

Faculty Vita

Name: Siew T. Koay

Academic Rank: Professor of Electrical and Computer Engineering, Prairie View A&M University, Prairie View, TX 77446

Education:

Ph.D. University of California at Berkeley; May 1971; (Advisor: Prof. David Blackwell)

M.S.E.E., University of Toledo, Toledo, Ohio; May 1964

B.S.E.E., University of Toronto, Toronto, Canada; May 1963

Academic Experience:

9/99 – Present: Professor of Electrical Engineering, Prairie View A&M University

9/84 – 8/99: Associate Professor of Electrical Engineering, Prairie View A&M University

9/85 - 5/87: Director of Computer Science Program, Joint Appointment as Associate Professor of Electrical Engineering and Computer Science, Prairie View A&M University

9/1996 - 5/2014: Assistant to Dr. John O. Attia, Head of Department of Electrical & Computer Engineering, PVAMU, Prairie View, Texas.

9/2002 - 8/2010: Ph.D. Program Coordinator, Department of Electrical & Computer Engineering, PVAMU, Prairie View, Texas.

9/76 - 8/84: Associate Professor, Department of Mathematical Sciences, University of Arkansas

9/71 - 8/76: Assistant Professor, Department of Mathematics, Mississippi Valley State University

5/65 - 9/69: Research Assistant, University of California at Berkeley

Non-academic Experience:

6/81 - 8/81: NASA-ASEE Faculty Research Fellow, Goddard Space Flight Center

Research Topic: “Computer Science: Key to a Space Program Renaissance”

6/80 - 8/80: Faculty Research Fellow, Lawrence Livermore National Laboratory

Research Topic: “Development of “3-Dimensional Computer Modeling of Fields and Particles”

6/79 - 8/79: NASA-ASEE Faculty Research Fellow, Langley Research Center

Research Topic: “Avionics: Projections for Civil Aviation 1995-2000”

6/78 - 8/78: NASA-ASEE Faculty Research Fellow, Langley Research Center

Research Topic: “Air Cargo: An Integrated Systems View”

6/77 - 8/77: NASA-ASEE Faculty Research Fellow, Marshall Space Flight Center

Research Topic: “Planning for Materials Processing in Space”

6/64 - 1/65: Electrical Engineer, Haughton Elevator Company, Toledo, Ohio

5/63 - 9/63: Electronics Engineer, De Havilland Aircraft of Canada, Ontario, Canada

C. Publications in the Last five Years:

Most Related Publication:

1. Sharmistha Khan, Dhadesugoor R. Vaman, Siew T. Koay, "Highly Reliable Multi-Service Provisioning Using Sequential Prediction of Zone and PL&T Tracking of Nodes in Mobile Networks", *International Journal of Wireless & Mobile Networks (IJWMN)*, Vol. 6, No. 4, August, 2014.
2. Sharmistha Khan, Golam R. Khan, Dhadesugoor R. Vaman, Siew T. Koay, Suxia Cui, "Analyzing The Performance of the Dynamic Position Location and Tracking (D-PL&T) of Mobile Nodes Using Omni Directional Antenna in MANET", *International Journal of Computer Networks and Communications (IJCNC)*, Vol. 7, No. 4, July 2015.
3. D. R. Vaman, S. T. Koay, Y. Zhang, T. Li, “Real Time Distributed Tri-Mode Control of Coefficient of Variance for High Quality of Service End-to-End Voice/IP Application”, *Proceedings of IEEE ICFCC 2010*, paper 377, Wuhan, China, June 3 – 5, 2010.
4. D. R. Vaman, S. T. Koay, “Handling of Multi-path Fading Using a Simple and Least Complex KV Transform Coding Technique with Low BER Performance at Low Eb/N0 in Bandwidth Starved Wireless Networks”, *Journal of Recent Patents on Electrical Engineering*, Bentham Science Publishers (Invited Paper).

Current Research Interests:

Real Time 3-D Tracking of Mobile Objects and Transform Coding in Communication.

Ph.D. Research Advisor:

Dr. Sharmistha Khan completed her Ph.D. degree requirement in May, 2015.

Dissertation Title: Highly Reliable Multi-Service Provisioning Using Sequential Prediction of Zone and PL&T Tracking of Nodes in Mobile Networks"

Dr. Prebesh Dongol completed his Ph.D. degree requirement in May, 2015.

Dissertation Title: End-to-End Quality of Service Assurance for Multi-Service Provisioning.

Honors & awards:

Awarded, "Excellence in Teaching", General Dynamics, 1988.

Awarded, "Excellence in Service", College of Engineering, Prairie View A&M University, December 2001

Nominated by Dr. Charles A. Hines, sixth president of PVAMU, to the "Resource Panel in Energy Related Science & Engineering", Texas International Education Consortium, 1997

Awarded, "Excellence in Service", Electrical Engineering Department, April 1996

Awarded, "PVAMU Leader", Prairie View A&M University, 1994

Awarded, "Outstanding Services in College of Engineering and Architecture", ECI Summer Program, 1990

Major funded research projects:

(As Co-PI, PI: Dr. D. R. Vaman)

1. HBCU NSF-RISE Modeling and Design of Robust Scalable Network Architecture for QoS assured Multi-service Applications, \$992,706, NSF 2009 – 2012.
2. ARO Battlefield Capability Enhancement for Line-of-Sight and Beyond Line-of-Sight Lethality, \$2.262 Million, ARO 2004 – 2009.

Current funded research project

(As Co-PI, PI: Dr. Cajetan M. Akujuobi)

Received TAMU Chancellor's Research Initiative award in the amount of four million dollars for three years for a research project to establish an Advanced Telecommunications and Cyber Security Institute which will be joined by three highly visible researchers: Dr. Victor Lawrence from Stevens Institute and two others, forming a formidable team to articulate and enhance research areas and lead the institute to a preeminent center.

Professional Development Activities in the Last Five Years

Ongoing research collaboration with colleagues on

- a. Koay-Vaman Transform coding
- b. Analytical modeling for spatial tracking of mobile objects for real time applications

Institutional and Professional Service in the Last Five Years

Served as Assistant to Dr. John Attia, Head of ECE Department

Served as Computer Engineering Program Coordinator

Served as Computer Engineering Curriculum Coordinator

Served as Undergraduate and Graduate Advisor

Served as Chair of Computer Engineering Curriculum Committee

Served on ECE Faculty Search Committee

Served on ECE Board of Examiners for Ph.D. Preliminary Examinations

Served on Ph.D. Dissertation Advisory Committees

Serve on M.S. Thesis Advisory Committees

Served on ECE and COE Tenure and Promotion Committees for Associate Professor Rank

Served on ECE and COE Promotion Committees for Professor Rank

Served on ECE and COE Post-Tenure Review Committees

Served on COE Curriculum Committee

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