CURRICULUM VITAE

Bui Duc Tung[1]

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Nationality	VIETNAMESE
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IN BRIEF

I had got the Master degree from VNU University of Engineering and Technology with deep knowledge of Micro-Electro-Mechanical Systems and firm language skill.

EDUCATION

10/2017-present: **PhD in Electrical, Electronics and Communications Engineering as a Marie-Curie Fellow**
Politecnico di Torino

2009-2013: **BSc in Electronics - Telecommunication Technology** (International Standard program),
University of Engineering and Technology (UET), Vietnam National University, Hanoi (VNU)
GPA: 3.21/4 (ranking 5th over 62)

2013-2015: **MSc in Electronics and Communication Engineering**, *University of Engineering and Technology (UET), Vietnam National University, Hanoi (VNU)*
GPA: 3.56/4
Thesis: A+

RESEARCH INTERESTS

Micro – Electro – Mechanical Systems (MEMS): Accelerometer and Gyroscope, Surface Acoustic Wave sensors.

WORK EXPERIENCES

❖ BSc Thesis

- SAW SYSTEM FOR SENSING LIQUIDS.
- Grade obtained: 9.5/10.
- This thesis deeply presents a more effective measurement of the new Surface Acoustic Wave (SAW) sensor structure which was described of published papers. It is simulated on single – crystal Aluminum Nitrite substrate. Diverse parameters of leaky waves including displacement, decay constant in the liquid media are analyzed.

[1] Full name: **Bui Duc Tung**

❖ **MSc Thesis**

- A SURFACE ACOUSTIC WAVE DEVICE FOR MICRO-FLUIDIC SENSING APPLICATION
- Grade obtained: 9.5/10 (A+)
- This thesis presented a novel sensor for discovering the pressure variation at the nozzle. The relation between the liquid pressure at the nozzle and the wave motion was found in the equation of motion for the piezoelectric medium. Based on the voltage, output power, and attenuation response of the electrical and mechanical signal, it is able to detect the droplet formation.

❖ **In Department of Micro – Electro – Mechanical Systems:**

- **GPS/IMU Integrated Systems:**
  In this project, we developed a navigation systems by integrate an Inertial Measurement Unit (IMU) and a GPS device. Data from GPS device was used to correct data from IMU, which is affected by cumulative error.
  The systems was simulated and optimized using MATLAB.
- **Surface Acoustic Wave system for sensing liquids (In a project of Ministry of Science and Technology):**
  In this project, we developed a Surface Acoustic Wave (SAW) device for liquids sensing. This SAW device can be used in inkjet system or medical applications thank to its ability to determine density or velocity of liquids
  - Design and optimize the system: Use COMSOL software to design and simulate the model.
  - Calculate and compare: Calculate based on parameters of the system and optimize.

AWARDS & HONORS RECEIVED

Consolation prize, Students Physics Olympiad in Vietnam, 2011.
Third prize, Students Physics Olympiad in Vietnam, 2012
Annual Scholarship for excellent students at University of Engineering and Technology, VNU, Hanoi, 2009-2013.
PONY Chung Scholarship, 2012.
Odon Vallet Scholarship, 2014

STANDARDLIZED TEST

6.0 IELTS

TECHNICAL SKILLS

Programming language: C/C++, Python.
CAD/Simulation tools: COMSOL, MATLAB.
OS: Microsoft Windows, Linux.
Other: Microsoft Office.

PUBLICATIONS

1. Bui, Thu Hang, **Tung Bui Duc** and Trinh Chu Duc. "An Optimisation of IDTs for Surface Acoustic Wave Sensor." *International Journal of Nanotechnology* 12, no. 5 (2015): 485-495.

2. Thu Hang, Bui, **Duc Tung Bui** and Duc Trinh Chu. "Microfluidic Injector Simulation with Fsaw Sensor for 3-D Integration." *IEEE Transactions on Instrumentation and Measurement* 64, no. 4 (2015): 849-856.

3. Hang, Bui Thu, **Bui Duc Tung**, Nguyen Tien Dat and Chu Duc Trinh. "Attenuation Coefficient for Surface Acoustic Waves in Fluid Region." *Vietnam Journal of Mechanics* 34, no. 4 (2012): 225-236.

4. Thu, H. B., P. M. Sarro, **T. B. Duc** and T. C. Duc. "Associated Idts in Surface Acoustic Wave Devices for Closed-Loop Control Inkjet System." In *2014 IEEE SENSORS*, 1936-1939, 2014.

5. Thu-Hang, Bui, Tien Dat Nguyen, **Duc Tung Bui** and Duc Trinh Chu. "3-D Finite Element Modeling of Saw Sensing System for Liquids." In *2012 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)*, 782-787, 2012.

6. **Duc, Tung Bui**, Nam Pham Hoai, Hang Bui Thu and Trinh Chu Duc. "Effect of the Focused Surface Acoustic Wave Devices on the Microfluidic Channel." In *The 3rd International Conference on Engineering Mechanics and Automation*, 221-225, 2014.

7. **Tung, BD**, B Thu-Hang, NT Dat and CD Trinh. "R-Saw Analysis on Single-Crystal Aln Substrate for Liquid Sensors." In *The 2nd International Conference on Engineering Mechanics and Automation*,13-18, 2012.