

Associate Professor Settapong Malisuwan, Ph.D.

Chairman of the Board

Excellence Center of Space Technology and Research (ECSTAR), King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand

Advisor to the Standing Committee on Judicial Affairs, Independent Agencies, the Office of the Attorney General, State Enterprises, Public Organizations, and Government Funds
House of Representatives, Thailand

EDUCATION (Fully Funded by the Thai Government)

2000 Ph.D. in Electrical Engineering

Florida Atlantic University, Boca Raton, Florida, USA

1997 Master of Science in Electrical Engineering (Telecom)

George Washington University, Washington, D.C., USA

1993 Master of Science in Electrical Engineering

Georgia Institute of Technology, Atlanta, Georgia, USA

1990 Bachelor of Science in Electrical Engineering with First-Class Honors (Gold Medal Award)

Chulachomklao Royal Military Academy, Nakhon Nayok, Thailand

CERTIFICATE (Fully Funded by U.S. Government)

- **Naval Postgraduate School, U.S. Navy, Monterey, CA, USA**
 - Defense Resource Management Course
 - Streamlining Government Through Outsourcing Course
 - International Counterterrorism Fellowship Program (ICTFP)
- **National Defense University (NDU), Joint Forces Staff College, Norfolk, VA, USA**
 - Joint Transition Course
 - Joint and Combined Warfighting Course
 - International Military Education and Training (IMET)

RESEARCH AREAS

- 5G/6G Mobile Communication System
- Space-Air-Ground Communication Network and System

- Remote Sensing
- Broadband LEO Satellite Communication System
- Earth Observation Technology
- Unmanned Aerial System (UAS)
- Counter-UAS (C-UAS) System
- Telecommunication Management and Policy

PROFESSIONAL EXPERIENCE

Aug 2019 – Mar 2023

Member of Parliament (MP)

The House of Representatives, Thailand

- **Vice-Chairperson**, Committee on Communications, Telecommunications, and Digital Economy and Society
- **Chairperson**, Subcommittee on Space for Economy and Security

Oct 2011 – Oct 2018

- **Vice Chairman**, National Broadcasting and Telecommunications Commission (NBTC), Bangkok, Thailand
- **Chairman**, National Telecommunications Commission (NTC), Bangkok, Thailand

Nov 2007 – Oct 2011

- **Staff Officer**, Office of the Deputy Supreme Commander, Royal Thai Armed Forces Headquarters, Bangkok, Thailand

Jan 2007 – Nov 2007

- **Secretary to the Chairman of the Board**
CAT Telecom Public Company Limited (Thai Government State Enterprise), Bangkok, Thailand

Oct 2006 – Jan 2007

- **Staff Officer**
Office of the Chief of Staff, Royal Thai Army (RTA) Headquarters, Bangkok, Thailand

July 2005 – Sept 2006

- **Staff Officer**
Command and General Staff College, Royal Thai Army, Bangkok, Thailand

June 2004 – June 2005

- **Advisor (Cybersecurity Policy)**
The Prime Minister's Office, Royal Thai Government, Bangkok, Thailand

Jan 2002 – May 2004

- **Information Security Officer**
C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance & Reconnaissance) Center, Royal Thai Army Headquarters, Bangkok, Thailand
- **Visiting Researcher**
Asian Center for Research on Remote Sensing (ACRoRS), Asian Institute of Technology, Thailand

Nov 2000 – Dec 2001

- **Information Warfare Officer**
Signal Department, Royal Thai Army (RTA), Bangkok, Thailand
- **Visiting Researcher**
Asian Center for Research on Remote Sensing (ACRoRS), Asian Institute of Technology, Thailand

Oct 1991 – Oct 2000

- **Lecturer**
Department of Electrical and Computer Engineering, Chulachomklao Royal Military Academy, Nakhon Nayok, Thailand
(During this period, concurrently pursued Master's and Ph.D. degrees in Electrical Engineering in the USA, fully funded by the Thai Government.)

June 1990 – Sept 1991

- **Lecturer**
Department of Electrical and Computer Engineering, Chulachomklao Royal Military Academy, Nakhon Nayok, Thailand

Feb 1990 – June 1990

- **Signal Corps Officer**
1st Signal Battalion, Royal King's Guard, Royal Thai Army, Bangkok, Thailand

KEY ACHIEVEMENTS

Chairperson, Spectrum Auctions, National Broadcasting and Telecommunications Commission (NBTC), Thailand

- **Successfully led Thailand's first-ever 3G spectrum auction (2100 MHz) on October 16, 2012.**

Significantly enhanced Thailand's national mobile broadband capabilities, contributing to greater internet accessibility, improved connectivity, and accelerated economic growth. Recognized by the International Telecommunication Union (ITU) Measuring the Information Society Report 2013 for substantially improving Thailand's broadband infrastructure and mobile internet penetration.

- **Directed Thailand's first-ever 4G spectrum auctions (1800 MHz, November 11, 2015; 900 MHz, December 15, 2015).**

Strengthened Thailand's telecommunications infrastructure, facilitating widespread adoption of high-speed mobile internet. Highlighted by the World Bank and Thailand's Ministry of Digital Economy and Society as significantly enhancing broadband speeds, coverage, and overall quality of service nationwide.

- **Issued Thailand's first-ever Satellite Orbit License to Thaicom Public Company Limited on June 26, 2012.**

Pioneered Thailand's transition from a concession-based framework to a satellite orbit licensing regime, aligning the country with international trade commitments under the World Trade Organization (WTO). This marked the first instance of compliance with WTO Free Trade principles specifically within the telecommunications sector in Thailand.

Chairperson of the Subcommittee on Space for Economy and Security, House of Representatives, Thailand

- **Successfully proposed and presented the "Spaceport Initiative" project report (2022)** to the House of Representatives, leading high-level parliamentary discussions on strategic space infrastructure development essential for Thailand's economic growth and national security.
- **Secured parliamentary approval for the Spaceport Initiative project**, officially influencing and shaping Thailand's national space policy.

SELECTED PUBLICATIONS

- S. Malisuwan, C. Delmaire, and A. Nimgirawath, "Mobile-Enabled Internet of Drones: An Initiative Project for Advancing Drone Connectivity in 5G and Beyond 5G," *Communications on Applied Nonlinear Analysis*, vol. 32, no. 9s, 2025.
- S. Malisuwan, "Challenges, Opportunities, and Future Research in the Integration of 5G/6G Networks, LEO Satellites, and IoT for Environmental Protection and Sustainable Development at ECSTAR," *Journal of Environmental Science and Engineering - B*, vol. 12, pp. 146-159, 2023, doi:10.17265/2162-5263/2023.03.005.

- S. Malisuwan, C. Munikanond, C. Delmaire, and W. Kaewphanuekrungsi, "Earth Observation Ground Station Systems of KMITL-ECSTAR Research Center," *2022 3rd International Conference on Next Generation Computing Applications (NextComp)*, Flic-en-Flac, Mauritius, 2022, pp. 1-4, doi:10.1109/NextComp55567.2022.9932160.
- S. Malisuwan, "The First Spectrum Auction in Thailand: Lessons Learned and Achievements" *Journal of Advanced Management Science*, Vol. 5, No. 2, pp. 109-114, March 2017. doi: 10.18178/joams.5.2.109-114
- S. Malisuwan, N. Tiamnara, and N. Suriyakrai, "Design of Antennas for a Rectenna System of Wireless Power Transfer in the LTE/WLAN Frequency Band," *Journal of Clean Energy Technologies*, vol. 5, no. 1, pp. 42-46, 2017.
- S. Malisuwan, N. Suriyakrai, and N. Madan, "Radio Spectrum Valuation by Applying the Artificial Neural Network Model," *Journal of Advances in Computer Networks*, vol. 4, no. 1, pp. 19-23, 2016.
- S. Malisuwan, N. Tiamnara, and N. Suriyakrai, "Performance Evaluation of Microstrip Patch Antenna by Applying Cole-Cole Representation for X-Band Satellite Communications System," *International Journal of Electronics and Electrical Engineering*, Vol. 4, No. 5, pp. 449-453, October 2016. doi: 10.18178/ijeee.4.5.449-453
- S. Malisuwan, J. Sivaraks, N. Madan, and N. Suriyakrai, "A Study on Throughput of LTE Multicast Systems under Co-existence Interference," *International Journal of Modeling and Optimization*, vol. 5, no. 3, pp. 177-181, 2015.
- S. Malisuwan, N. Tiamnara, and D. Milindavanij, "The Impact of Spectrum Assignment on Economic Growth and Competitiveness in Thailand," *International Journal of Management*, vol. 6, no. 12, pp. 44-51, 2015.
- S. Malisuwan, W. Kaewphanuekrungsi, N. Tiamnara, and P. Apintanapong, "A study of electromagnetic radiation effects from mobile phone base stations on human health," *Int. J. Adv. Res. Eng. Technol. (IJARET)*, vol. 6, no. 12, pp. 25-38, Dec. 2015.
- J. Sivaraks and S. Malisuwan. "Multiband Antenna Formed of Superimposed Compressed Loops." *Applied Mechanics and Materials*, vol. 548-549, Apr. 2014, pp. 780-784. Crossref, doi:10.4028/www.scientific.net/amm.548-549.780.
- S. Malisuwan, W. Kaewphanuekrungsi, J. Sivaraks, and N. Suriyakrai, "Design and Performance Model of Probe-Fed Rectangular Patch Antenna for LTE 2300 MHz Smart Phone and Portable Computer Applications," *International Journal of Computer and Communication Engineering*, vol. 2, no. 6, pp. 696-701, 2013.
- T. Veeraklaew, S. Malisuwan, S. Huvanundana and A. Aimdilokwong, "Dynamic Spectrum Management with minimizing user's budget," *2010 Asia-Pacific International Symposium on Electromagnetic Compatibility*, Beijing, China, 2010, pp. 79-82, doi: 10.1109/APEMC.2010.5475806.
- A. Boonpratong, S. Malisuwan, P. Degenaar and T. Veeraklaew, "A Minimum Jerk Design of Active Artificial Foot," *2008 IEEE/ASME International Conference on Mechatronic and Embedded Systems and Applications*, Beijing, China, 2008, pp. 443-448, doi: 10.1109/MESA.2008.4735681.
- S. Malisuwan, A. Ieamgusonkit, and K. Rosesukon, "Uplink capacity of mobile all-packet-service WCDMA internet systems in EMI environment," in *Proc. IEEE International Symposium on Electromagnetic Compatibility (EMC)*, Japan, 2004.
- S. Malisuwan, K. Rosesukon, T. Iamsinthom and P. Siwalai, "Orthogonal polarization switching as applied to Bluetooth system in mobile phone interference environment,"

Asia-Pacific Conference on Applied Electromagnetics, 2003. APACE 2003., Shah Alam, Malaysia, 2003, pp. 92-95, doi: 10.1109/APACE.2003.1234476.

- S. Malisuwan, P. S. Neelakanta, and V. Ungvichian, "A Cole-Cole diagram representation of microstrip structure," *Journal of the Applied Computational Electromagnetics Society*, vol. 15, No. 3, 2000.
- S. Malisuwan and V. Ungvichian, "A study of crosstalk applied to ultra-high-speed parallel lossy microstrip and strip lines with shielding effectiveness," *1999 International Symposium on Electromagnetic Compatibility (IEEE Cat. No.99EX147)*, Tokyo, Japan, 1999, pp. 742-745, doi: 10.1109/ELMAGC.1999.801435.
- S. Malisuwan, "Crosstalk in ultra-high-speed VLSI interconnects due to substrate-conductivity, temperature, and line-length effects," *1999 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing (PACRIM 1999), Conference Proceedings (Cat. No.99CH36368)*, Victoria, BC, Canada, 1999, pp. 173-176, doi: 10.1109/PACRIM.1999.799505.
- S. Malisuwan and V. Ungvichian, "Rise time effects on crosstalk in high-speed microstrip transmission lines," *1999 Asia Pacific Microwave Conference. APMC'99. Microwaves Enter the 21st Century. Conference Proceedings (Cat. No.99TH8473)*, Singapore, 1999, pp. 202-205 vol.1, doi: 10.1109/APMC.1999.828085.
- V. Ungvichian and S. Malisuwan, "The effects of substrate permittivity and pulse-width on the crosstalk as applied to ultra-high-speed microstrip lines," *IEEE Antennas and Propagation Society International Symposium. 1999 Digest. Held in conjunction with: USNC/URSI National Radio Science Meeting (Cat. No.99CH37010)*, Orlando, FL, USA, 1999, pp. 202-205 vol.1, doi: 10.1109/APS.1999.789116.
- S. Malisuwan, V. Ungvichian, and L. Lu, "Analysis of crosstalk energy applied to ultra-high-speed parallel microstrip and strip lines with conductor thickness and shielding effectiveness," in *Proc. SPIE Int. Conf. High Density Packaging and MCMs*, Denver, CO, USA, Apr. 1999, vol. 3830, pp. 154-158.