ottawa, Graduate School of Engineering, Canada (1975-1978).
- Assistant Professor, Concordia University, Montreal, Canada (1970-1971).
- Offered invited seminars at several US and international universities and research institutions.
- Also served as the external examiner of Ph.D. theses at several universities.

b. Industrial experience:

- 1996-1999: *Managing Director* Business Development, *Lucent Technologies* - Global Service Providers Business (1998-1999), and Business Communications System (BCS) (1996-1998). Created strategic alliances and partnerships with leading organizations. During BCS tenure in the call center business, created a \$50M revenue stream through partnerships and managed the associated P&L.

- 1995-1996: *Chief Technical Officer Integrated Solutions, Lucent Technologies* - Business Communication Systems. Provided technical and strategic marketing leadership during the conceptualization and development phases of a \$500-million market-driven call center business. Provided thought leadership in assessing the marketability of R&D driven projects.
- 1984-1995: *Technical Manager AT&T Bell Laboratories*. Established and managed the first self-funding lab - the Systems Interoperability Lab - for executing multi-vendor certification/market cooperation program for AT&T's premises products/network services with industry's leading vendors' CPEs. Developed/supported AT&T's position on aspects of ISDN at major public forums and for major customers. Also, concurrently ran a competitive analysis and reverse engineering lab for Business Communication Systems. Supervised approximately twenty members of technical staff.
- 1980-1984: *District Manager AT&T General Departments*. Worked in the Business Marketing Department on the architecture of enhanced network services. This work was used in the divestiture of the Bell System.
- 1978-1980: *Member of Technical Staff AT&T Bell Laboratories*. Worked in the area of data network planning and performance evaluation from an end-user's perspective. This work was used in planning AT&T's first data network - Advanced Communications System.
- 1971-1978: *Supervising Engineer Bell Canada, Ottawa*. Managed group-level activities at various stages in the planning, design, and operation of Canada's nationwide digital data networks, the Dataroute and DataPac.

Honors and Awards

2016: IEEE Tulsa Section, Outstanding COMSOC Member Award.

2015: Distinguished Service Award by the Information and Telecommunications Education and Research Association (ITERA).

2014: Hind Rattan (Jewel of India) Award for Non-resident Indians by the NRI Welfare Society of India

2009: OU-Tulsa President's Leadership Award for excellence in Research Development

Professional Affiliation

- Senior Fellow, International Telecommunication Education and Research Association (2011)
- Professional Engineer, registered in the Province of Ontario, Canada
- Senior Member, Institute of Electrical and Electronics Engineers, New York
- Governor, International Council for Computer Communication, Washington, D.C. (1976-2004)
- President, International Council for Computer Communication, Washington, D.C. (1997-1999)
- Associate Editor, Wiley Journal of Security and Communication Networks
- Reviewer, Several IEEE Communications Society Journals and Magazines
- Guest Editor, IEEE Communications Society Magazines
- Reviewer, Computer Communications Journal
- Panelist, Review Panel - NSF SBIR (Cyber Trust)
- Panelist, Review Panel - NSF SBIR (Phase 2)
- Panelist, Review Panel, NSF Cyber Trust
- Session chair at various international conferences

Patents

Year 2018

- Optical Cryptography Systems and Methods
US Patent No. 10,079,676; August 15, 2018.

Year 2017

- Optical Cryptography Systems and Methods
US Patent No. 9,735,955; August 15, 2017.

Year 2016

- Optical Cryptography Systems and Methods
US Patent No. 9,246,680, January 26, 2016.

Year 2014

- Light Surface Display for Rendering a Three-dimensional Image Japan Patent No. 5,594,718, August 15, 2014.

Year 2013

- Maximization of Throughput under a Fairness Constraint in DWDM-based Optical Networks US Patent No. 8,605,580, B2, December 10, 2013.

Year 2012

- 3D Volumetric Display
US Patent No. 8,247,755, B2 August 21, 2012.
- Remote Cervical Dilation Monitoring System and Method
US Patent No. 8,100,840, B2 January 24, 2012.

Year 2011

- 3D Light Surface Display
US Patent No. 8,075,139, B2, December 13, 2011

Year 2010

- Continuous Wireless Monitoring of the Cervical Dilation of a Pregnant Woman US Patent No. 7,819,825, B2 October 26, 2010.
- Enhancing the Traffic Carrying Capacity of Telecommunication Networks
US Patent No. 7,668,135 B2, February 23, 2010.
- Light Surface Display for Rendering a Three-dimensional Image
US Patent No. 7,858,913, B2 December 28, 2010.

Year 2009

- Volumetric Liquid Crystal Display for Rendering a Three-dimensional Image
US Patent No.: 7,537,345 B2, May 26, 2009.

Keynote Addresses

- "Unconditional Security through Quantum Uncertainty", Delivered at the *IEEE LATINCOM*, November, 2017, Guatemala City, Guatemala.
- "Quantum Communication", Delivered at the *4th International Workshop on Privacy, Security and Trust in Mobile and Wireless Systems (MobiPST 2014)*, August 7, 2014, Shanghai, China, in conjunction with ICCCN 2014.
- "The Dawn of Quantum Communication," Delivered at the *4th International Symposium on Information and Communication Technology, SoICT 2013*, Da Nang, Vietnam, December 5-6, 2013.
- "The Science of Networks," Delivered at the *12th International Conference on Networks, ICN 2013*, Seville, Spain, January 27-February 1, 2013.
- "The Emerging Science of Complex Networks," Delivered at the *4th IEEE Latin-American Conference on Communications 2012*, Cuenca, Ecuador, November 7-9, 2012.

Publications

a. Books

- *The Economics of Telecommunication Services – An Engineering perspective*, Author (with Fan Zhang), Springer, 2020.
- *Multi-photon Quantum Secure Communication*, Author (with Mayssa Elrifai and Kamwai Clifford Chan), Springer, 2019.
- *Proceedings of International Conference On Communication and Networks, COMNET 2016*, Editor (with Nilesh Modi and Bhushan Trivedi), ISBN 978-981-10-2749-9, Springer 2017.
- *Voice over IP: Quality of Service, Pricing and Security*, Author (with Ling Wang), Verlag GmbH. Springer, 2010.
- *The Computer Communication Revolution Multi-Disciplinary Retrospective and Prospective*, Contributing Editor (with S. Ramani), ICC Press, 1997.
- *Performance Estimation of Computer Communication Networks: A Structured Approach*, Author, Computer Science Press, 1989. (Also translated into French as *Models De Performances des Reseaux*, W. H. Freeman & Co., 1992.)
- *ISDN Systems Architecture, Technology, and Applications*, Contributing Editor, Prentice-Hall, 1990. (Also published by Prentice-Hall International in paperback for sale outside the United States, Mexico and Canada.)
- *Journal of Telecommunications*, Editor, 1982 - 1985.
- *Proceedings of the Third International Conference on Computer Communication*, Editor, Toronto, Canada, Aug. 3-6, 1976.

b. Book Chapters

- *Internet Networks - Wired, Wireless, and Optical Technologies*, Contributor of a chapter titled "Optical Burst Switching: An Emerging core Network Technology", with co-author Yuhua Chen, (Edited by K.

Iniewski), CRC Press, Taylor and Francis Group, 2010, pp. 265-290.

- *Security and Privacy in Mobile and Wireless Networks*, Contributor of a chapter with co-authors Di Jin and Stamatios Kartalopoulos titled “Wireless Ad Hoc and Sensor Network Security,” (Edited by Stefanos Gritzalis, Tom Karygiannis and Charalabos Skianis), Troubador Publishing Ltd., Leicester, U.K., 2009, ISBN 978-1905886-906, pp. 129-159.
- *Security and Privacy in Mobile and Wireless Networks*, Contributor of a chapters with co-authors Wen Gu and Stamatios Kartalopoulos titled “Security Architectures and Protocols in WLANs and B3G/4G Mobile Networks,” (Edited by Stefanos Gritzalis, Tom Karygiannis and Charalabos Skianis), Troubador Publishing Ltd., Leicester, U.K., 2009, ISBN 978-1905886-906, pp. 183-215.
- *McGraw Hill Encyclopedia of Science and Technology*, Contributor of a section titled "Packet Switching", McGraw Hill, 11th Edition, 2012.
- *McGraw Hill Encyclopedia of Science and Technology*, Contributor of a section titled "Packet Switching," McGraw Hill, 10th Edition, 2005.

So this is 1984: Some Personal Views by Governors of the International Council for Computer Communication, Contributor of a chapter titled “A 1984 Perspective on Developments in Computer Communications Systems,” (Edited by D. Parkhill and P. Enslow, Jr.), Elsevier Science Publishers B. V., 1984.

c. *Journal Articles*

1. Pramode Verma, “The Natural Impact of Artificial Intelligence,” *International Journal of Critical Infrastructure Protection*, Volume 22, Sept. 2018, Pages 150-151.
2. Nishaal J. Parmar and Pramode K. Verma, “A Comparative Evaluation of Algorithms in the Implementation of an Ultra-Secure Router-to-Router Key Exchange System,” *Secur. and Commun. Netw.*, vol. 2017, Article ID 1467614, 7 pages, 2017. doi:10.1155/2017/1467614
3. Pramode Verma, “Unconditional Security through Quantum Uncertainty,” *International Journal of Critical Infrastructure Protection*, Volume 16, March 2017, pages 36-38.
4. Chan K.W.C, El Rifai M., Verma P.K., Kak S., Chen Y, “Security Analysis of the Multi-photon Three- stage Quantum Key Distribution,” Posted on: <http://arxiv.org/abs/1503.05793>, *Int'l. J. on Cryptography and Inf. Secur. (IJCIS)*, Vol. 5, No. ¾, December 2015.
5. El Rifai, Mayssaa, Kam Wai Clifford Chan, and Pramode K. Verma, “Multi-stage quantum secure communication using polarization hopping,” *Secur. and Commun. Netw.*, Wiley Journal, vol. 8, issue 18, October 1, 2015, pp. 4333-4342; DOI: 10.1002/sec.1364.
6. El Hajj, Rasha, Gregory MacDonald, Pramode Verma, and Robert Huck, “Implementing and testing a fiber-optic polarization-based intrusion detection system,” *Opt. Eng.* 54 (9), 096107 (September 11, 2015); doi: 10.1117/1.OE.54.9.096107.

7. Verma P.K., El Rifai M, "An Ultra-secure Router-to-router Spontaneous Key Exchange System," *Int'l. J. of Compu. Netw. and Inf. Secur. (IJCNIS)*, MECS Publisher (June 7, 2015), Vol. 7, No. 7, pp. 1-9; DOI: 10.5815/ijcnis.2015.07.01.
8. Nomula R., El Rifai M. and Verma P.K., "Multi-photon Tolerant Protocols for Quantum Secure Communication in Wireless Standards," *Int'l. J. of Secur. and Netw.*, Inderscience publishers, Vol 11, 2015-Inpress, Accepted for publication April 2015.
9. A. Roozgard, N. Barzigar, S. Cheng, and P. Verma, "3D-SCoBeP: 3D Medical Image Registration using Sparse Coding and Belief Propagation," *Int'l. J. of Diagnostic Imaging (IJDI)*, vol. 2 no. 1, 2015.
10. Aminmohammad Roozgard, Nafise Barzigar, Samuel Cheng, and Pramode Verma, "Genome Privacy Protection using Compressed Sensing," *BMC Biomed. Informatics and Decision Making*, 2014.
11. Aniruddha A. Agharkar, Gregory MacDonald, and Pramode K. Verma, "DiffStart: An Algorithm to Improve the Start-up Behaviour of TCP for High Bandwidth-delay Networks," *J. of Telecommun.*, vol.24, issue 2, May 2014.
12. Nafise Barzigar, Aminmohammad Roozgard, Pramode Verma, and Samuel Cheng, "A Video Super Resolution Framework Using SCoBeP," *IEEE Trans. on Circuits and Syst. for Video Tech. (TCSVT)*, 2013.
13. Ziping Hu, Krishnaiyan Thulasiraman, and Pramode K. Verma, "Complex Networks: Traffic Dynamics, Network Performance, and Network Structure," *Amer. J. of Operations Res.*, vol. 3 no. 1A, 2013, pp. 187-195, doi: 10.4236/ajor.2013.31A018.
14. Pramode Verma, "The Role of the Network in Implementing Security and Privacy," *Int'l. J. of Critical Infrastructure Protection*, vol. 6, issue 1, March 2013, pp. 25-27.
15. Nafise Barzigar, Aminmohammad Roozgard, Samuel Cheng, and Pramode Verma, "SCoBeP: Dense Image Registration using Sparse Coding and Belief Propagation," *J. of Visual Commun. and Image Representation (JVIS)*, 2012.
16. S. Wang, L. Cui, D. Liu, R. C. Huck, P. Verma, J. J. Sluss, and S. Cheng, "Vehicle Identification via Sparse Representation," *IEEE Trans. on Intelligent Transportation Syst.*, vol. 13, no. 2, 2012, pp. 955- 962.
17. Pramode Verma, "The Elusive Goal of Net Neutrality," *Int'l. J. of Critical Infrastructure Protection*, vol. 4, issue 3+4, Dec. 2011, doi: 10.1016/j.ijcip.2011.09.001, pp. 135-136.
18. Fan Zhang and Pramode K. Verma, "Pricing Multi-class Network Services Using the Shapley Value," *Netnomics*, vol. 12, no. 1, April 2011, pp. 61-75.
19. Anjan Ghosh and Pramode Verma, "Lyapunov Exponent of Chaos Generated by Acousto-optic

- Modulators with Feedback,” *J. of Opt. Eng.*, vol. 50, 017005, Jan 20, 2011, doi:10.1117/1.3530105.
20. F. Zhang, P. Verma, and S. Cheng, "Pricing, Resource Allocation and QoS in Multi-class Networks with Competitive Market Model," *IET Commun.*, vol. 5, no.1, Jan. 2011, pp. 51-60.
 21. Wen Gu, Stamatios Kartalopoulos, and Pramode Verma, "Fast and Secure Handover Schemes Based on Proposed WiMAX over EPON Network Security Architecture," *WSEAS Trans. on Commun.*, vol. 9, issue 2, 2010, pp. 115-126.
 22. Wen Gu, Pramode Verma, and Stamatios Kartalopoulos, "A Unified Security Framework for WiMAX over EPON Access Networks," *J. of Secur. and Commun. Netw.*, Wiley, July 1, 2010, doi:10.1002/sec.24.
 23. Pramode Verma, Anjan Ghosh, Robert Huck, Samuel Cheng, Shanshan Chen, Anil Kaul, and Mark Martens, "Designing a Wireless Sensor System for Continuous Monitoring of the Cervical Dilation of a Pregnant Woman," *Int'l. J. Adv. Media and Commun.*, vol. 3, no. 1/2, 2009, pp. 126-138.
 24. Yuhua Chen, Pramode Verma, and Subhash Kak, "Embedded Security Framework for Integrated Classical and Quantum Cryptography Services in Optical Burst Switching Networks," *Secur. and Commun. Netw.*, vol. 2, no. 6, Nov.-Dec. 2009, pp. 546-554.
 25. Di Jin, Pramode Verma, and Stamatios Kartalopoulos, "Fast Convergent Key Distribution Algorithms Using a Dual Quantum Channel," *Secur. and Commun. Netw.*, vol. 2, no. 6, Nov.-Dec. 2009, pp. 519-530.
 26. Pramode Verma, "George Orwell's Nineteen Eighty-four, A Retrospective and Prospective Twenty-five Years Later," *Int'l J. of Critical Infrastructure Protection*, vol. 2, no. 3, Oct. 2009, pp. 71-72.
 27. Ling Wang, Yahia Tachwali, Pramode Verma, and Anjan Ghosh, "Impact of Bounded Delay on Throughput in Multi-hop Networks," *J. of Netw. and Comput. Appl.*, vol. 32, issue 5, Sept. 2009, pp. 1031-1038.
 28. Ziping Hu, Pramode Verma, and James Sluss, Jr., "Routing in Degree Constrained FSO Mesh Networks," *Int'l J. of Hybrid Inf. Technol.*, vol. 2, no. 2, April 2009, pp. 71-81.
 29. Yuhua Chen and Pramode Verma, "Impact of Bimodal Traffic on Latency in Optical Burst Switching Networks," *Research Letters in Commun.*, vol. 2008, article ID 175359, 2008.
 30. Ziping Hu, Pramode Verma, and James Sluss Jr., "Improved Reliability of Free-space Optical Mesh Networks Through Topology Design," *J. of Opt. Netw.*, vol. 7, no. 5, May 2008, pp. 436-448.
 31. Yuhua Chen and Pramode Verma, "Secure Optical Burst Switching: Framework and

- Research Directions,” *IEEE Commun. Mag.*, vol. 46, no. 8, May 2008, pp. 40-45.
32. M.Dahshan and P. Verma, “Refined Assured Forwarding Framework for Differentiated Service Architecture,” *J. of Comput. Commun.*, 2007, pp. 3842-3849.
33. D.Jin, S. Kartalopoulos, and P.Verma, “Analysis of Security Vulnerabilities And Countermeasures of Ethernet Passive Optical Networks (EPON),” *J.of China Commun.*, vol. 4, no. 3, 2007, pp. 17-29.
34. Y. Chen and P. Verma, “Analytical Model for Burstification Latency in Optical Burst Switched Networks,” *IEICE Trans. on Commun.*, vol. E90-B, no. 9, Sept. 2007, pp. 2588-2591.
35. Y Chen, W. Tang and P. Verma, “Latency In Grid Over Optical Burst Switching With Heterogeneous Traffic,” *Lecture Notes in Comput., Sci.*, Springer, vol. 4782, Sept. 2007, pp. 334-345.
36. M. Dahshan and P.Verma, “Resources Based Pricing Framework for Integrated Services Networks,” *J. of Netw.*, vol. 2, no. 3, June 2007, pp. 36-45.
37. Y. Qu and P. K. Verma, “The Notion of Cost and Quality in Telecommunication Networks: An Abstract Approach,” *IEEE Proc. Commun.*, vol. 152, no. 2, April 2005, pp. 167-171.
38. Y. Qu and P. K. Verma, “Limits on the Traffic Carrying Capacity of Optical Networks with an Arbitrary Topology,” *IEEE Commun. Lett.*, vol. 8, no. 10, Oct. 2004, pp. 641-643.
39. C. F. Foard, L. A. Spindel, and P. K. Verma, “Switch-To-Computer Networking in the Nineties: The Evolution of AT&T's Switch- Computer Interface,” *AT&T Tech. J.*, vol. 70, no. 5, Sept./Oct. 1991, pp. 45-58.
40. H. V. Bertine, W. B. Elsner, P. K. Verma, and K. T. Tewani, “Overview of Protocol Testing Programs, Methodologies, and Standards,” *AT&T Tech. J.*, vol. 69, no. 1, Jan./Feb. 1990, pp. 7-16.
41. P. K. Verma, “A 1984 Perspective on Developments in Computer Communication Systems,” *Comput. Netw.*, vol. 9, 1985, pp. 43-48.
42. N. D. Georganas, S. G. Shiva, P. K. Verma, and J. S. Jawanda, “Evaluation of the Mean Error-Free Interval of a Noisy Data Channel,” *IEEE Trans. on Commun.*, vol. com-26, no. 1, Jan. 1978, pp. 185-187.
43. A. Chatterjee, N. D. Georganas, and P. K. Verma, “Analysis of a Packet-Switched Network with End-to- End Congestion Control and Random Routing,” *IEEE Trans. on Commun.*, vol. 25, no. 12, Dec. 1977, pp. 1485-1489.
44. S. Harting and P. K. Verma, “Universal Time Frame: A New Network Feature for Delay Minimization,” *IEEE Trans. on Commun.*, vol. com-23, no. 11, Nov. 1975, pp. 1339-1342.

45. P. K. Verma and A. M. Rybczynski, "The Economics of Segregated and Integrated Systems in Data Communications with Geometrically Distributed Message Lengths," *IEEE Trans. on Commun.*, vol. 22, no. 11, Nov. 1974, pp. 1844-1848.
46. J. G. Baart, S. Harting, and P. K. Verma, "Network Synchronization and Alarm Remitting in The Dataroute," *IEEE Trans. on Commun.*, vol. com-22, no. 11, Nov. 1974, pp. 1873-1877.
47. P. K. Verma and V. Ramachandran, "Some Properties of the Integrals of Even and Odd Parts of Hurwitz Polynomials," *IEEE Trans. on Circuit Theory*, vol. CT-20, no. 3, May 1973, pp. 311-314.
48. E. Goodman, V. Ramachandran, and P. K. Verma, "Necessary Coefficient Conditions for Voltage Transfer Functions of Some RC Ladder Networks," *IEEE Trans. on Circuits and Syst.*, vol. 19, no. 5, Sept. 1972, pp. 514-515.
49. P. K. Verma and V. Ramachandran, "Synthesis of Transfer Functions by Non-Symmetrical Lattice Networks using Lossy Coils," *Electron. Lett.*, vol. 7, no. 14, July 15, 1971, pp. 409-410.
50. J. C. Gigure, V. Ramachandran, and P. K. Verma, "Use of Routh Hurwitz Algorithms for Determining the Number of Negative Real Axis Zeros in a Polynomial Having Real Coefficients," *Electron. Lett.*, vol. 5, no. 22, Oct. 30, 1969, pp. 546.
51. P. K. Verma, V. Ramachandran, and M. N. Swamy, "High- Selectivity Variable Null RC Networks," *Int'l. J. Electron.*, vol. 25, no. 2, 1968, pp. 111-115.

d. Conference Papers

1. Bhosale, Shweta S., Darunkar, Bhagyashri Arun, Puneekar, Nikhil V., Gregory MacDonald, Verma, Pramode K., "Polarization based secure AES key transmission over optical fiber", presented at the *IEEE ICC 2016 Commun. and Inf. Syst. Secur. Symposium and published in the Proceedings of IEEE ICC 2016*, Kuala Lumpur, 23-27 May, 2016.
2. Bhagyashri Darunkar, Nikhil Puneekar and Pramode K. Verma, "Secure satellite communication using multi-photon tolerant quantum communication protocol", *Proc. SPIE 9615, Quantum Commun. and Quantum Imaging XIII*, 961509, (September 1, 2015); doi:10.1117/12.2188575; <http://dx.doi.org/10.1117/12.2188575>
3. Chan K.W.C, El Rifai M., Verma P.K., Kak S., Chen Y., "Multi-Photon Quantum Key Distribution Based on Double-Lock Encryption", presented at the *CLEO 2015 Conference*, San Jose, California, May 10-15, 2015.

4. El Rifai M., Verma P.K., "Quantum secure communication using a multi-photon tolerant protocol", *Proc. SPIE 9377, Advances in Photonics of Quantum Computing, Memory, and Commun. VIII*, 937713 (March 4, 2015); doi:10.1117/12.2077229.
5. Mayssaa El Rifai and Pramode K. Verma, "An IEEE 802.11 Quantum Handshake Using the Three-stage Protocol," *23rd Int'l. Conf. on Computer Commun. and Netw., ICCCN 2014*, and published in the Proceedings, Shanghai, China, August, 4-7, 2014.
6. Abhishek Parakh and Pramode Verma "Improving the Efficiency of Entanglement Based Quantum Key Exchange," *23rd Int'l. Conf. on Computer Commun. and Netw., ICCCN 2014*, and published in the Proceedings, Shanghai, China, August, 4-7, 2014.
7. Bhagyashri Darunkar and Pramode Verma, "The Braided Single-stage Protocol for Quantum-secure Communication," *SPIE.DDS Conf.*, Baltimore, MD, May 5-9, 2014.
8. A. Roozgard, N. Barzigar, P. Verma, and S. Cheng, "3D Medical Image Denoising Using 3D Block Matching and Low-rank Matrix Completion," *47th Asilomar Conf. on Sig. Syst. and Comput.*, Pacific Grove, CA, Nov. 3-6, 2013.
9. Nafise Barzigar, Aminmohammad Roozgard, Pramode Verma, and Samuel Cheng, "Medical Image Denoising Using 3D-Block Matching and Low-rank Matrix Completion," *OU-Tulsa Student Research Forum*, Tulsa, OK., 2013. (Best Research Paper)
10. Aminmohammad Roozgard, Nafise Barziger, Pramode Verma, and Samuel Cheng, "Genomic Data Alignment Using Sparse Coding and Belief Propagation," *OU-Tulsa Student Research Forum*, Tulsa, OK., 2013. (Awarded Research Paper)
11. N. Barzigar, A. Roozgard, P. Verma, and S. Cheng, "Introducing Diversity to Normalized Cross Correlation for Dense Image Registration," *47th Asilomar Conf. on Sig. Syst. and Comput.*, Pacific Grove, CA, Nov. 3-6, 2013.
12. Ziping Hu, Pramode K. Verma, and Krishnaiyan Thulasiraman, "Local Flow Distribution and Optimal Weighting Against Congestion and Cascading Failures in Weighted Complex Networks," *European Conf. on Complex Syst. (ECCS'13) Complex Syst. Soc.*, Barcelona, Spain, Sept. 16-20, 2013
13. Mayssaa El Rifai, Nikhil Puneekar, and Pramode K. Verma, "Implementation of an M-ary Three-Stage Quantum Cryptography Protocol," *SPIE Quantum Commun. and Quantum Imaging XI*, San Diego, CA, Aug. 25-29, 2013.
14. Mayssaa El Rifai and Pramode K. Verma, "An Algorithmic Approach to Securing the Three-stage Quantum Cryptography Protocol," *12th IEEE Int'l. Conf. on Trust, Secur. and Privacy in Comput. and Commun. (IEEE TrustCom-13)*, Melbourne, Australia, July 16-18, 2013.
15. N. Barzigar, A. Roozgard, P. Verma, and S. Cheng, "Mixture Noise Removal in Ultrasound Images Using SCoBeP and Low-rank Matrix Completion," *Eng. in Med. and Biology Soc. (EMBC), 35th Annu. Int'l. Conf. of the IEEE*, Osaka, Japan, July 3-7, 2013, doi: 10.1109/EMBC.2013.6609449, pp. 109-112.

16. Nilambari Gawand, Mayssaa El Rifai, Gregory MacDonald, and Pramode K Verma, "Superdense Coding for Dual-Quantum Channel Quantum Key Distribution," *Quantum Inf. and Meas. Conf.*, Rochester, NY, June 17-20, 2013.
17. Yuhua Chen, Subhash Kak, Pramode K. Verma, Gregory Macdonald, Mayssaa El Rifai, and Nikhil Puneekar, "Multi-Photon Tolerant Secure Quantum Communication - From Theory to Practice," *Int'l Conf. on Commun.(IEEE ICC 2013)*, Budapest, Hungary, June 10-13, 2013.
18. Adeola Fasiku, Anjan Ghosh, and Pramode Verma, "Determination of the Direction of Arrival of a Light Beam Using an Angle-diversity Array of Photodiodes," *Free-space Laser Commun. and Atmospheric Propagation XXV, (SPIE LASE)*, San Francisco, CA, Feb. 2-7, 2013.
19. Ziping Hu, Pramode K. Verma, and Krishnaiyan Thulasiraman, "Interplay Between Traffic Dynamics and Network Structure," *8th Int'l Conf. on Netw. Syst. (ICONS 2013)*, Seville, Spain, Jan. 27 – Feb. 1, 2013.
20. Sayonna Mandal, Gregory MacDonald, Mayssaa El Rifai, Nikhil Puneekar, Farnaz Zamani, Yuhua Chen, Subhash Kak, Pramode Verma, Robert Huck, and James Sluss, "Multi-Photon Implementation of Three-Stage Quantum Cryptography Protocol," *27th Int'l. Conf. on Inf. Netw. (ICOIN 2013)*, Bangkok, Thailand, Jan. 27-30, 2013.
21. N. Barzigar, A. Roozgard, S. Cheng, and P. Verma, "A New Denoising Technique for Ultrasound Images Using Block Matching Filtering and Low-rank Matrix Completion," *Hong Kong Productivity Council / Biomed. Eng. Int'l. Conf.*, Hong Kong, China, Dec. 5-8, 2012.
22. A. Roozgard, N. Barzigar, P. Verma, and S. Cheng, "Lung Nodule Segmentation Using Kernel RX Algorithm and Graph-cuts," *Hong Kong Productivity Council / Biomed. Eng. Int'l. Conf.*, Hong Kong, China, Dec. 5-8, 2012.
23. N. Barzigar, A. Roozgard, S. Cheng, and P. Verma, "A Robust Super Resolution Method for Video," *46th Asilomar Conf. on Sig., Syst., and Comput.*, Pacific Grove, CA, Nov. 4-7, 2012.
24. N. Barzigar, A. Roozgard, S. Cheng, and P. Verma, "An Efficient Video Denoising Method Using Decomposition Approach for Low-rank Matrix Completion," *46th Asilomar Conf. on Sig., Syst., and Comput.*, Pacific Grove, CA, Nov. 4-7, 2012.
25. N. Barzigar, A. Roozgard, P. Verma, and S. Cheng, "Removing Mixture Noise from Medical Images Using Block Matching Filtering and Low-rank Matrix Completion," *IEEE Conf. on Healthcare Informatics, Imaging, and Syst., Biology (IEEE HISB)*, San Diego, CA, Sept. 27-28, 2012.
26. A. Roozgard, N. Barzigar, S. Cheng, and P. Verma, "Medical Image Registration Using Sparse Coding and Belief Propagation," *34th Ann. Int'l. Conf. of IEEE Eng. In Medicine and Biology Soc. (IEEE EMBC)*, San Diego, CA, Aug. 28 – Sept. 1, 2012.
27. Farnaz Zamani, Sayonna Mandal, and Pramode Verma, "A Three-stage Phase Encoding Technique for Quantum Key Distribution," *2102 Int'l. Conf. on Secur. and Manage.*, Las Vegas, NV, July 16-19, 2012.

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