

# Trung-Hieu Tran

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## PERSONAL INFORMATION

**Gender:** Male (+49) 15252895102 ☎  
**Nationality:** Vietnamese (+49) 711 685 88216 📠  
**Date of birth:** October 2<sup>nd</sup>, 1988 trung.hieu.tran@ipvs.uni-stuttgart.de ✉  
**Address:** Universitätsstrae 38, D-70569 Stuttgart, Germany.

## RESEARCH INTERESTS

- Multi-view image processing
- Image and video compression
- Parallel computing with reconfigurable platform (FPGA) and GPU.

## EDUCATION

**DOCTORAL OF PHILOSOPHY** Oct 2015 – Current

*Department of Parallel System  
Institute for Parallel and Distributed System  
The University of Stuttgart, Germany*

- **Thesis title**  
*Parallel-Architecture for Light-field Image Processing and Compression*

**MASTER OF SCIENCE** Sep. 2011 – Jul. 2013

*Faculty of Computer Science and Engineering  
HCMC University of Technology, Vietnam*

- Degree in Computer Science
- Graduated with the highest honor
- **GPA:** 9.28/10.00

**BACHELOR OF ENGINEERING** Sep. 2006 – Jan. 2011

*Faculty of Computer Science and Engineering  
HCMC University of Technology, Vietnam*

- Honours degree in Computer Engineering
- **GPA:** 8.56/10.00

## RESEARCH EXPERIENCE

### **Re-configurable Intrusion Prevention System (HR-IPS)**

*Funded by Vietnam National University, Hochiminh City*

May 2011 – May 2013

The project aims to develop a stateful Network Intrusion Prevention System (NIPS) for Gbps network connection. I worked on analyzing malicious network activities and developing a reconfigurable computing architecture for malicious patterns detection.

Related publication:[C1,J1]

### **Re-configurable Anti-virus System**

*Funded by The Department of Science and Technology, Hochiminh City*

Sep. 2013 – Jul. 2015

The objective of this project is developing a high-speed virus scanning system for mail server and network gateway. My responsibilities are analyzing virus signatures and developing a hybrid system which combines CPU and reconfigurable devices (FPGA) for detecting virus signatures.

Related publication:[J2]

## SELECTIVE PUBLICATIONS

- C3. **Trung-Hieu Tran**, Zhe Wang and Sven Simon. “*Variational Disparity Estimation Framework for Plenoptic Images*”. IEEE International Conference on Multimedia and Expo (ICME) 2017. [**Best paper award**]
- C2. **Trung-Hieu Tran**, Yousef Baroud, Zhe Wang, Sven Simon and David Taubman, “*Light-field Image Compression Based on Variational Disparity Estimation and Motion-compensated Wavelet Decomposition*”. IEEE International Conference on Image Processing (ICIP) 2017.
- J2. **Trung-Hieu Tran** and Tran Ngoc Thinh (2014), “*mDFA: A Memory Efficient DFA-Based Pattern Matching Engine on FPGA*”. Journal of Wireless Personal Communications, 78(4). (SCI, IF=0.951)
- J1. **Trung-Hieu Tran**, Tran Ngoc Thinh and Shigenori Tomiyama (2013), “*ENREM: An efficient NFA-based regular expression matching engine on reconfigurable hardware for NIDS*”. Journal of Systems Architecture, 59(4). (SCI, IF=1.579)
- C1. **Tran Trung Hieu**, Tran Ngoc Thinh, Tran Huy Vu and Shigenori Tomiyama, “*Optimization of Regular Expression processing circuits for NIDS on FPGA*”. IEEE International Conference on Networking and Computing (ICNC) 2011.

## AWARDS AND HONORS

### Postgraduate

- Jul. 2017 Best Paper Award in the 2017 IEEE International Conference on Multimedial and Expo (ICME)
- Feb. 2015 German Academic Exchange Service (DAAD) Reseach Grant for PhD study in Germany
- Dec. 2014 Vietnamese Government Scholarship for PhD study in USA

### Graduate

- Nov. 2013 Master degree with the highest honor (over all disciplines)
- Oct. 2012 Vallet’s Scholarship awarded for young researcher
- Aug. 2011 SORUN Kitagawa graduate research scholarship

### Undergraduate

- Nov. 2010 PVFCCo honor scholarship for undergraduate students with outstanding academic achievements.
- Aug. 2010 Sunflower Mission Senior Project Sponsorship awarded for undergraduate thesis project

## PROFESSIONAL EXPERIENCES

### **The University of Stuttgart**, Stuttgart, Germany

#### *PhD student*

Oct. 2015 – present

- Working toward my doctoral degree at the institute for parallel and distributed systems.
- Teaching exercise class and supervising master student thesis.

### **HCMC University of Technology**, Hochiminh city, Vietnam

#### *Assistant Lecturer*

Apr. 2011 – Aug. 2013

- Working toward my master of science degree in computer science.
- Teaching exercise classes and helping in supervising student projects and theses.
- Working on scientific research project.

#### *Lecturer*

Sep. 2013 – Jul. 2015

- Teaching undergraduate classes.
- Writing research proposal and working on scientific research project.

HARDWARE AND  
SOFTWARE SKILLS

- Programming languages: C/C++, Java, Python, Matlab, OpenCL.
- Programming tools/library: OpenCV, TensorFlow.
- Hardware description languages: Verilog HDL, VHDL.
- Hardware design tools: QuartusII, Xilinx Vivado/ISE, Modelsim.

REFERENCES

Prof. Dr.-Ing. Sven Simon

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Institute for Parallel and Distributed Systems  
University of Stuttgart

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