Duc-Tuyen Ta

Curriculum Vitae

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Personal

Name Duc-Tuyen Ta

Research summary I am a researcher with broad interests, including signal processing, game theory, communication networks, and learning theory. My research to date focuses on theoretical and applied learning theory to the communication network. I currently work as a post-doc at LRI, a joint research center between CNRS and University Paris-Sud.

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Webpage https://tuyenta.github.io

Education

2014 - 2018 **Telecom ParisTech**, Ph.D in Electrical Engineering..

2007 - 2011 **Univerisity of Tecnology and Engineering, Vietnam National Univerisity Hanoi**, M.S. in Electrical Engineering.

2010 **Univerisity of Tecnology and Engineering, Vietnam National Univerisity Hanoi**, B.S. in Electrical Engineering, Graduated with honors.

Publications

2019 **Spoofing Attack and Surveillance Game in Geo-location Database Driven Spectrum Sharing**, *Nhan Nguyen-Thanh, and Duc-Tuyen Ta, and Van-Tam Nguyen*, IET Communications.

2018 **Strategic Surveillance Against Primary User Emulation Attacks in Cognitive Radio Networks**, *Duc-Tuyen Ta, Nhan Nguyen-Thanh, Patrick Maillé, and Van-Tam Nguyen*, IEEE Transactions on Cognitive Communications and Networking.

2016 **Energy-efficient techniques using FFT for deep convolutional neural networks**, *Nhan Nguyen-Thanh, Han Le-Duc, Duc-Tuyen TA, Van-Tam Nguyen*, International Conference on Advanced Technologies for Communications (ATC).

2016 **Mitigating Primary Emulation Attacks in Multi-Channel Cognitive Radio Networks: A Surveillance Game**, *Duc-Tuyen TA, Nhan Nguyen-Thanh, Patrick Maille, Phillipe Ciblat, Van-Tam Nguyen*, IEEE Global Communications Conference (GLOBECOM).

2015 **Extra sensing game for malicious primary user emulator attack in cognitive radio network**, *Duc-Tuyen TA, Nhan Nguyen-Thanh, Phillipe Ciblat, Van-Tam Nguyenn*, European Conference on Networks and Communications (EuCNC).

2013 **Efficient and Reliable GPS-Based Wireless Ad Hoc for Marine Search Rescue System**, *Duc-Tuyen TA, Tran Duc-Tan, Do Duc Dung*, Multimedia and Ubiquitous Engineering, Lecture Notes in Electrical Engineering.

2011 **Novel Low-Complexity CCK Decoder for IEEE 802.11b System**, *Duc-Tuyen TA*, *Trinh Anh VU*, VNU Journal of Science: Natural Sciences and Technology.

2011 **Wireless ad hoc network based on Global Positioning System for marine monitoring, searching and rescuing (MSnR)**, *Duc-Tuyen TA, Duc-Tan Tran, Do Duc Dung, Van Hoang Nguyen, Vu Van Yem and Xuan Nam Tran*, Asia-Pacific Microwave Conference.

2011 **GPS-Based Wireless Ad Hoc Network for Marine Monitoring, Search and Rescue (MSnR)**, *Duc-Tuyen TA, Duc-Tan Tran, Do Duc Dung, Van Hoang Nguyen, Vu Van Yem and Xuan Nam Tran*, Second International Conference on Intelligent Systems, Modelling and Simulation.

2010 **Combination compress sensing and digital wireless transmission for the MRI signal**, *Duc-Tan Tran, Duc-Tuyen TA, Tung Thanh Bui*, International Symposium on Micro-NanoMechatronics and Human Science.

Preprints

IOT-MAB: Toward an Intelligent Decentralized Resources Allocation Approach for IoT Networks, Duc-Tuyen TA, Kinda Kharwarm, Cedric Adjih, Samer Lahoud, and Steven Martin.
In preperation

Collaborative Paradigm for Next Generation Wireless Networks, Duc-Tuyen TA, and Duy H.N. Nguyen, and Nhan Nguyen-Thanh, and Van-Tam Nguyen.
In review

Awards

2009 **Toshiba Award**, *Demonstrated excellence and outstanding ability*, Granted by Toshiba Corp. Vietnam.
Monetary value of $1000

2008 **Student's Scientific Research Contest**, *Consolation prize*, Ministry Of Education and Trainings, Viet Nam.

2008 **Student's Scientific Research Contest**, *2rd prize*, Vietnam National University Ha Noi .

2008 **Northtel-Coltech Award**, *Demonstrated excellence and outstanding ability*, Nothtel Corp. and Vietnam National University Ha Noi .
Monetary value of $200

Work Experience

2018 - present **Research Engineer**, *LRI, a joint research center between CNRS and University Paris-Sud* .
Research and develop reinforcement learning algorithms for resource management and physical layer security in IoT networks, including data analysis, modeling, algorithm designs, tool development (open source, in Python).

2014 - 2015 **Research Engineer**, *Department of MEMS*, VNU University of Engineering and Technology, Viet Nam.
Desiged and implemented an efficient and reliable Landslide Monitoring and Early Warning (LMnE) system based on the 3G/2G mobile communication system combining with a wireless sensor network at monitoring stations.

2011 - 2014	**Graduate Research Assistant**, *Signal Processing Laboratory*, VNU University of Engineering and Technology, Viet Nam.
	Research on signal processing algorithms for wireless communication and EEG signal. Proved theorems, designed algorithms, ran experiments, and wrote technical research papers.
2011 - 2014	**Graduate Teaching Assistant**, *Faculty of Electronics and Telecommunications*, VNU University of Engineering and Technology, Viet Nam.
	Taught mathematical for engineering, signal processing and wireless communication.
2011 - 2012	**Research Engineer**, *Bac Ha International University, Vietnam*.
	Designed a novel MAC protocol for the sensor networks for marine monitoring, searching, and rescuing applications; implemented a testbed with multiple communication nodes, which is contained a GPS, sensors, and radio communication devices.

Professional Programs

Feb 2014	**Co-Principal Investigator**, *ISIF ASIA Grant*.
	Designing and implementing an efficient and reliable Landslide Monitoring and Early Warning (LMnE) system based on the 3G/2G mobile communication system combining with a wireless sensor network at monitoring stations.
Summer 2014	**Signal Processing Engineering Intern**, *National Institute of Informatic, Japan*.
	Worked on the redundant reduction framework for reducing the size of the multiplexing data receiving at the multiple microphone systems. The work aims to apply in the voice-controlled TV with multiple microphones.
Jan 2011 - Jan 2012	**Research Engineering**, *Bac Ha International University, Vietnam*.
	Designing a novel MAC protocol for the sensor networks for marine monitoring, searching, and rescuing applications. A testbed with multiple communication nodes, which is contained a GPS, sensors, and radio communication devices, is also implemented.

Programming

Portfolio	**Github Repository**.
Top Language	**Python**.
Competent Languages	**Python, Matlab, C, C++, Mathematica**.
Familiar Languages	**R, Bash, SQL, NoSQL**.
Tools	**Tensor Flow, Torch, Git, GNU Radio, Docker**.

Service

Reviewer, *IEEE Transactions on Communications, IEEE Transactions on Vehicular Technology, IEEE Transactions on Cognitive Communications and Networking, IEEE Communications Letters, IET Communications, EURASIP Journal on Wireless Communications and Networking, GlobeCom'18, ICC'18, etc.*.

TPC Member, *ATC 2018*, International Conference on Advanced Technologies for Communications.

Talks

2018	**Strategic Surveillance Against Primary User Emulation Attacks in Cognitive Radio Networks**, *LRI, CNRS & University Paris-Sud*, Research talk.

2015	**Game Theory and Application to Physical Layer Security in Wireless Communication**, *VNU University of Enginnering and Technology, Vietnam*, Research talk.
2015	**Physical Layer Security in Wireless Communication: A Game-Theoretic Solution**, *Hanoi University of Technology, Vietnam*, Research talk.

Teaching

Wireless Communications	**TA**, *VNU University of Engineering and Technology, Viet Nam*, Fall 2010, Fall 2011, Fall 2012, Fall 2014. Led a discussion session twice weekly
Satelite Communications	**TA**, *VNU University of Engineering and Technology, Viet Nam*, Fall 2010, Fall 2011. Led a discussion session once weekly
Mathematical for Engineering	**TA**, *VNU University of Engineering and Technology, Viet Nam*, Spring 2013. Led a discussion session twice weekly

Other

Interests	**Data analysis, Photography, Trekking, Running**.