Hien Ta

Citizenship: Vietnamese
Ethnicity: Asian
Gender: Male

taquanghien0407@gmail.com
https://www.linkedin.com/pub/hien-ta/96/48a/298
https://sites.google.com/site/taquanghien18787/home

Career Objective

Seeking a full-time/part-time position in university to leverage my professional experience and educational background in wireless network and Internet of Things (IoT).

Profile

Strong technical, research, leadership and organizational skills.
Strong public speaking skill, detail-oriented and goal-driven.
Multi-tasking and flexible in handling changes in assignments and requirements.

Education

IOWA STATE UNIVERSITY — Ames, Iowa
PhD in Electrical and Computer Engineering Department — Jan. 2014 - Dec. 2019
Advisor: Prof. Sang Wu Kim

HO CHI MINH UNIVERSITY OF TECHNOLOGY — Ho Chi Minh City, Vietnam
B.Eng in Electrical Engineering Department — Sep. 2005 - Oct. 2010
Advisor: Prof. Khuong Ho Van

Work Experience

IOWA STATE UNIVERSITY — Ames, Iowa
Course Instructor/Teaching Assistantship — Jan. 2014 - Present

- Give lecture for the course "EE448 - Introduction to basic circuit and motors".
- Organize lab meeting and complete reports on weekly basis.
- Assist undergraduate students with lab experiments and explain concepts or theories on daily basis.

LAC HONG UNIVERSITY — Dong Nai Province, Vietnam
Lecturer — May 2011 - Dec. 2013

- Gave lectures of Wireless Communication and Digital Signal Processing (DSP) with Lab experiments.
- Co-supervised students in defining research topics and giving weekly research report.
- Established connection between industrial companies and department of Electrical Engineering to help finding internship opportunities for undergraduate students.

MOBIFONE COMPANY — Dong Nai Province, Vietnam
Telecommunication Engineer — Oct. 2010 - May 2011

- Participated in weekly seminars and trainings for 3G network architecture in company.
- Tested 3G speed, adjusted antenna direction and optimized the 3G quality of service.

NOVA RF COMPANY — Ho Chi Minh City, Vietnam
Undergraduate Intern in Research Lab — May 2009 - Aug. 2009

- Participated in trainings on using Network Analyzer and Spectrum Analyzer.
- Learned the Feed-Forward technique used in Power Amplifier.
- Tested the performance of Power Amplifier based on Federal Communication Commission (FCC) standard.

Research Experience

IOWA STATE UNIVERSITY — Ames, Iowa
Research Assistantship — Jan. 2014 - Present

- Secret communication and Energy Efficiency:
  - Worked on power and rate adaptation scheme for maximizing secrecy energy efficiency.
  - Extended current work to Artificial Noise, Cooperative Relay and Multiple Access Channel Schemes.
- Covert Communication:
  - Exploited the channel uncertainty to set up the covert transmission.
  - Establish the shadow network with super-position coding and artificial noise technique.
  - Improve the performance of shadow network into the cooperative relaying network.

AALBORG UNIVERSITY — Aalborg, Denmark
Guest Researcher — Feb. 2018 - Aug. 2018

- Machine Type Communication
  - Focused on contention-based Random Access Procedure (RAP) in Narrow- Band Internet of Thing (NB-IoT).
  - Improved the contention-based RAP with distance -based collision detection technique.
  - Found the efficient aid of positioning technique in coded-expanded random access.
- Ultra-Reliable Low-Latency Communication
  - Established the strategy of transmission in Decode-and-Forward relay network to minimize latency .

PhD Dissertation

- Hien Ta and Sang Wu Kim, 'Physical-Layer Secrecy and Privacy of Wireless Communication,' Iowa State University - expected November 2019.

Publications

- Hien Ta and Sang Wu Kim, 'Adapting Rate and Power for Maximizing Secrecy Energy Efficiency,' IEEE Com. Letters, May 2017.
- Hien Ta and Sang Wu Kim, 'Covert Communication under Channel Uncertainty and Noise Uncertainty,' IEEE ICC Conference, May 2019.
- Hien Ta, Zhengdao Wang, Sang Wu Kim, Jimmy J. Nielsen and Petar Popovski, 'Preamble detection in NB-IoT random access with limited-capacity backhaul', IEEE ICC Conference, May 2019.
- Hien Ta and Sang Wu Kim, 'Covert non-orthogonal multiple access,' - submitted to WCNC 2020.
- Sang Wu Kim and Hien Ta, 'Low Probability of Detection by Exploiting Node Multiplicity and Channel Variations,' - submitted to ICC Conference 2020.
- Sang Wu Kim and Hien Ta, 'Harnessing Multiplicity of Users and Channel Variations for Low Probability of Detection,' - submitted to IEEE Transaction of Wireless Communication journal.
- Hien Ta, Zhengdao Wang, Sang Wu Kim, Jimmy J. Nielsen and Petar Popovski, 'Study on NB-IoT Multi-BS Random Access with limited-capacity backhaul', IEEE Trans. Wireless Communication - on going.

Interests

Physical Layer Security, Internet of Things, massive Machine-type and Ultra-reliable Low-Latency Communication

Academic Awards

Travel-Grant Scholarship ICC Conference 2019 - Shanghai, China	May. 2019
Teaching Excellence Award at Electrical and Computer Engineering, Iowa State University	May. 2017
Scholarship for PhD program at Iowa State University	Jan. 2014 - Present
Bronze Medal in "Finding Solution" Competition in University of Science, Viet Nam	Oct. 2009
Third Prize in Mathematics National Competition, Viet Nam	Apr. 2005
Third Prize in Mathematics in Olympics Competition, Viet Nam	Apr. 2004
Certification in Royal Australia Chemistry Examination, Viet Nam	Sep. 2004

References

Prof. Sang Wu Kim
Electrical and Computer Engineering Department, Iowa State University
Email: swkim@iastate.edu
Tel: +1 515 294 2726

Prof. Timothy Bigelow
Mechanical Engineering Department
Iowa State University
Email: bigelow@iastate.edu
Tel: +1 515 294 4177

Prof. Petar Popovski
Department of Electronic System
Aalborg University
Email: petarp@es.aau.dk
Tel: +45 99 40 98 97

Prof. Zhengdao Wang
Electrical and Computer Engineering Department, Iowa State University
Email: zhengdao@iastate.edu
Tel: +1 515 294 8362