Jingya **YAN**

POSTDOCTORAL RESEARCHER

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Education

The French Naval Academy Research Institute (IRENav)
Brest, France

PH.D IN GEOMATICS
Feb. 2011 - Dec. 2014

- Supervisor: Associate Professor Eric SAUX (IRENav)
- Co-supervisor : Assistant Professor Eric Guilbert (Universiteé Laval, Canada)
- Thesis: *An Ontologies and Agents Based Approach for Undersea Feature Characterization and Generalization*
- This work was funded by the Research Grant Council of Hong Kong, the Consulate General of France in Hong Kong and the Région Bretagne in France under grant 0211/ ARE 09011/00026102.

Department of Land Surveying and Geo-Informatics, The Hong Kong Polytechnic University
Hong Kong

MASTER OF SCIENCE IN GEOMATICS
Aug. 2009 - Jan. 2011

- GPA: 3.35(4)
- Dissertation Title: *Terrain Feature Extraction at Different Levels*
- Supervisor : Assistant Professor Eric Guilbert
- Core Courses: Principles of Geographic Information Systems, Remote Sensing Image Processing, Spatial Data Visualization and Modeling, Satellite Positioning and Navigation, Advanced GIS, GIS Engineering, Urban Remote Sensing.

Hainan University
China

B.S. IN COMPUTER SCIENCE AND TECHNOLOGY
Sept. 2003 - July 2007

- GPA: 79(100)
- Dissertation Title: *The Research of Image Edge Detection Algorithm*
- Core Courses: Discrete Mathematics, Data Structure, Software Engineering, C++ Programming Language, Programming Language, Computational Method, Digital System and Logical Design, Multimedia Technology, Fundamentals of Compiling, Computer Graphics, Analysis and Design of Algorithms, Operating Systems, Computer Network, Principle and Application of Database, JAVA Programming.

Work Experience

ETH Zurich, Singapore-ETH Centre
Singapore

POSTDOCTORAL RESEARCHER
Oct. 2015 - PRESENT

- Research topic 1: Digital Underground: 3D mapping of utility networks
- Research topic 2: The Growth and Evolution of City Infrastructure

Hong Kong R& D center for Logistics and Supply Chain Management Enabling Technologiesy
Hong Kong

SENIOR RESEARCHER
Aug. 2014 - Aug. 2015

- Working in GIS cloud, E-banking and other projects.

The Hong Kong Polytechnic University
Hong Kong

TEACHING ASSISTANT (PART TIME)
Jan. 2013 - May 2014

- Teaching lab of System Customisation and Development (year 2), includes basic skill of VB.net and Java programming in GIS and UML.

Information Center of Hainan Land Environment and Resources
Haikou, China

COMPUTER PROGRAMMER
Sept. 2007 - June 2009

- Worked in the Program Department to design and produce software that can be used in the Land Environment and Resources services.
- Technical director of The Second Land Survey Project Management System of Hainan province.

Publications

Refereed Journal Articles

- **Yan, Jingya**, Eric Guilbert, and Eric Saux. "An ontology for submarine feature representation on charts." In International Conference on Conceptual Modeling, pp. 87-96. Springer International Publishing, 2013.
- **Yan, Jingya**, Eric Guilbert, and Eric Saux. "An ontology for the generalisation of the bathymetry on nautical charts." ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences 2, no. 2 (2014): 1.
- **Yan, Jingya**, Eric Guilbert, and Eric Saux. "An ontology of the submarine relief for analysis and representation on nautical charts." The Cartographic Journal 52, no. 1 (2015): 58-66.
- **Yan, Jingya**, Eric Guilbert, and Eric Saux. "An ontology-driven multi-agent system for nautical chart generalization." Cartography and Geographic Information Science (2016): 1-15.

Refereed conference papers and other articles

- **Yan, Jingya**, Eric Guilbert, and Eric Saux. "A conceptual model for submarine feature description and generalisation in nautical chart production." The 20th International Conference on Geoinformatics, Geoinformatics 2012, Hong Kong (2012).
- **Yan, Jingya**. "Ontology-based approach to modeling interdependency of critical infrastructure." SRA 2017 Annual Meeting, Arlington, VA (2017).
- **Yan, Jingya** and Tang, Junqing. "Resilience-oriented Analysis of Risk Management and Ontology-based Categorisation of Hazards in interdependent Infrastructure Systems." SRA 2017 Annual Meeting, Arlington, VA (2017).
- Siow Wei Jaw, Rob Van Son, Victor Khoo Hock Soon, Gerhard Schrotter, Richard Loo Wei Kiah, Sandy Teo Shen Ni, and **Yan, Jingya**. "The Need for a Reliable Map of Utility Networks for Planning Underground Spaces." 17th International Conference on Ground Penetrating Radar, Switzerland (2018).
- Rob Van Son, **Jingya, YAN**, Siow Wei JAW, Victor Khoo Hock Soon, Richard Loo Wei Kiah, Sandy Teo Shen Ni, Gerhard SCHROTTER. "Three-Dimensional Data Modelling for Underground Utility Network Mapping." ISPRS Technical Commission IV Symposium 2018, Delft, Netherlands, Accepted.
- **Jingya, YAN**, Siow Wei JAW, Rob Van Son, Kean Huat SOON, and Gerhard SCHROTTER. "A Framework fro Reliable Three-dimensional Underground Utility Mapping for Urban Planning." 3D GeoInfo 2018, Delft, Netherlands, Accepted.

Working papers

- **Yan, Jingya**. "The Growth of Natural Cities in Switzerland." Paper presented at the COST (European Cooperation in Science and Technology) meeting, London, UK (2016)

Academic Activity

Funding

- Travel Grant from the summer school of COST Action TU1305, 2016.
- Travel Grant from the COST Action TU1305 meeting in London, 2016.
- Travel Grant from the Society of Risk Analysis annual meeting, 2017.

The 20th International Conference on GeoInformatics
Hong Kong

Oral presentation
June 2012

- A conceptual model for submarine feature description and generalisation in nautical chart production.

Doctoriales Bretagne 2013
Rennes, France

Oral presentation
Jan. 2013

- My thesis in 180 seconds, which is a challenge to the PhD students to get everyone interested in his/her thesis in only 3 minutes.

Summer School on Topological and Scaling Analyses of Transport and Social Media Data
Gävle, Sweden

Trainee
June 2016

- This summer school, sponsored by COST Action TU1305: Social networks and travel behavior, and by the University of Gävle, was provided a set of workshops on alternative geospatial analysis methods surrounding topological and scaling analyses that enable us to better understand structure and dynamics of transport systems and human mobility patterns.
- A grant was awarded from the training school.

COST (European Cooperation in Science and Technology) Action TU1305: Social Networks and Travel Behaviou
London, UK

Oral presentation
Nov. 2016

- The growth of Natural cities from the Nighttime Light data and street network in Switzerland.

International Conference on Infrastructure Resilience 2018 *Zurich, Switzerland*
ORAL PRESENTATION *Feb. 2018*
- Ontology-based approach to modelling interdependency of critical infrastructure.

International Conference on Infrastructure Resilience 2018 *Zurich, Switzerland*
SESSION CHAIR *Feb. 2018*
- I was session chair of Resilience Assessment session.

Honors & Awards

2014	**Best honorable of Ph.D Thesis**, Universite de Brest	*Brest, France*
2005	**First-class scholarship**, Hainan University	*Haikou, China*
2004	**First-class scholarship**, Hainan University	*Haikou, China*

Other Information

LANGUAGES

Mandarin	Native
English	Fluent
Cantonese	conversational
French	Beginner

COMPUTER SKILLS

Programming	Java, C++, PYTHON, R
Databases	PostreSQL, MySQL, Oracle, Virtuoso, UML
Web development	W3C Standards, HTML, PHP, JSP, JAVASCRIPT, RDF, OWL, CSS
OS Systems	Windows, Mac OS X, Linux (Ubuntu)
Miscellaneous	ArcGIS, Protégé, QGIS, MATLAB, ERMAP, Gephi, LaTeX, Photoshop

Interests   Swimming, Cycling, Table tennis, Basketbal, Squash, Scuba diving, Photography

Referees

Eric SAUX *The French Naval Academy*
Research Institute
ASSOCIATE PROFESSOR *Brest, France*
- E-mail: eric.saux@ecole-navale.fr
- Tel: +33 2 98 23 38 64
- Address: BCRM Brest, Ecole Navale et Groupe des Ecoles du Poulmic,
  Institut de Recherche de l'Ecole Navale, Groupe MoTIM (Modélisation et Traitement de l'Information Maritime),
  Lanvéoc-Poulmic, CC 600, 29240 BREST Cedex 9 (France)

Eric GUILBERT *Universiteé Laval*
ASSOCIATE PROFESSOR *Québec, Canada*
- E-mail: eric.guilbert.1@ulaval.ca
- Tel: (418) 656-2131, post 3863
- Address: Département des sciences géomatiques
  Pavillon Louis-Jacques-Casault 1055, avenue du Séminaire, Local 1315
  Québec (Québec) G1V 0A6 Canada

Hans Rudolf Heinimann *ETH Zurich*
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Christophe CLARAMUNT

Professor and chair

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- Address: BCRM Brest, Ecole Navale et Groupe des Ecoles du Poulmic,
  Institut de Recherche de l'Ecole Navale,
  Lanvéoc-Poulmic, CC 600, 29240 BREST Cedex 9 (France)

Naval Academy Research Institute

Brest, France