

# TRAN Van-Hoang

Research Engineer | Univ Rennes, IRISA, CNRS

- 📍 Lannion, France
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## Employment History

- 2011 – Today     ◇ **Lecturer**, Can Tho University, Viet Nam.
  - Prepare and give lectures to undergraduate students, e.g., programming with C, C# .NET, *Software Requirements Analysis, Algorithms Design and Analysis, Data Structure, and Software Engineering Project*.
  - Supervise 13 undergraduate students for undergraduate theses.
  - Conduct research with international collaboration.
- 2011 – 2011     ◇ **Software developer**, TMA Solutions, Viet Nam.
  - Apply cutting-edge technologies to potential projects, particularly hybrid frameworks (PhoneGap) for building mobile applications (Android and iOS).

## Education

- 2017 – 2020     ◇ **PhD Student in Computer Science, Rennes 1 University, France**  
Thesis title: *Performance Analysis of Big Data Management Systems for Cybersecurity*.
  - Study tools protecting data privacy, namely differential privacy, applied cryptography, etc.
  - Study Big Data technologies such as NoSQL, Hadoop, Spark, Elasticsearch etc.
  - Propose solutions for efficiently supporting range query processing on encrypted data with respect to common properties of Big Data systems (intensive throughput, high-frequency update, high volume).
- 2014 – 2015     ◇ **M.Sc. in Computer Science, Western Brittany University, France.**  
Thesis title: *Cyber-Physical Systems and Mixed Simulations*.
  - Model and implement simulations of physical systems based on Cellular Automata (CA), then use GPU to boost the simulations.
  - Federate the CA-based simulations using the High Level Architecture standard.
- 2007 – 2011     ◇ **B.S. in Software Engineering, Can Tho University, Viet Nam.**  
Thesis title: *A Digital Traffic Map of Can Tho City based on WebGIS*.
  - Use MapInfo tool to obtain GIS data and store the data on PostGIS.
  - Build webservices over the stored data such as finding interested locations, shortest path, etc.
  - Develop a web-based map using OpenLayers library.

## Research Publications

- 1 Truong, T. M., Phan, C. H., **Tran, V. H.**, Duong, L. N., Van Nguyen, L., & Ha, T. T. (2020). To develop a water quality monitoring system for aquaculture areas based on agent model, In *ICICT*, Singapore, Springer.
- 2 **Tran, V. H.**, Allard, T., d'Orazio, L., & Abbadi, E. A. (2019). Range Query Processing for Monitoring Applications over Untrustworthy Clouds, In *EDBT*, Lisbon, Portugal.
- 3 **Tran, V. H.**, Huynh, H. X., Phan, V. C., & Pottier, B. (2016). A federation of simulations based on cellular automata in cyber-physical systems. *EAI Endorsed Transactions on Context-aware Systems and Applications*, 3(7).

- 4 **Tran, V. H.**, Truong, T. P., Nguyen, K. T., Huynh, H. X., & Pottier, B. (2016). A federated approach for simulations in cyber-physical systems, In *ICCASA*, Vung Tau, Viet Nam, Springer.
- 5 Truong, T. P., **Tran, V. H.**, Huynh, H. X., & Pottier, B. (2016). Optimizing the connection time for leo satellite based on dynamic sensor field, In *ICCASA*, Vung Tau, Viet Nam, Springer.
- 6 Lam, B. H., **Tran, V. H.**, Huynh, H. X., & Pottier, B. (2015). Synchronous networks for insects surveillance, In *SoICT*, Hue City, Viet Nam, ACM.

## Skills

- Languages     ◇ Vietnamese (Native), English (Fluent), French (Intermediate).
- Coding        ◇ Java, C++, C#, CUDA, PHP, Python, SQL.
- Databases     ◇ MySQL, PostgreSQL, SQL Server.
- Web Dev       ◇ HTML, CSS, JavaScript, jQuery, Ajax, Webservice, Apache Web Server.
- Tools/IDEs    ◇ Eclipse, MS Visual Studio, SVN, GitHub, Vim, Maven.
- Misc.          ◇ Academic research, teaching, training, consultation,  $\LaTeX$  typesetting and publishing.

## Awards and Achievements

- 2014     ◇ **Eiffel Excellence Scholarship**, pursuing the master 2 at Western Brittany University, France.
- 2011     ◇ **Valedictorian of Software Engineering class**, Can Tho University.  
- Ranked **first** among 476 graduates of the same college.

## Grants

- 2016 – 2017     ◇ **Can Tho University research grant**, technical member.  
Project: *A monitoring system for catfish farm*  
- Develop a wireless sensor network for monitoring and sampling water-related parameters, e.g., dissolved oxygen, pH, temperature, etc.  
- Implement webservices over collected data.  
- Develop applications (Winforms, Android, and web) for displaying real-time status of water as well as statistics using the webservices.
- 2013 – 2014     ◇ **Can Tho University research grant**, technical member.  
Project: *One-stop-shop system for student services at a university faculty*.  
- Relieve high pressure of administrative personnel and encourage students to use online services to self-support and meet their need, namely signed transcripts, certification of student status, etc.

## References

**Prof. Laurent d'Orazio**, IUT de Lannion, Rennes 1 University, CNRS, IRISA

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