

# Hao Wang, Ph.D.

CONTACT Information Room B318, Dept. of ICT & Nat. Sci., Phone: +47 70 16 15 34

Faculty of IT and Electrical Engineering,

Norwegian Univ. of Sci. & Tech. Email: hawa@ntnu.no
Larsgårdsvegen 2, 6009 Ålesund, Norway Webpage: www.haowang.no

RESEARCH INTERESTS I am interested in big data analytics (BDA), industrial internet of things (IIoT), and high performance computing and their practical applications. I also work in the development of safety-critical systems using rigorous software engineering techniques, including formal modeling and verification, model-driven development. In particular, I've studied topics including real-time systems, distributed systems, fault-tolerance, security.

ACADEMIC APPOINTMENTS

#### Associate Professor

Oct. 2014 to present

#### Norwegian Univ. of Sci. & Tech., Aalesund<sup>1</sup>

- Research activities
  - Head of the Big Data Lab;
    - AIS and Maritime Transport, funded by MarKom 2020
    - GCE BLUE Maritime Big Data, funded by Innovasjon Norge;
    - Building up R&D on BDA and HoT;
    - Collaboration with GCE BLUE Maritime and industrial partners including Rolls Royce Marine;
    - Collaboration with international academic and industrial partners on BDA and IIoT.
  - Continue research work on software certification with McMaster collaborators.

#### Research Scientist

Jan. 2013 to Sept. 2014

# IBM Canada Research and Development Centre

- Research activities
  - Studied the safety-critical development and certification process of Software Medical Devices;
  - Developed prototypical toolkit for development and certification;
  - Studied succinct data structures in the architecture of FPGA.

# Visiting Research Fellow

June to Aug. 2012, Oct. 2010 to Mar. 2011

# United Nations University - International Institute for Software Technology

- Research activities
  - Studied model driven development methods for the healthcare domain;
  - Assisted in a successful proposal for a multi-million-patacas project SAFEHR
    on the secure architecture of electronic health records;

## Research Scientist

Feb. 2010 to Apr. 2012

# Centre for Logic and Information, St. Francis Xavier University

- Atlantic Canada Opportunities Agency's Atlantic Innovation Fund (AIF)
  - Project: Building decision-support through workflow systems for health care
- Research activities
  - (with students) Studied and developed a structured graphical workflow modelling language called Compensable Workflow Modelling Language (CWML). Based on this language, we developed a graphical editor, a translator to model checkers, and a workflow execution engine, which

<sup>&</sup>lt;sup>1</sup>Previously Aalesund University College, merged in Norwegian Univ. of Sci. & Tech (NTNU). since 01.01.2016

- were integrated as a workflow design framework called *NOVA Workflow* framework;
- (with Dr. A. Rutle) Developed a new workflow formalism based on modeldriven development approach and the Diagram Predicate Framework developed in University of Bergen, Norway.

# H. Stanley and Doreen Alley Heaps Chair Professor in Computing Science Apr. 2011 to June 2011

# St. Francis Xavier University

- Research activities
  - This is a prestigious grant by StFX to bring in internationally recognized scholars to interact with CS faculty and students;
  - Gave a well-received seminar, with the title of "Overview of Electronic Health Record Standards", to promote the research on eHealth. Interacted with students and faculty members from other departments including biology, nursing and information systems;
  - (with students) Studied program slicing methods and proposed a model slicing method for our CWML.

#### Postdoctoral Fellow

Feb. 2008 to Feb. 2010

## Centre for Logic and Information, St. Francis Xavier University

- Atlantic Canada Opportunities Agency's Atlantic Innovation Fund (AIF)
  - Project: Building decision-support through workflow systems for health care
- Research activities
  - Studied distributed algorithms for model checking, esp. algorithms based on Strongly Connected Components, e.g., OWCTY and MAP in DiVinE;
  - Developed Explicit-time Description Methods for timed verification in general untimed model checkers like SPIN and DiVinE;
  - (with students) Studied verification for workflow models; developed a translator from Yet Another Workflow Language (YAWL) to DiVinE.

## **Assistant Professor**

Sept. 2006 to Feb. 2008

## Faculty of Computer, Guangdong University of Technology

- Research activities
  - Formal verification and mechanism design for fair exchange protocols.

# Research Assistant

Sept. 2002 to June 2006

# South China University of Technology

- Research activities
  - Developed a new interest-driven model of fair exchange;
  - Developed several general/designated verifier committable signatures and based on them, proposed optimistic fair exchange protocols with/without abuse-freeness;
  - Proposed the concept of *Main-protocol-first* fair exchange mechanism;
  - Formal verification of fair exchange protocols using rewriting logic and the Maude tool;

#### **Development Group Leader**

July 2000 to Oct. 2003

# South China University of Technology

- Guangdong Publishing Group
  - Project: Integrated information system for Guangdong Publishing Group
- Research activities
  - Led the development for the logistic sub-system;
  - The project won the 3<sup>rd</sup> Prize of Guangdong Sci.&Tech. advancement award:

## EDUCATION South China University of Technology, China

Ph.D., Computer Science, July 2006

- Thesis: Research and Implementation of New Interest-Driven Fair Exchange Protocols
- Adviser: Prof. Heqing Guo

B.Eng., Computer Science, June 2000

- Honors in Engineering
- Thesis: Study on Web Services with Websphere
- Adviser: Prof. Zhizhong Xia

#### Publications F

#### Refereed Journal Papers

- Hong-Ning Dai, Raymond Chi-Wing Wong, and **Hao Wang**. On Capacity and Delay of Multi-channel Wireless Networks with Infrastructure Support. *IEEE Trans. Vehicular Tech.*, IEEE. In press.
- Xuran Li, Hong-Ning Dai, **Hao Wang**, and Hong Xiao. On Performance Analysis of Protective Jamming Schemes in Wireless Sensor Networks. Sensors, 2016, 16(12), 1987. MDPI.
- Junhao Zhou, Hong Xiao, **Hao Wang**, and Hong-Ning Dai. Parallelizing Simulated Annealing Algorithm in Many Integrated Core Architecture. Lecture Notes in Computer Science, Springer-Verlag, July. 2016, 9787: 239-250.
- Shanshan Yu, Jindian Su, Pengfei Li, and **Hao Wang**. Towards High Performance Text Mining: A TextRank-based Method for Automatic Text Summarization. *International Journal of Grid and High Performance Computing*, IGI Global, May. 2016, 8(2):58-75.
- Qiu Wang, Hong-Ning Dai, Xuran Li, Hao Wang, Hong Xiao. On Modeling Eavesdropping Attacks in Underwater Acoustic Sensor Networks. Sensors, MDPI. 2016, 16(5), 721.
- Xuran Li, **Hao Wang**, Hong-Ning Dai and Yuanyuan Wang. An Analytical Study on Eavesdropping Attacks in Wireless Nets of Things. *Mobile Information Systems*. Article ID 4313475, 10 pages, 2016.
- Chun Yang, Jinyi Long, **Hao Wang**. Performance Comparison of Classification Methods for Surface EMG-based Man-Machine Interface. *International Journal of Grid and High Performance Computing*, IGI Global, Nov. 2015, 7(4):47-56.
- Alan Wassyng, Neeraj Singh, Mischa Geven, Nicholas Proscia, **Hao Wang**, Mark Lawford, Tom Maibaum. Can Product Specific Assurance Case Templates be Used as Medical Device Standards? *IEEE Design & Test*, IEEE, Oct. 2015, 32(5):1-11.
- Neeraj Singh, **Hao Wang**, Mark Lawford, Tom Maibaum, and Alan Wassyng. Stepwise Formal Modelling and Reasoning of Insulin Infusion Pump Requirements. Lecture Notes in Computer Science, Springer-Verlag, August 2015, 9185:387-398.
- Hao Wang, Yihai Chen, Ridha Khedri, and Alan Wassyng. Envisioning a Requirement Specification Template for Medical Device Software. Lecture Notes in Computer Science, Springer-Verlag, Dec. 2014, 8892:209-223.
- Neeraj Singh, **Hao Wang**, Mark Lawford, Tom Maibaum, and Alan Wassyng. Formalizing the Glucose Homeostasis Mechanism. Lecture Notes in Computer Science, Springer-Verlag, June 2014, 8529:460-471.
- Chao Chen, Yihai Chen, Huaikou Miao, and **Hao Wang**. Usage-pattern Based Statistical Web Testing and Reliability Measurement. Elsevier Procedia Computer Science. Oct. 2013, 21:140-147.
- Yihai Chen, Mark Lawford, Hao Wang and Alan Wassyng (alphabetical ordered). Insulin Pump Software Certification. Lecture Notes in Computer Science, Springer-Verlag, 2014, 8315:87-106.
- Adrian Rutle, **Hao Wang** and Wendy MacCaull. A Formal Diagrammatic Approach to Compensable Workflow Modelling. Lecture Notes in Computer Science. 2013, 7789:194-212.
- Fazle Rabbi, Hao Wang, Wendy MacCaull and Adrian Rutle. A Model Slicing Method for Workflow Verification. *Electr. Notes Theor. Comput. Sci.*, Elsevier. May 2013, 295:79-93.

- Fazle Rabbi, **Hao Wang** and Wendy MacCaull. Compensable Workflow Net. Lecture Notes in Computer Science, Springer-Verlag. Nov. 2010, 6447:122-137.
- Ahmed Mashiyat, Fazle Rabbi, **Hao Wang** and Wendy MacCaull. An Automated Translator for Model Checking Time Constrained Workflow Systems. Lecture Notes in Computer Science, Springer-Verlag. Sept. 2010, 6371:99-114.
- **Hao Wang** and Wendy MacCaull. An Efficient Explicit-time Description Method for Timed Model Checking. Electronic Proc. in Theoretical Comp. Sci., 2010. 14:77-91.
- **Hao Wang** and Wendy MacCaull. Verifying Real-Time Systems using Explicit-time Description Methods. Electronic Proc. in Theoretical Comp. Sci., 2010. 13:67-78.
- **Hao Wang**, Heqing Guo, Manshan Lin, Jianfei Yin, Qi He, and Jun Zhang. A New Dependable Exchange Protocol. *Computer Communications*, Elsevier. 2006, 29(15):2770-2780.
- **Hao Wang**, Heqing Guo, Manshan Lin, Jianfei Yin, Qi He and Jun Zhang. Dependable Transaction for Electronic Commerce. Lecture Notes in Computer Science, Springer-Verlag. May 2005. 3482:691-700.
- **Hao Wang**, Heqing Guo, Jianfei Yin, Qi He, Manshan Lin and Jun Zhang. Abuse-free Item Exchange. Lecture Notes in Computer Science, Springer-Verlag. May 2005. 3483:1028-1035.

#### Refereed Conference Papers

- Xuran Li, Hong-Ning Dai, and **Hao Wang**. Friendly-Jamming: An Anti-Eavesdropping Scheme in Wireless Nets of Things. IEEE Global Communications Conference (GLOBECOM 2016), Washington DC, USA. IEEE Press, Dec. 2016.
- The Hien Dang Ha, Roland Olsson, and **Hao Wang**. Clustering Methods for Electricity Consumers: An Empirical Study in Hvaler Norway. 29th Norwegian Informatics Conference 2016 (NIK 2016), Nov. 2016.
- Xu Zhuge, **Hao Wang**, and Girts Strazdins. Evaluating the Data Visualization for Demanding Marine Operations. Techno-Ocean Conference 2016. Kobe, Japan, IEEE Press, Oct. 2016.
- Hong-Ning Dai, Hao Wang, Hong Xiao, Zibin Zheng, Qiu Wang, Xuran Li and Xu Zhuge, On Analyzing Eavesdropping Behaviours in Underwater Acoustic Sensor Networks, 11th ACM International Conference on Underwater Networks and Systems (WUWNet 2016), Shanghai, China, Oct. 2016.
- Hong-Ning Dai, **Hao Wang**, Hong Xiao, Xuran Li, and Qiu Wang. On Eavesdropping Attacks in Wireless Networks. 14th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC 2016), Paris, France. IEEE CS Press. Aug. 2016. *Invited Paper*.
- Hong-Ning Dai, Hao Wang and Hong Xiao, On Channel Allocation of Directional Wireless Networks Using Multiple Channels, 11th International Network Conference, Frankfurt, Germany, 2016.
- Hao Wang, Xu Zhuge, Girts Strazdins, Zheng Wei, Guoyuan Li, Houxiang Zhang. Data Integration and Visualisation for Demanding Marine Operations. MTS/IEEE Oceans Conference 2016. Shanghai, IEEE Press, April 2016.
- Hao Wang, Sindre Fossen, Fang Han, Ibrahim A. Hameed, Houxiang Zhang. Data-driven Identification and Analysis of Propeller Ventilation. MTS/IEEE Oceans Conference 2016. Shanghai, IEEE Press, April 2016.
- Guoyuan Li, Houxiang Zhang, Bikram Kawan, **Hao Wang**, Ottar L. Osen, Arne Styve. Analysis and Modelling of Sensor Data for Ship Motion Prediction. MTS/IEEE Oceans Conference 2016. Shanghai, IEEE Press, April 2016.
- Jiani Lan, **Hao Wang**, Xinyuan Lou. Towards a Random Walk Controller for Block Management and Wear Leveling in Flash Memory. 2015 International Conference on Big Data Intelligence and Computing (DataCom 2015). IEEE CS Press. Dec. 2015. Pages 590-597.
- The Hien Dang Ha, Roland Olsson, and **Hao Wang**. The Role of Big Data on Smart Grid Transition. 2015 IEEE International Conference on Smart City (IEEE Smart City 2015), Chengdu, China, IEEE CS Press. Dec. 2015, Pages 33-39.

- Girts Strazdins and **Hao Wang**. Open Security and Privacy Challenges for the Internet of Things. The 10th International Conference on Information, Communications and Signal Processing (ICICS 2015), Singapore, IEEE Press, Dec. 2015. Pages 33-39.
- Qiu Wang, Hong-Ning Dai, Xuran Li, and **Hao Wang**. Eavesdropping Attacks in Underwater Acoustic Networks. The 10th International Conference on Information, Communications and Signal Processing (ICICS 2015), Singapore, IEEE Press, Dec. 2015.
- Hao Wang, Ottar Osen, Guoyuan Li, Wei Li, Hong-Ning Dai, and Wei Zeng. Big Data and Industrial Internet of Things for the Maritime Industry in Northwestern Norway. 2015 IEEE Region 10 Conference (TENCON 2015), Macau, IEEE Press, Nov. 2015.
- Xuran Li, Hong-Ning Dai, Yuanyuan Wang, and **Hao Wang**. Eavesdropping Activities in Wireless Networks: Impact of Channel Randomness. 2015 IEEE Region 10 Conference (TENCON 2015), Macau, IEEE Press, Nov. 2015.
- Per Engelseth, **Hao Wang**, Richard Glavee-Geo, Cato Gundersen. IT-Enabled Process Development: A Case Study of the Purchasing Challenges of a Petroleum Logistics Firm. The 23rd Norwegian conference for organizations using information technology (NOKOBIT 2015), Vol. 23, No. 1, Aalesund, Norway, Nov. 2015.
- Adrian Rutle, **Hao Wang**, Robin Bye, Ottar Osen. Scalable and User-friendly Simulation. The 29<sup>th</sup> European Conference on Modelling and Simulation (ECMS 2015), Albena, Bulgaria, May 2015.
- Adrian Rutle, Wendy MacCaull, **Hao Wang** and Yngve Lamo. A Metamodelling Approach to Workflow Modelling. The 4<sup>th</sup> Workshop on Behavioural Modelling: Foundations and Applications (BM-FA 2012) in the 8<sup>th</sup> European Conference on Modelling Foundations and Applications (ECMFA 2012), Denmark, ACM. July 2012, Pages 5:1-10.
- **Hao Wang**, Adrian Rutle and Wendy MacCaull. A Formal Diagrammatic Approach to Timed Workflow Modelling. 6<sup>th</sup> IEEE International Symposium on Theoretical Aspects of Software Engineering (TASE 2012), Beijing, China, IEEE CS. July 2012, Pages 167-174.
- Nazia Leyla, Ahmed Mashiyat, **Hao Wang** and Wendy MacCaull. Towards Workflow Verification. In: Proceedings of the 20<sup>th</sup> International Conference of the IBM Center for Advance Studies on Collaborative Research (CASCON 2010), Canada, ACM press. Nov. 2010, Pages 253-267.
- Fazle Rabbi, **Hao Wang** and Wendy MacCaull. YAWL2DVE: An Automatic Translator for Workflow Verification. In: Proceedings of the 4<sup>th</sup> IEEE International Conference on Secure Software Integration and Reliability Improvement 2010 (SSIRI 2010), Singapore, IEEE CS Press, June 2010. Pages 53-59.
- Hao Wang, Yuyi Ou, Jie Ling, Xiang Xu and Heqing Guo. A New Certified Email Protocol. In: Proceedings of the 5<sup>th</sup> Workshop on Internet Communications Security (WICS2007), Regensburg, Germany, IEEE CS Press, Sept. 2007. Pages 683-687.
- **Hao Wang**, Yuyi Ou, Jie Ling, Lu Liang and Xiang Xu. Certified Email Delivery with Offline TTP. In: Proceedings of the 3<sup>rd</sup> International Symposium on Information Assurance and Security (IAS 2007), Manchester, UK, IEEE CS Press, Aug. 2007. Pages 15-20.
- **Hao Wang**, Jie Ling, Yuyi Ou, Xiang Xu and Heqing Guo. A New Abuse-free Contract-signing Protocol. In: Proceedings of the 6<sup>th</sup> International Conference in IT and Application (ICITA 2007), Harbin, China, IEEE CS Press, Jan. 2007.
- Hao Wang, Heqing Guo, Manshan Lin and Jianfei Yin. A Fair Item-item Exchange
  Protocol Satisfying Newly Introduced Requirements. In: Proceedings of the International Conference on Information Technology and Applications (ICITA05),
  Volume 2, Sydney, Australia, IEEE CS Press, 2005, pp. 502-507.
- Manshan Lin, Jianshan Xie, Heqing Guo, **Hao Wang**. Solving Qos-Driven Web Service Dynamic Composition as Fuzzy Constraint Satisfaction. In: Proceedings of 2005 IEEE International Conference on e-Technology, e-Commerce and e-Service (EEE5), Hong Kong. IEEE CS Press, Mar. 2005. Pages 9-14.

Hao Wang and Heqing Guo. Fair Payment Protocols for E-Commerce. In Lamersdorf,
W., Tschammer, V., Amarger, S. (Eds). Building The E-Society: E-Commerce,
E-Business, and E-Government. Proceedings of IFIP 18<sup>th</sup> WCC and 4<sup>th</sup> I3E
Conference, Toulouse, France. Kluwer academic publishers, Aug. 2004. Pages 227-245.

**Hao Wang** and Heqing Guo. Achieving Fairness in Wireless Environment. In: Proceedings of *IEEE* 6<sup>th</sup> CAS Symposium on Emerging Technologies: Frontiers of Mobile and Wireless Communication, Shanghai, China. IEEE CAS Press. May 2004. Volume 1, Pages 117-120.

Hao Wang, Heqing Guo and Manshan Lin. New Fair Payment protocols. In: Proceedings of the 1<sup>st</sup> International Conference on E-business and Telecommunication Networks (ICETE04), Setubul, Portugal. INSTICC Press. Aug. 2004. Volume 1, Pages 199-203.

# Projects and Fundings

## Norwegian Univ. of Sci. & Tech.

AIS and Maritime Transport, MarKom 2020, Jan.-Dec. 2016.

 $Big\ Data\ Analytics\ for\ Local\ Maritime\ Industry,$ NTNU & Vard Electro AS, June – Aug., 2016

Big Data Analytics for Local Tourism Industry, NTNU & Flakk Group, June – Aug., 2016

GCE BLUE Maritime Big Data, Innovasjon Norge, Jan.-Dec. 2015.

# St. Francis Xavier University

H. Stanley and Doreen Alley Heaps Chair Professor in Computing Science grant, April–June 2011.

#### ACADEMIC SOFTWARE

**NOVA Workflow framework**, Centre for Logic and Information, St. Francis Xavier University

## TEACHING EXPERIENCE

# Norwegian Univ. of Sci. & Tech.

## Faculty of Engineering and Science

- GCE Big Data for Maritime Operations, 9-days intensive courses for industrial employees
   Dec.2015-Jan.2016
- IE502515 Big Data (Master) Fall semester (2015-present)
- IE501514 Distributed Programming (Master) Fall semester (2014-present)
- ID101912 Object-Oriented Programming Spring 2015 & 2016
- IF300114 System Engineering and Development, Software Engineering lectures (12 hours) Spring 2015
- Supervision of bachelor theses

Spring 2015

• Supervision of master theses

Spring 2016

- Bikram Kawan, Neural Network Time Series Prediction of Ship Motion;
- Xu Zhuge, A Visual Analytics Framework for Marine Operations.

# McMaster University

#### Department of Computing and Software

• Co-supervision of master/doctoral students

2013 - 2014

- Thomas Chowdhury, PhD student;
- Mischa Geven, Master student;
- Nicholas Proscia, Master student;
- Yanjun Jiang, Master student.

### St. Francis Xavier University

### Centre for Logic and Information

• Co-supervision of master students

2009-2011

- Fazle Rabbi, worked in NOVA Workflow. He is now a PhD student in University of Oslo;
- Ahmed Mashiyat, worked in timed verification of workflow. He is now a Ph.D. student in Univ. of Toronto:
- Nazia Leyla, worked in pattern-based workflow verification.

## Dept. of Information Systems, Gerald Schwartz School of Business

- INFO-102 introduction to Information Systems II Winter 2012
  - Responsible for 58 students, 90% of who are  $1^{st}$ -year students;
  - Developed and delivering two 75-min lectures per week;
  - Developed term assignments, quizzes and final exam.
- INFO-101 introduction to Information Systems I
  - Responsible for 59 students, 90% of who are  $1^{st}$ -year students;
    - Developed and delivering two 75-min lectures per week;
    - Developed term assignments, websites and database design for eBusiness.

#### Dept. of Math, Stats and Computer Science, Faculty of Science

- CSCI-455/522 High Performance Computing
- Spring 2010

Fall 2011

- Responsible for 9 students, 5 undergraduate and 4 master students;
- Developed and delivered three 45-min lectures per week on parallel computing and MPI programming:
- Developed and ran a two-hour lab session per week;
- Supervised master students for their final projects.
- CSCI-383 Object-Oriented Programming and Design

Fall 2008

- Responsible for 9 students;
- Developed and delivered three lectures per week on OOP paradigm and C++ programming;
- Developed and ran a two-hour lab session per week;
- Developed and graded short, long assignments, and term project.

## Guangdong University of Technology

# Faculty of Computer

- Discrete Mathematics;
- Software Engineering;
- Algorithm Design and Analysis;
- Database Systems;
- Supervision of Theses for Bachelor's degree.

#### Seminars

#### Norwegian Univ. of Sci. & Tech., Aalesund, Norway

Big Data: A Brief Introduction. May 20, 2015.

#### NCE Smart Energy Markets, Halden, Norway

Summary of Big Data concepts. April 23, 2015.

# Dept. of Math, Stats and Computer Science, St. Francis Xavier University

Overview of Electronic Health Record Standards. May 4, 2011.

Towards Distributed Model Checking of Real-time Systems. March 20, 2009.

Toward Fairness in Electronic Exchange. March 31, 2008.

# AWARDS AND FELLOWSHIPS

### Norwegian Univ. of Sci. & Tech.

Outstanding Service Award, PC Chair, DataCom 2015, Dec.2015.

Certificate of Recognition, Ambassador for ACM, ACM, Mar.2015.

## McMaster University

Certificate of Appreciation, McMaster Centre for Software Certification, Aug. 2014.

#### St. Francis Xavier University

Outstanding Leadership Award, Local chair, IEEE multi-conference (IEEE CSE 2009, IEEE/IFIP EUC 2009, IEEE PASSAT 2009, and IEEE SocialCom 2009) in Vancouver, 2009.

Atlantic Computational Excellence network (ACEnet) Postdoctoral Research Fellowship, Feb. 2008–Feb. 2010.

## South China University of Technology

World Computer Congress 2004 (WCC 2004) Student Fellowship, WCC, Aug. 2004.

3<sup>rd</sup> prize of Guangdong Sci.&Tech. Advancement Award, Subgroup leader, Project: Integrated information system for Guangdong Publishing Group, Guangdong Sci.&Tech. Department, 2003.

Guangzhou Suntek Group Fellowship Award, Sept.2001–June 2002.

Lenovo Group Fellowship Award, Sept.2000-June 2001.

China International Marine Containers (Group) Ltd Fellowship Award, Sept. 1998–June 1999.

Outstanding Student Awards (for all undergraduate school years), Sept.1996–June.2000.

 $1^{st}$  prize, the  $1^{st}$  National University Student English Contest, P.R. China, 1999.

## ACADEMIC SERVICE

#### Member

- Association for Computing Machinery (ACM), 2005–present
- Institute of Electrical and Electronics Engineers (IEEE), 2007–present
- Marine Technology Society (MTS), life member, 2016–present

#### **Editorial Board Member**

• Journal of Marine Science and Application, Springer

#### Program chair

- The 17th IEEE International Conference on Computer and Information Technology (IEEE CIT-2017)
- The 5th International Conference on Enterprise Systems (ES 2017)
- $\bullet\,$  2015 International Conference on Big Data Intelligence and Computing (DataCom 2015)

#### Local chair

- The 12th IEEE International Conferences on Computational Science and Engineering (CSE 2009)
- The 7th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC 2009)
- The 2009 IEEE International Conference on Information Privacy, Security, Risk and Trust (PASSAT 2009)
- The 2009 IEEE International Conference on Social Computing (SocialCom 2009).

#### Reviewer

- IEEE Trans. on Information Forensics and Security
- IEEE Trans. on Transactions on Emerging Topics in Computing
- ACM Trans. on Multimedia Computing, Communications, and Applications
- Neurocomputing (Elsevier)
- Future Generation Computer Systems (Elsevier)
- Journal of Systems and Software (Elsevier)
- Journal of Supercomputing (Springer)
- KSII Transactions on Internet and Information Systems (Korea Society of Internet Information)

## PC member

- $\bullet$  The  $30^{th}$  International Conference on Advanced Information Networking and Applications (AINA 2016)
- The 5<sup>th</sup>, 6<sup>th</sup>, & 7<sup>th</sup> International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2017, 2016, & 2015)
- The  $29^{th}$  European Conference on Modelling and Simulation (ECMS 2015)
- Metamodelling for Health Systems (MMHS 2015, 2014)
- Systems Software Engineering Track, The 5<sup>th</sup>, 7<sup>th</sup>, & 8<sup>th</sup> International Conference on Ambient Systems, Networks and Technologies (ANT 2017, 2016, & 2014)
- The  $6^{th}$  &  $7^{th}$  International Conference on Cooperative Design, Visualization, and Engineering (CDVE 2010 & 2009)

Language Native: Mandarin (Chinese), Cantonese

Fluent: English (taught university courses to native speakers)

Elementary: Norwegian (passed A2 level)