#### Dr Tru Cao

Department of Biostatistics and Data Science School of Public Health The University of Texas Health Science Center at Houston Email: Tru.Cao@uth.tmc.edu Office: RAS W846, 1200 Pressler Street, Houston, TX 77030 (October 2024)

#### **CURRICULUM VITAE**

#### **BRIEF BIOGRAPHY**

Tru Cao is an Associate Professor in the Department of Biostatistics and Data Science, The University of Texas Health Science Center at Houston School of Public Health. He obtained his bachelor's degree from Ho Chi Minh City University of Technology, master's degree from Asian Institute of Technology, and PhD degree in Computer Science from the University of Queensland. He then spent his postdoc at the University of Bristol and the University of California at Berkeley. Prior to his current position, Tru Cao was Visiting Professor in the Department of Information Systems and Business Analytics, Eastern Washington University, and Full Professor in the School of Computer Science and Engineering, Ho Chi Minh City University of Technology. He was also a co-founder and chair of Information Science of John von Neumann Institute, Vietnam National University at Ho Chi Minh City. His past positions include Chair of Information and Communication Technologies Committee, Scientific Council of Vietnam National University at Ho Chi Minh City (2009-2012), School Associate Dean (2002-2007), and Computer Science Department Chair (2002-2006). In 2007, Tru Cao proposed his School's World Bank funded project that resulted in the first ABET-accredited programs in the country. He was also one of the founding members of the IEEE Vietnam Section established in 2007. From 2009 to 2016, he held the visiting professorship at Japan Advanced Institute of Science and Technology. Tru Cao is currently PRICAI's steering committee member, has served as a program committee co-chair for ICADL 2007, PACIS 2012, and PAKDD 2015, and program committee member for more than one hundred international conferences. He has published three textbooks, one research book, seven edited books, seven book chapters, and over one hundred peer-reviewed papers in international journals and conferences in the fields of conceptual structures, soft computing, semantic web, machine learning, natural language processing, and intelligent health information systems.

#### **EDUCATION**

#### 1996-1999 Ph.D. in Computer Science

The University of Queensland, Australia

Dissertation: "Foundations of Order-Sorted Fuzzy Set Logic Programming in Predicate

Logic and Conceptual Graphs"

Scholarships: Australian Overseas Postgraduate Research Scholarship

University of Queensland Postgraduate Research Scholarship

#### 1994-1995 Master of Engineering in Computer Science

Asian Institute of Technology, Thailand

Award: Tim Kendall Memorial Prize in recognition of the most outstanding academic performance among the master's graduates of the Computer Science and Information

Management Program.

Scholarship: The German Academic Exchange Service Scholarship

### 1985-1990 Engineer in Computer Science and Engineering

Ho Chi Minh City University of Technology, Vietnam

**Award:** *University Gold Medal* in recognition of the most outstanding academic performance among the bachelor's graduates of the School of Electrical and Electronics Engineering.

### 1983-1984 Specialized High School Classes for Gifted Students in Mathematics

Award: Third Prize in Vietnam National Mathematics Contest

#### **FACULTY AND WORK EXPERIENCE**

### 04/2020-Present Associate Professor

Department of Biostatistics and Data Science

School of Public Health

University of Texas Health Science Center at Houston, USA

### 10/2017-04/2020 Visiting Professor/Lecturer

Department of Information Systems and Business Analytics

College of Business (AACSB Accredited)
Eastern Washington University, USA

# 2014-2016 Visiting Professor

Japan Advanced Institute of Science and Technology, Japan

## 11/2013-09/2017 Full Professor

School of Computer Science and Engineering (ABET Accredited) Ho Chi Minh City University of Technology, VNUHCM, Vietnam

### 2009-2013 Visiting Associate Professor

Japan Advanced Institute of Science and Technology, Japan

## 10/2005-10/2013 Associate Professor

School of Computer Science and Engineering

Ho Chi Minh City University of Technology, VNUHCM, Vietnam

# 08/2001-10/2001 Visiting Scholar

Berkeley Initiative in Soft Computing (Lofti Zadeh's Lab)

University of California at Berkeley, USA

### 07/1999-07/2001 Research Associate

Artificial Intelligence Group, Department of Engineering Mathematics

University of Bristol, England

#### 09/1990-05/1994 Lecturer

11/2001-09/2005 School of Computer Science and Engineering

Ho Chi Minh City University of Technology, VNUHCM, Vietnam

# ADMINISTRATIVE EXPERIENCE

### 07/2010-09/2017 Co-Founder and Chair of Information Science

John von Neumann Institute, Vietnam National University at Ho Chi Minh City

10/2002-10/2007 Associate Dean

School of Computer Science and Engineering

Ho Chi Minh City University of Technology, VNUHCM, Vietnam

In charge of research, international relations, graduate studies, and undergraduate honor program for talented students.

In charge of the proposal for the World Bank funded project (~1.2 million USD) to obtain ABET accreditation and develop eight strong research groups for the school. The project then resulted in the School's ABET-accredited programs in Computer Engineering and in Computer Science effective from 2011 and 2012, respectively.

10/2002-04/2006 Chair of Computer Science Department

School of Computer Science and Engineering

Ho Chi Minh City University of Technology, VNUHCM, Vietnam

02/2007 Co-Founder of IEEE Vietnam Section

#### ACADEMIC SERVICES

2023-2024 Co-Chair of the Logistics and Website Committee, A Special Conference on

Biostatistics in the New Era of Data-Driven Sciences, Celebrating the 55th

**Department Anniversary** 

Department of Biostatistics and Data Science UTHealth Houston School of Public Health, USA

2023 Chair of the Data Science Teaching Faculty Search Committee

Department of Biostatistics and Data Science UTHealth Houston School of Public Health, USA

2023-Present Member of the Data Science IT Development Committee

Department of Biostatistics and Data Science UTHealth Houston School of Public Health, USA

2021-Present Member of the Student Admission and Advising Committee

Department of Biostatistics and Data Science UTHealth Houston School of Public Health, USA

2020-Present Member of the Data Science Program Committee

Department of Biostatistics and Data Science UTHealth Houston School of Public Health, USA

2020-2023 Member of the Online/New Education Program Development Committee

Department of Biostatistics and Data Science UTHealth Houston School of Public Health, USA

03/2020-04/2020 Member of the Online Teaching Resources Staff Team

College of Business, Eastern Washington University, USA

2018-2019 Member of the Global Experiential Learning Committee

College of Business, Eastern Washington University, USA

2017-2018 Member of the Faculty Development Committee

College of Business, Eastern Washington University, USA

2014-2018 Member of the Vietnam Council for Professor Title for Information Engineering

In charge of reviewing and recommending candidates for the Associate Professor

and Full Professor titles in Information and Communication Technologies

2009-2012 Chair of the Information and Communication Technologies Committee

Scientific Council, Vietnam National University at Ho Chi Minh City

### **TEACHING EXPERIENCE**

08/2020-Present Graduate Courses at University of Texas Health Science Center at Houston:

Introduction to Data Science Data Science Computing

10/2017-04/2020 Upper Division Courses at Eastern Washington University:

Advanced Database Applications (Data Warehouses, Big Data, and NoSQL models) Business Database Applications (Relational Database Design, Normalization, SQL)

Spreadsheet Modeling for Business Applications

Systems Analysis and Design Systems Project Management

Machine Learning and Artificial Intelligence

11/2001-07/2017 Courses taught in English at Ho Chi Minh City University of Technology and John von Neumann Institute, VNUHCM:

Undergraduate: Artificial Intelligence

Data Structures and Algorithms Computational Structures

Graduate: Text and Web Analytics

Information and Social Networks

Courses taught in Vietnamese at Ho Chi Minh City University of Technology

*Undergraduate*: Principles and Paradigms of Programming Languages

Automata and Formal Languages Introduction to Computer Science

Machine Learning

Graduate: Knowledge-Based Systems

#### **PUBLISHED TEXTBOOKS**

T1. Cao, T.H., Artificial Intelligence = Algorithms + Intelligence (2008, in Vietnamese).

T2. Cao, T.H., Programming Languages: Principles and Paradigms (2004, in Vietnamese).

T3. Cao, T.H., Introduction to Computer Science (1992, in Vietnamese).

#### SUPERVISED PHD STUDENTS

**Sara Nofal**, UTHealth Houston School of Public Health, PhD Health Promotion and Behavioral Sciences (2022-2023)

Dissertation: "Mammography Screening Behavior Analysis: A Machine Learning Approach"

**Vuong Ngo**, Ho Chi Minh City University of Technology, PhD Computer Science (2008-2013) Dissertation: "Ontology-Based Information Retrieval"

**Hien Nguyen**, Ho Chi Minh City University of Technology, PhD Computer Science (2006-2011) Dissertation: "Open and Close Ontology-Based Named Entity Disambiguation"

**Hoa Nguyen**, Ho Chi Minh City University of Technology, PhD Computer Science (2004-2008) Dissertation: "A Fuzzy and Probabilistic Object Base Model"

**Tho Quan**, Nanyang Technological University, PhD Computer Science (co-supervision, 2002-2006) Dissertation: "Cluster Analysis and Ontology Generation Techniques for the Development of Scholarly Semantic Web"

### SUPERVISED MASTER'S AND ENGINEERING BACHELOR'S STUDENTS

**Devanshi Majeethia**, UTHealth Houston School of Public Health, MS Biostatistics (2023) Thesis: "Identification of Sociodemographic Factors Leading to Missed Appointments in a Hospital"

Muneeza Qureshi, UTHealth Houston School of Public Health, Master Public Health (2022) Thesis: "Validity Assessment of ICD-10 Codes among Covid-19 Patients from the Optum Database in the United States: A Retrospective Cohort Study"

2002-2017 47 Master's and over a hundred of Engineering Bachelor's graduation theses at HCMUT

### DISSERTATION AND THESIS COMMITTEE MEMBER

**Yuxuan Gu**, UTHealth Houston School of Public Health, PhD Candidate Biostatistics (since 2024) Dissertation Proposal: "Disease Trajectory Prediction Using Deep Learning and State Space Model Based on EHR"

**Zitong Zhang**, UTHealth Houston School of Public Health, PhD Candidate Biostatistics (since 2023) Dissertation Proposal: "Scholarly Recommendation Systems: Recommenders for Datasets and Grant Projects and Methods to Evaluate Them"

**Zhouxuan Li**, UTHealth Houston School of Public Health, PhD Biostatistics (2023-2024)
Dissertation: "Vaccine Effectiveness Estimation via Counterfactual Deep Neural Network Survival Model and a Brain-Inspired Hyperdimensional Computation Approach for DNA Sequence Classification"

**Jiachen Lu**, UTHealth Houston School of Public Health, PhD Biostatistics (2023-2024)

Dissertation: "A Bayesian Hidden Markov Model Framework to Investigate Multiple Circadian Rhythmicities"

**Khang Ly**, UTHealth Houston School of Public Health, PhD Biostatistics (2023) Dissertation: "Uncertainty Contouring System for CT Scans of Prostate Cancer Patients"

Huining Sun, UTHealth Houston School of Public Health, MS Biostatistics (2024)

Thesis: "Identifying Similar Health Related Quality of Life Levels in Adolescents and Young Adults with Cancer and Characterizing New Levels Using Unsupervised Random Forest and Partitioning Around Medoids"

Anh Vo, UTHealth Houston School of Public Health, MS Biostatistics (2024)

Thesis: "The Effectiveness of Machine Learning Models in Stroke Prediction"

Daisy Kwok, UTHealth Houston School of Public Health, MS Biostatistics (2023)

Thesis: "Evaluating the Impact of Covid-19 on Lung Cancer"

Shefali Patel, UTHealth Houston School of Public Health, MS Biostatistics (2023)

Thesis: "Predicting Mortality and 30-Day Readmission Using Machine-Learning Methods for MIMIC-IV Patients with Chronic Obstructive Pulmonary Disorder"

Mobin Khajeh-Sharafabadi, UTHealth Houston School of Public Health, MS Biostatistics (2023)

Thesis: "Creating an Analysis Pipeline Using an R-Shiny Application to Investigate the Association of Food Specific Compound Metabolites in the Mediterranean Diet with Cardiovascular Health Indicators Using Linear Mixed Models"

Minji Chae, UTHealth Houston School of Public Health, MS Biostatistics (2022)

Thesis: "Predicting Hospitalization and Length of Stay Following Emergency Department Admission in Working Adults with Chronic Kidney Disease"

Rachit Sabharwal, UTHealth Houston School of Public Health, MS in Biostatistics (2022)

Thesis: "Biorec: A Biomedical Recommendation System for Academic Conferences and Journals"

### PHD DISSERTATION EXAMINER

Dissertation: "Social Media as Sensor for Healthcare: A Machine Learning Approach" (2016) Deakin University, Australia.

Dissertation: "Representing and Reasoning about Bayesian Games with Epistemic Logic" (2014). Macquarie University, Australia.

### **RESEARCH AWARDS**

- **2013 Best Paper Runner-Up Award**, the 10<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future in Computing and Communication Technologies.
- **2010 Outstanding Research Publication Award**, Vietnam National University at Ho Chi Minh City, for publication of a monograph with Springer-Verlag.
- **2010** Best Paper Award, the 4<sup>th</sup> International Conference on Advances in Semantic Processing.
- **2007 Outstanding Research Contribution Award,** Vietnam National University at Ho Chi Minh City, for Development of the Semantic Web in Vietnam.
- **2000 Young Researcher Fellowship Award**, the 2000 European Symposium on Computational Intelligence.

#### RECENT RESEARCH GRANTS

F1. Texas Epidemic Public Health Institute; collaborating with leaders in public health, science, medicine, and the community, TEPHI will analyze the lessons learned during the COVID-19 pandemic and other major biological events to prepare Texas for the next public health emergency – 4546301

Role: Co-Investigator (PI: Eric Boerwinkle) Start/End Date: 2/16/2024 – 12/31/2024

Total Amount: \$40,000,000

F2. Collaboration of UTSPH and HCPH on COVID -19 and health disparities in Harris County/ Harris Cares: Embrace HOPE (Healing, Opportunity, Prosperity, Equity) – 0018622

Role: Co-Investigator (PI: Dritana Marko) Start/End Date: 09/01/2023 – 05/31/2024

Total Direct Costs: \$930,081 Total Indirect Costs: \$167,919

F3. Harris Health PCORI Health Systems Implementation Initiative Capacity Building - ADH-515

Role: Co-Investigator (PI: Chethan Bachireddy) Start/End Date: 07/01/2023 – 12/31/2024

Total Direct Costs: \$218,928 Total Indirect Costs: \$87,571

F4. Characterization and Clustering of Symptoms in People with HIV - NIH R24 AI067039

Role: Principal Investigator

Start/End Date: 9/1/2021 - 8/31/2026

F5. Integrated Data Science and Implementation Science Participatory Planning to End the HIV Epidemic (EHE CFAR Supplement) – P03AI161943

Role: Co-Investigator (PI: Hulin Wu)

Start/End Date: 09/01/2022 - 08/31/2024

Funding Agency: Baylor College of Medicine (BCM)/National Institutes of Health/DHHS (NIH)

Total Direct Costs: \$179,660 Total Indirect Costs: \$100,610

F6. COVID-19 Cohort Study - 0015338

Role: Co-Investigator (PI: Eric Boerwinkle) Start/End Date: from 05/01/2022 – 12/31/2024

Funding Agency: The Cullen Foundation, Cullen Trust for Health Care, the Elkins Foundation, and

the John P. McGovern Foundation

Total Direct and Indirect Costs: \$1,512,175

F7. A Prescription for Healthy Living – 0017312

Role: Co-Investigator (PI: Shreela Sharma) Start/End Date: 05/06/2022 – 07/15/2023

Funding Agency: Harris County Hospital District (HCHD) Total Direct Costs: \$511,809 Total Indirect Costs: \$0

F8. The PHIT Workforce Development Program: Creating a Diverse and Inclusive Health Information Technology (IT) Workforce in Texas – 90PH0003/01-03

Role: Co-Investigator (PI: Eric Boerwinkle) Start/End Date: 09/21/2021 - 09/15/2023

Funding Agency: Office of the National Coordinator for Health Information Technology/HRSA/DHHS

Total Direct Costs: \$9,213,935 Total Indirect Costs: \$540,312

#### PRIOR RESEARCH GRANTS

The research grants in Vietnam were substantial with respect to the country low GDP per capita.

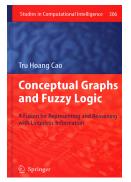
- R1. Co-Investigator of the Key Project of Vietnam National University at Ho Chi Minh City on **Developing Core Technologies for Mining Electronic Medical Records for Health Care and Medical Research** (2015-2019, large grant: 3,685 million VND ~ 171,000 USD by the respective conversion rate in the grant period).
- R2. Principal Investigator of the Key Project of Vietnam National University at Ho Chi Minh City on **Wikipedia-Based Entity Disambiguation** (2012-2014, large grant: 1,150 million VND ~ 58,000 USD).
- R3. Principal Investigator of the World Bank University Education and Research Project on **Information Processing on Semantic Web & Applications** (2010-2012, large grant: 66,000 USD).
- R4. Principal Investigator of the Key Project of Vietnam National University at Ho Chi Minh City on **Semantic Web Information Extraction and Integration** (2007-2009, large grant: 1,000 million  $VND \sim 62,000 \text{ USD}$ ).
- R5. Co-Investigator of the Vietnam National Key Project on **Building Basic Resources and Tools for Vietnamese Language and Speech Processing** (2006-2008, large grant).
- R6. Key Partner of the Joint Research Project on Advanced Methods for Knowledge Representation and Integration with Applications (2006-2008, Japan Advanced Institute of Science and Technology research grant, in collaboration with the Knowledge Science School, JAIST, and the Artificial Intelligence Group, University of Bristol).
- R7. Principal Investigator of the Vietnam National Key Project on **Vietnamese Semantic Web** (2004-2006, large grant: 1,600 million VND  $\sim 103,000$  USD).
- R8. Key Developer of the **FRIL++ language project**, funded by the Engineering and Physical Sciences Research Council, UK (1999-2001, large grant).

#### RESEARCH PUBLICATIONS

### **Google Scholar Citations**

Citations: 2030 h-index: 21 i10-index: 53

## Monograph



**Cao, T.H.** (2010), Conceptual Graphs and Fuzzy Logic: A Fusion for Representing and Reasoning with Linguistic Information. Studies in Computational Intelligence, Vol. 306, Springer-Verlag. (First paperback version: 2012)

<u>From the reviews:</u> "This research monograph is devoted to the idea of fuzzy conceptual graphs, their analysis, algorithms and applications. ... One of the outstanding features of the monograph is a formal and systematic coverage of the fundamental concepts. Overall, the book can serve as a valuable, well-structured reference book for all those interested in the effective representation and processing of fuzzy information." (Witold Pedrycz, Zentralblatt MATH, Vol. 1208, 2011)

### **Edited Books**

- E1. Cao, T.H. & Ho, Y.-S. (Eds) (2016), *Proceedings of the 12<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future in Computing & Communication Technologies (IEEE-RIVF 2016)*. Institute of Electrical and Electronics Engineers (IEEE). https://ieeexplore.ieee.org/xpl/conhome/7787233/proceeding
- E2. **Cao, T.H.** & Lim, E.P. & Zhou, Z.H. & Ho, B.T. & Cheung, D. & Motoda, H. (Eds) (2015), *Proceedings of the 19<sup>th</sup> Pacific-Asia Conference in Knowledge Discovery and Data Mining (PAKDD 2015*), Lecture Notes in Artificial Intelligence, LNAI 9077 (Part I) and LNAI 9078 (Part II). Springer-Verlag. Part I: https://link.springer.com/book/10.1007/978-3-319-18038-0; Part II: https://link.springer.com/book/10.1007/978-3-319-18032-8
- E3. Li X.-L. & Cao, T.H. & Lim, E.P. & Zhou, Z.H. & Ho, B.T. & Cheung, D. & Motoda, H. (Eds) (2015), *Proceedings of the Workshops at the 19<sup>th</sup> Pacific-Asia Conference in Knowledge Discovery and Data Mining (PAKDD 2015)*, Lecture Notes in Artificial Intelligence, LNAI 9441. Springer-Verlag. https://link.springer.com/book/10.1007/978-3-319-25660-3
- E4. Pan, S.L. & **Cao**, **T.H.** (Eds) (2012), *Proceedings of the 16<sup>th</sup> Pacific Asia Conference on Information Systems*. Association for Information Systems. https://aisnet.org/page/PACISPage
- E5. **Cao, T.H.** & Kutsche, R.-D. & Demaille, A. (Eds) (2009), *Proceedings of the 7<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future in Computing & Communication Technologies (IEEE-RIVF 2009)*. Institute of Electrical and Electronics Engineers (IEEE). https://ieeexplore.ieee.org/xpl/conhome/5174598/proceeding
- E6. Cao, T.H. & Ho, B.T. (Eds) (2008), *Proceedings of the 6<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future in Computing & Communication Technologies (IEEE-RIVF 2008)*. Institute of Electrical and Electronics Engineers (IEEE). https://ieeexplore.ieee.org/xpl/conhome/4586318/proceeding
- E7. Goh, D.H.-L. & **Cao**, **T.H.** & Solvberg, I. & Rasmussen, E.M. (Eds) (2007), *Proceedings of the 10<sup>th</sup> International Conference on Asian Digital Libraries*, Lecture Notes in Computer Science, LNCS 4822. Springer-Verlag. https://link.springer.com/book/10.1007/978-3-540-77094-7

## **Journal Special Issues**

- S1. **Cao**, **T.H.** & Osmani, V. & Wu, H. (Eds) (2023), Research Topic on EHR Data Analytics and Knowledge Discovery, *Frontiers in Big Data Data Mining and Management*. Frontiers. https://www.frontiersin.org/research-topics/24187/ehr-data-analytics-and-knowledge-discovery/magazine
- S2. Li, H. & Phung, D. & **Cao, T.H.** & Ho, B.T. & Zhou, Z.H. (Eds) (2016), Special Issue of Selected Papers from Asian Conference on Machine Learning (ACML 2014), *Machine Learning*, Vol. 103 (2). Springer-Verlag. https://link.springer.com/article/10.1007/s10994-016-5549-9
- S3. Ho, B.T. & Bellot, P. & **Cao**, **T.H.** (Eds) (2012), Special Issue of Selected Papers from the 8<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future in Computing and Communication Technologies (RIVF 2010), *Journal of Ambient Intelligence and Humanized Computing*, Vol. 3 (4). Springer-Verlag. https://link.springer.com/article/10.1007/s10994-016-5549-9

### **Book Chapters**

- B1. Cao, T.H. & Tang, T.M. & Chau, C.K. (2012), Text Clustering with Named Entities: A Model, Experimentation and Realization. In *Holmes, D.E. & Jain, L.C. (Eds): Data Mining: Foundations and Intelligent Paradigms*, Intelligent Systems Reference Library, ISRL 23, pp. 267-287. Springer-Verlag. https://link.springer.com/chapter/10.1007/978-3-642-23166-7\_10
- B2. **Cao, T.H.** (2008), Fuzzy and Probabilistic Object-Oriented Databases. In *Encyclopaedia of Information Science and Technology (2nd ed.)*, pp. 126-134. IGI Global. https://www.igi-global.com/chapter/fuzzy-probabilistic-object-oriented-databases/7905
- B3. Cao, T.H. & Huynh, D.T. (2006), Approximate Knowledge Graph Retrieval: Measures and Realization. In *Sanchez, E. (Ed.): Fuzzy Logic and the Semantic Web*, Capturing Intelligence, Vol. 1, pp. 283-304. Elsevier. https://www.sciencedirect.com/science/article/pii/S157495760680016X
- B4. **Cao, T.H.** & Nguyen, H. (2005), Fuzzy and Probabilistic Object Bases. In *Ma, Z. (Ed.): Advances in Fuzzy Object-Oriented Databases: Modeling and Applications*, pp. 46-84. IGI Global. https://www.igi-global.com/chapter/fuzzy-probabilistic-object-bases/4807
- B5. Rossiter, J.M. & Cao, T.H. (2005), Fril++ and Its Applications. In Ma, Z. (Ed.): Advances in Fuzzy Object-Oriented Databases: Modeling and Applications, pp. 113-152. IGI Global. https://www.igi-global.com/chapter/fril-its-applications/4809
- B6. Cao, T.H. (2003), Conceptual Graphs for Modelling and Computing with Generalized Quantified Statements. In Lawry, J. & Shanahan, J. & Ralescu, A. (Eds): Modelling with Words: Learning, Fusion, and Reasoning within a Formal Linguistic Representation Framework, Lecture Notes in Artificial Intelligence, LNAI 2873, pp. 80-101. Springer-Verlag. https://link.springer.com/chapter/10.1007%2F978-3-540-39906-3 5
- B7. **Cao, T.H.** & Rossiter, J.M. & Martin, T.P. & Baldwin, J.F. (2002), On the Implementation of Fril++ for Object-Oriented Logic Programming with Uncertainty and Fuzziness. In *Bouchon-Meunier*, *B. et al.* (*Eds*): *Technologies for Constructing Intelligent Systems*, Studies in Fuzziness and Soft Computing, STUDFUZZ 90, pp. 393-406. Springer-Verlag. https://link.springer.com/chapter/10.1007/978-3-7908-1796-6 31

### **Peer-Reviewed Journal Papers**

- \* Except for those papers, my students or I are the first or (co-)corresponding authors.
- J1. Cao, T.H. & Brady, V. & Whisenant, M. & Wang, X. & Gu, Y. & Wu, H. (2024), Toward Reliable Symptom Coding in Electronic Health Records for Symptom Assessment and Research: Identification and Categorization of International Classification of Diseases, Ninth Revision, Clinical Modification Symptom Codes. Computers, Informatics, Nursing. Vol. 42 (9), 636-647. https://pubmed.ncbi.nlm.nih.gov/38968447/
- J2. Sandoval, M.N.\* & Mikhail, J.L. & Fink, M.K. & Tortolero, G.A. & Cao, T.H. & Ramphul, R. & Husain, J. & Boerwinkle, E. (2024), Social Determinants of Health Predict Readmission Following COVID-19 Hospitalization: A Health Information Exchange-Based Retrospective Cohort Study. Frontiers in Public Health, Vol. 12, 1352240. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC11004289/

- J3. Zhang, S.\* & Chou, L.N. & Swartz, M.D. & Mehta, H. & Goodwin, J. & Kuo, Y.-F. & Giordano, S.H. & Tucker, C.A. & Basen-Engquist, K.M. & Lyons, E. & Downer, B. & Peterson, S.K. & Cao, T.H. & Swartz, M.C. (2024), Association of Cancer Diagnosis with Disability Status among Older Survivors of Colorectal Cancer: A Population-Based Retrospective Cohort Study. Frontiers in Oncology, Vol. 14, 1283252. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10978737/
- J4. Zhang, Z.\* & Patra, B. & Yaseen, A. & Zhu, J. & Sabharwal, R. & Roberts, K. & **Cao, T.H.** & Wu, Hu. (2023), Scholarly Recommendation Systems: A Literature Survey. *Knowledge and Information Systems*, Vol. 65, 4433-4478. Springer. https://link.springer.com/article/10.1007/s10115-023-01901-x
- J5. **Cao, T.H.** (2022), A Relational Database Model and Algebra Integrating Fuzzy Attributes and Probabilistic Tuples. *Fuzzy Sets and Systems*, Vol. 445, 123-146. Elsevier. https://www.sciencedirect.com/science/article/pii/S0165011421004127
- J6. Vo, C. & Cao, T.H. & Truong, N. & Ngo, T. & Bui, D. (2022), Automatic Medical Term Extraction from Vietnamese Clinical Texts. *Terminology*, Vol. 28 (2), 299-327. https://www.jbe-platform.com/content/journals/10.1075/term.20037.vo
- J7. Cao, T.H. & Vo, C. & Nguyen, S. & Inoue, A. & Zhou, D. (2020), A Kernel k-Means-Based Method and Attribute Selections for Diabetes Diagnosis. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, Vol. 24 (1), 73-82. https://www.fujipress.jp/jaciii/jc/jacii002400010073/
- J8. Vo, C. & Cao, T.H. & Doan, N. & Tu, S. & Nguyen, A.D. & Nguyen, B. & Ho, B.T. (2019), EMRVisualization for Patient Progress Tracking: Interface Design and System Implementation. International Journal of Affective Engineering, Vol. 18 (3), 117-128. https://www.jstage.jst.go.jp/article/ijae/18/3/18 IJAE-D-18-00025/ article
- J9. Cao, T.H. & Nguyen, A.D. & Dinh, T.Q. & Luong, Q.C. & Diep, H.T. (2018), Forecasting Dengue Incidences: Statistical and Dynamic Models. Oxford Journal of Intelligent Decision and Data Science, 1-13. https://www.ispacs.com/journals/ojids/2018/ojids-00017/article.pdf
- J10. Tran, T. & Cao, T.H. (2013), Automatic Detection of Outdated Information in Wikipedia Infoboxes. *Research in Computing Science*, Vol. 70, 211-222. https://www.cicling.org/2013/rcs/Automatic%20Detection%20of%20Outdated%20Information%20in%20Wikipedia%20Infoboxes.html
- J11. Nguyen, H.T. & Cao, T.H. (2012), Named Entity Disambiguation: A Hybrid Approach. *International Journal of Computational Intelligence Systems*, Vol. 5 (6), 1052-1067. Atlantis Press. https://www.tandfonline.com/doi/abs/10.1080/18756891.2012.747661
- J12. Cao, T.H. & Ngo, V.M. (2012), Semantic Search by Latent Ontological Features. *Journal of New Generation Computing*, Vol. 30 (1), 53-71. Springer-Verlag. https://link.springer.com/article/10.1007/s00354-012-0104-0
- J13. Cao, T.H. & Nguyen, H. (2011), Uncertain and Fuzzy Object Bases: A Data Model and Algebraic Operations. *International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems*, Vol. 19 (2), 275-305. World Scientific.

- J14. Cao, T.H. & Noi, N.V. (2010), A Framework for Linguistic Logic Programming. *International Journal of Intelligent Systems*, Vol. 25 (6), 559-580. John Wiley & Sons. https://onlinelibrary.wiley.com/doi/abs/10.1002/int.20421
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- C60. **Cao, T.H.** (2001), Generalized Quantifiers and Conceptual Graphs. In *Proceedings of the 9<sup>th</sup> International Conference on Conceptual Structures (ICCS 2001)*, Lecture Notes in Artificial Intelligence, LNAI 2120, pp. 87-100. Springer-Verlag. https://link.springer.com/chapter/10.1007/3-540-44583-8\_7
- C61. Cao, T.H. & Rossiter, J.M. & Martin, T.P. & Baldwin, J.F. (2001), Inheritance and Recognition in Uncertain and Fuzzy Object-Oriented Models. In *Proceedings of the 1st International Joint Conference of the International Fuzzy Systems Association and the North American Fuzzy Information Processing Society*, (IFSA-NAFIPS 2001), pp. 2317-2322. Institute of Electrical and Electronics Engineers (IEEE). https://ieeexplore.ieee.org/document/944434
- C62. Rossiter, J.M.\* & Cao, T.H. & Martin, T.P. & Baldwin, J.F. (2000), A Fril++ Compiler for Soft Computing Object-Oriented Logic Programming. In *Proceedings of the 6<sup>th</sup> International Conference on Soft Computing (IIZUKA 2000)*, pp. 340-345. https://www.semanticscholar.org/paper/A-Fril%2B%2B-Compiler-for-Soft-Computing-Logic-Rossiter-Cao/768e92e3c8ac997d200bc52d152c53232dc4b7a0
- C63. **Cao, T.H.** (2000), Fuzzy Conceptual Graphs: A Language for Computational Intelligence Approaching Human Expression and Reasoning. In *Proceedings of the 2000 European Symposium on Computational Intelligence*, Advances in Soft Computing, AINSC 5, pp. 114-120. Springer-Verlag. https://link.springer.com/chapter/10.1007%2F978-3-7908-1844-4\_20
- C64. Baldwin, J.F. & Cao, T.H. & Martin, T.P. & Rossiter, J.M. (2000), Towards Soft Computing Object-Oriented Logic Programming. In *Proceedings of the 9<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2000)*, pp. 768-773. Institute of Electrical and Electronics Engineers (IEEE). https://ieeexplore.ieee.org/document/839129
- C65. **Cao, T.H.** & Creasy, P.N. (1998), Fuzzy Order-Sorted Logic Programming in Conceptual Graphs with a Sound and Complete Proof Procedure. In *Proceedings of the 6<sup>th</sup> International Conference on Conceptual Structures (ICCS 1998)*, Lecture Notes in Artificial Intelligence, LNAI 1453, pp. 270-284. Springer-Verlag. https://link.springer.com/chapter/10.1007/BFb0054920
- C66. **Cao, T.H.** & Creasy, P.N. & Wuwongse, V. (1997), Fuzzy Unification and Resolution Proof Procedure for Fuzzy Conceptual Graph Programs. In *Proceedings of the 5<sup>th</sup> International Conference on Conceptual Structures (ICCS 1997)*, Lecture Notes in Artificial Intelligence, LNAI 1257, pp. 386-400. Springer-Verlag. https://link.springer.com/chapter/10.1007/BFb0027885
- C67. **Cao, T.H.** & Creasy, P.N. (1997), Universal Marker and Functional Relation: Semantics and Operations. In *Proceedings of the 5<sup>th</sup> International Conference on Conceptual Structures (ICCS 1997*), Lecture Notes in Artificial Intelligence, LNAI 1257, pp. 416-430. Springer-Verlag. https://link.springer.com/chapter/10.1007/BFb0027887
- C68. **Cao, T.H.** & Creasy, P.N. & Wuwongse, V. (1997), Fuzzy Types and Their Lattices. In *Proceedings* of the 6<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 1997), pp. 805-812. Institute of Electrical and Electronics Engineers (IEEE). https://ieeexplore.ieee.org/document/622813

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# **Other Peer-Reviewed Conference Papers**

- O1. Dong, D.T. & **Cao**, **T.H.** (2014), Improvement of Vietnamese Text Classification by Class Frequency Term Weighting. In *Proceedings of the 3<sup>rd</sup> Asian Conference on Information Systems*.
- O2. Bui, N.T.N. & **Cao**, **T.H.** (2014), A Method for Vietnamese Opinion Mining. In *Proceedings of the* 3<sup>rd</sup> Asian Conference on Information Systems.
- O3. Nguyen, H.K. & **Cao**, **T.H.** (2013), Using Core Phrases and Information Features for Keyphrase Extraction. In *Proceedings of the 2<sup>nd</sup> Asian Conference on Information Systems*, pp. 291-296.
- O4. Nguyen, T.K. & **Cao**, **T.H**. (2013), Exploiting WordNet for Wikipedia-Based Named Entity Disambiguation. In *Proceedings of the 2<sup>nd</sup> Asian Conference on Information Systems*, pp. 275-281.
- O5. Tran, T. & Cao, T.H. (2013), Automatic Detection of Outdated Information in Wikipedia Infoboxes. In Poster Presentations at the 14<sup>th</sup> International Conference on Intelligent Text Processing and Computational Linguistics.
- O6. Ta, T.A. & **Cao**, **T.H.** & Nguyen, T.V. (2012), The Hybrid Approach of Image Segmentation Using MeanShift and Saliency Maps. In *Proceedings of the 4<sup>th</sup> Knowledge and Systems Engineering (KSE 2012)*, pp. 11-17. Institute of Electrical and Electronics Engineers (IEEE).
- O7. Ngo, V.M. & Cao, T.H. & Le, T.M.V. (2011), WordNet-Based Information Retrieval Using Common Hypernyms and Combined Features. In *Proceedings of the 5<sup>th</sup> International Conference on Intelligent Computing and Information Systems*.
- O8. Huynh, D.T. & **Cao, T.H.** & Ta, H.Q. & Nguyen, L.H. (2008), VN-KIM KBM: A Distributed and Collective Tool for Managing Semantic Web Knowledge Bases. In *Proceedings of the 1<sup>st</sup> Workshop on Human Factors and the Semantic Web* (in conjunction with ASWC 2008), pp. 153-158.
- O9. **Cao, T.H.** & Ngo, V.M. & Hong, D.T. & Quan, T.T. (2008), A Named-Entity-Based Multi-Vector Space Model for Semantic Document Clustering. In *Proceedings of the 1<sup>st</sup> Pacific-Asia Workshop on Web Mining and Web-Based Application*.
- O10. Luu, T.A.\* & Quan, T.T. & Cao, T.H. & Dong, J-S. (2007), Axiom-Oriented Reasoning to Deal with Inconsistency Between Ontology and Knowledge Base. In *Proceedings of the 2007 Uncertainty Reasoning for the Semantic Web Workshop* (in conjunction with ISWC 2007).
- O11. Nguyen, C.Q.\* & Phan, T.T. & **Cao, T.H.** (2007), A Pattern-Based Approach to Vietnamese Key Phrase Extraction. In *Addendum Contributions of the 5<sup>th</sup> International Conference on Research, Innovation and Vision for the Future*, Special Issue of Studia Informatica Universalis, pp. 41-46.
- O12. Nguyen, H.T. & **Cao**, **T.H.** (2007), A Knowledge-Based Method to Resolve Name Ambiguity in Vietnamese Texts. In *Addendum Contributions of the 5<sup>th</sup> International Conference on Research, Innovation and Vision for the Future*, Special Issue of Studia Informatica Universalis, pp. 83-88.

- O13. Le, P. & Cao, T.H. (2006), Automatic News Extraction from Web Pages. In Addendum Contributions of the 4<sup>th</sup> International Conference on Research, Innovation and Vision for the Future, Special Issue of Studia Informatica Universalis, pp. 47-52.
- O14. **Cao, T.H.** & Do, H.T. & Pham, B.T.N. & Huynh, T.N. & Vu, D.Q. (2005), Conceptual Graphs for Knowledge Querying in VN-KIM. In *Contributions to the 13<sup>th</sup> International Conference on Conceptual Structures*.
- O15. **Cao, T.H.** (2004), Combination of Uncertain Membership Measures on a Class Hierarchy. In *Proceedings of the 2004 Asian Fuzzy Systems Society Conference*, pp. 99-103.
- O16. **Cao, T.H.** & Ta, M.T.H. & Luong, T.Q. (2004), A Domain-Specific Concept-Based Searching System. In *Proceedings of the 2004 Vietnam-Japan Workshop on Active Mining*, Japanese Artificial Intelligence Society SIG-KBS-A403, pp. 197-200.
- O17. Noi, N.V. & **Cao, T.H.** (2004), Annotated Linguistic Logic Programs for Soft Computing. In *Proceedings of the 2<sup>nd</sup> International Conference of Vietnam and Francophone Informatics Research*.
- O18. Thao, P.T.T. & **Cao**, **T.H.** (2004), A Top-Down Method for Program Plagiarism Detecting Systems. In *Proceedings of the*  $2^{nd}$  *International Conference of Vietnam and Francophone Informatics Research*.
- O19. **Cao, T.H.** & Nguyen, H. (2002), Towards Fuzzy and Probabilistic Object Bases. In *Proceedings of the 3<sup>rd</sup> International Conference on Intelligent Technologies and the 3rd Vietnam-Japan Symposium on Fuzzy Systems and Applications.*
- O20. **Cao, T.H.** & Rossiter, J.M. (2001), Fril++ for Machine Learning. In *Proceedings of the 2<sup>nd</sup> Vietnam-Japan Symposium on Fuzzy Systems and Applications*, pp. 225-232.
- O21. Rossiter, J.M.\* & Cao, T.H. & Martin, T.P. & Baldwin, J.F. (2001), Imprecise Belief Updating for Uncertain User Modelling. In *Proceedings of the 2<sup>nd</sup> International Conference on Fuzzy Logic and Technology*, pp. 122-125.
- O22. **Cao, T.H.** (2000), On the Model-Theoretic Semantics of Fuzzy Set Logic for Dealing with Inconsistency. In *Proceedings of the 2000 European Symposium on Computational Intelligence*, Studies in Fuzziness and Soft Computing, pp. 271-277. Springer-Verlag.
- O23. Baldwin, J.F. & Cao, T.H. & Martin, T.P. & Rossiter, J.M. (2000), Implementing Fril++ for Uncertain Object-Oriented Logic Programming. In Proceedings of the 8<sup>th</sup> International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems, pp. 496-503.
- O24. **Cao, T.H.** (1998), Annotated Fuzzy Logic Programs for Soft Computing. In *Proceedings of the 2<sup>nd</sup> International Conference on Computational Intelligence and Multimedia Applications*, pp. 459-464. World Scientific.

### **INVITED TALKS**

I1. **Cao, T.H.** (2023), *Statistics, Machine Learning, and Data Science: A Historical Review and a Look to the Future*. At The 17<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2023, Vietnam)

- I2. Cao, T.H. (2018), Development of Core Technologies for Exploiting Electronic Medical Records in Vietnam. At the Genesis Workshop, in conjunction with the Joint 4<sup>th</sup> International Symposium on Affective Science and Engineering, and 29th Modern Artificial Intelligence and Cognitive Science Conference (ISASE-MAICS 2018, USA).
- I3. **Cao, T.H.** (2016), Entity Recognition for Intelligent Information Management. At the 10<sup>th</sup> ACM International Conference on Ubiquitous Information Management and Communication (ACM IMCOM 2016, Vietnam).
- I4. Cao, T.H. (2011), Fuzzing Conceptual Graphs and Fuzzy Logic: Towards the Structure and Expressiveness of Natural Language. At the 2<sup>nd</sup> International Symposium on Integrated Uncertainty in Knowledge Modelling and Decision Making (IUKM 2011, China).
- I5. **Cao, T.H.** (2008), *Named Entity-Centred Information Processing*. At the 3<sup>rd</sup> International Conference on Knowledge, Information, and Creativity Support Systems (KICSS 2008, Vietnam), and Seminar at Department of Computer Science, University of California, Los Angeles (Nov. 07, 2008), and Information Sciences Institute, University of Southern California (Nov. 03, 2008).

#### PEER-REVIEWED PAPER PRESENTATIONS AT CONFERENCES/WORKSHOPS

- P1. *AMIA 2024 Informatis Summit (USA)*Paper: "Automated HIV Case Identification from the MIMIC-IV Database"
- P2. The 28<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2019, USA)
  Paper: "A Probabilistic Relational Database Model with Fuzzy Attribute Values"
- P3. The IEEE Joint 8<sup>th</sup> International Conference on Informatics, Electronics & Vision & 3<sup>rd</sup> International Conference on Imaging, Vision & Pattern Recognition (ICIEV-IVPR 2019, USA)

  Paper: "Incremental Abbreviation Detection in Clinical Texts"
- P4. The Joint 4<sup>th</sup> International Symposium on Affective Science and Engineering, and 29<sup>th</sup> Modern Artificial Intelligence and Cognitive Science Conference (ISASE-MAICS 2018, USA)
  Paper: "A Kernel k-Means-based Method for Diabetes Diagnosis"
- P5. The 14<sup>th</sup> Pacific Rim Knowledge Acquisition Workshop (PKAW 2016, Thailand)
  Paper: "Abbreviation Identification in Clinical Notes with Level-wise Feature Engineering and Supervised Learning"
- P6. The 10<sup>th</sup> ACM International Conference on Ubiquitous Information Management and Communication (IMCOM 2016, Vietnam)

  Paper: "Candidate Searching and Key Coreference Resolution for Wikification"
- P7. The PAKDD 2014 International Workshops on Trends and Applications in Knowledge Discovery and Data Mining (PAKDD 2014, Taiwan)

  Paper: "Multi-group-based User Perceptions for Friend Recommendation in Social Networks"
- P8. The 14<sup>th</sup> International Conference on Intelligent Text Processing and Computational Linguistics (CICLING 2013, Greece)

  Paper: "Automatic Detection of Outdated Information in Wikipedia Infoboxes"

- P9. The 12<sup>th</sup> Pacific Rim Knowledge Acquisition Workshop (PKAW 2012, Malaysia)
  Paper: "A High-Order Hidden Markov Model for Emotion Detection from Textual Data"
- P10. The 12<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2012, Malaysia) Paper: "Heuristics- and Statistics-Based Wikification"
- P11. The 8<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future in Computing and Communication Technologies (IEEE-RIVF 2010, Vietnam)

  Paper: "Combining Named Entities with WordNet and Using Query-Oriented Spreading Activation for Semantic Text Search"
- P12. The 4<sup>th</sup> International Conference on Advances in Semantic Processing (SEMAPRO 2010, Italy)
  Paper: "Enriching Ontologies for Named Entity Disambiguation"
- P13. *The 18<sup>th</sup> International Conference on Conceptual Structures (ICCS 2010)*Paper: "Conceptual Graphs for Semantic Email Addressing"
- P14. The 18<sup>th</sup> International Conference on Conceptual Structures (ICCS 2010)

  Paper: "Ontology-Based Understanding of Natural Language Queries using Nested Conceptual Graphs"
- P15. The 2010 Intl Symp. on Integrated Uncertainty Management and Applications (IUM 2010, Japan)
  Paper: "Combination of Uncertain Class Membership Degrees with Probabilistic, Belief, and Possibilistic Measures"
- P16. The 10<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2008, Vietnam)
  Paper: "Exploring Combinations of Ontological Features and Keywords for Text Retrieval"
- P17. The 2008 International Workshop on Interval/Probabilistic Uncertainty and Non-Classical Logics (UncLog 2008, Japan)
  Paper: "Modelling and Computing with Imprecise and Uncertain Properties in Object Bases"
- P18. The 2008 International Workshop on Interval/Probabilistic Uncertainty and Non-Classical Logics (UncLog 2008, Japan)
  Paper: "Approximate Reasoning for Fuzzy-Based Information Retrieval"
- P19. The 16<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2007, UK)
  Paper: "Extending Probabilistic Object Bases with Uncertain Applicability and Imprecise Values of Class Properties"
- P20. The 16<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2007, UK) Paper: "FPDB4O: A Fuzzy and Probabilistic Object Base Management System"
- P21. The 4<sup>th</sup> International Conference on Research, Innovation and Vision for the Future in Computing and Communication Technologies (RIVF 2006, Vietnam)
  Paper: "Automatic News Extraction from Web Pages"
- P22. The 11<sup>th</sup> World Congress of International Fuzzy Systems Association (IFSA 2005, China) Paper: "Approximate Retrieval of Knowledge Graphs"

- P23. The 13<sup>th</sup> International Conference on Conceptual Structures (ICCS 2005, Germany)
  Paper: "Conceptual Graphs for Knowledge Querying in VN-KIM"
- P24. The 2003 International Conference on High Performance Scientific Computing (HPSC 2003) Paper: "Searching the Web: A Semantics-Based Approach"
- P25. The 1<sup>st</sup> Berkeley Initiative in Soft Computing International Workshop on Fuzzy Logic and the Internet (FLINT 2001, USA)

  Paper: "Fuzzy Conceptual Graphs for the Semantic Web"
- P26. The 9<sup>th</sup> International Conference on Conceptual Structures (ICCS 2001, USA)
  Paper: "Generalized Quantifiers and Conceptual Graphs"
- P27. The 1<sup>st</sup> International Joint Conference of the International Fuzzy Systems Association and the North American Fuzzy Information Processing Society (IFSA-NAFIPS 2001, Canada)

  Paper: "Inheritance and Recognition in Uncertain and Fuzzy Object-Oriented Models"
- P28. The 2000 European Symposium on Computational Intelligence (ESCI 2000, Slovakia)

  Paper: "A Language for Computational Intelligence Approaching Human Expression and Reasoning"
- P29. The 2000 European Symposium on Computational Intelligence (ESCI 2000, Slovakia)
  Paper: "On the Model-Theoretic Semantics of Fuzzy Set Logic for Dealing with Inconsistency"
- P30. The 9<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 2000, USA)
  Paper: "Towards Soft Computing Object-Oriented Logic Programming"
- P31. The 8<sup>th</sup> International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU 2000, Spain)

  Paper: "Implementing Fril++ for Uncertain Object-Oriented Logic Programming"
- P32. The 6<sup>th</sup> International Conference on Conceptual Structures (ICCS 1998, France)
  Paper: "Fuzzy Order-Sorted Logic Programming in Conceptual Graphs with a Sound and Complete Proof Procedure"
- P33. The 6<sup>th</sup> IEEE International Conference on Fuzzy Systems (FUZZ-IEEE 1997, Spain)
  Paper: "Fuzzy Types and Their Lattices"
- P34. The 2<sup>nd</sup> International Conference on Computational Intelligence and Multimedia Applications (ICCIMA 1998, Australia)

  Paper: "Annotated Fuzzy Logic Programs for Soft Computing"
- P35. *The 5<sup>th</sup> International Conference on Conceptual Structures (ICCS 1997, USA)*Paper: "Fuzzy Unification and Resolution Proof Procedure for Fuzzy Conceptual Graph Programs"
- P36. *The 5<sup>th</sup> International Conference on Conceptual Structures (ICCS 1997, USA)*Paper: "Universal Marker and Functional Relation: Semantics and Operations"
- P37. The 4<sup>th</sup> International Conference on Conceptual Structures (ICCS 1996, Australia)
  Paper: "Towards Fuzzy Conceptual Graph Programs"

#### PROFESSIONAL SERVICES

# **Conference Advisory Board Member**

The 20<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2023)

# **Conference Steering Committee Member**

Pacific Rim International Conference on Artificial Intelligence (PRICAI, 2006-Present)

Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD, 2015-2017)

IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF, 2009-Present)

#### **Conference General Chair**

The 6<sup>th</sup> Asian Conference on Machine Learning (ACML 2014)

The 3<sup>rd</sup> Asian Conference on Information Systems (ACIS 2014)

The 8<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2010)

## **Conference Program Chair**

The 12<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2016)

The 19<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2015)

The 16<sup>th</sup> Pacific Asia Conference on Information Systems (PACIS 2012)

The 7<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2009)

The 1<sup>st</sup> Asian Conference on Intelligent Information and Database Systems (ACIIDS 2009)

The  $6^{th}$  IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2008)

The 10<sup>th</sup> International Conference on Asian Digital Libraries (ICADL 2007)

### **Conference Tutorial Chair**

The 15<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2018)

The 10<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2008)

The 5<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2007)

# **Conference Publicity Chair**

The Joint 17<sup>th</sup> World Congress of International Fuzzy Systems Association and 9<sup>th</sup> International Conference on Soft Computing and Intelligent Systems (IFSA-SCIS 2017)

The 14<sup>th</sup> International Conference on Software Engineering Research, Management and Applications (SERA 2016)

### **Conference Session Chair**

The 20<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2023)

The 19<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2022)

The 18<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2021)

The 25<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2021)

The 10<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2013)

The  $13^{\text{th}}$  International Conference on Information Integration and Web-Based Applications & Services (iiWAS 2011)

The 8<sup>th</sup> IEEE International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (IEEE-RIVF 2010)

The 10<sup>th</sup> Pacific Rim International Conference on Artificial Intelligence (PRICAI 2008)

The  $4^{th}$  International Conference on Research, Innovation and Vision for the Future – in Computing and Communication Technologies (RIVF 2006)

The 9<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2005)

### **Conference Senior Program Committee Member**

Total number of meta-reviewed papers: 75

Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)
PAKDD 2016, New Zealand; 2019, China; 2020, Singapore; 2021, India; 2022, China; 2023, Japan; 2024, Taiwan

## **Conference Program Committee Member**

Total number of reviewed papers: 323

G1. International Conference on Conceptual Structures (ICCS)
ICCS 2000, Germany; 2001, USA; 2002, Bulgaria; 2003, Germany; 2004, USA; 2005, Germany; 2006, Denmark; 2007, UK; 2008, France; 2009, Russia; 2010, Malaysia; 2011, UK

- G2. IFIP International Conference on Intelligence in Communication Systems (INTELLCOMM) INTELLCOMM 2004, Thailand; 2005, Canada
- G3. Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)

  PAKDD 2005, Vietnam; 2006, Singapore; 2007, China; 2008, Japan; 2009, Thailand; 2011, China; 2012 Malaysia; 2013, Australia; 2014, Taiwan; 2015, Vietnam; 2016, New Zealand; 2017, Korea; 2018, Australia; 2019, China; 2020, Singapore
- G4. Pacific Rim International Conference on Artificial Intelligence (PRICAI)
  PRICAI 2006, China; 2008, Vietnam; 2012 Malaysia; 2014, Australia; 2016, Thailand; 2018, China; 2021, Vietnam; 2022, China; 2023, Indonesia; 2024, Japan
- G5. International Conference on Data Warehousing and Knowledge Discovery (DAWAK) DAWAK 2006, Poland; 2007, Germany; 2008, Italy
- G6. International Workshop on Integrating Artificial Intelligence and Data Mining (AIDM) AIDM 2006, 2007, Australia
- G7. International Applied Computing Conference (AC) AC 2006, 2007, Spain
- G8. Australian Joint Conference on Artificial Intelligence (AI) AI 2007, Australia
- G9. International Conference on Asian Digital Libraries (ICADL)
  ICADL 2007, Vietnam; 2008, Indonesia; 2011, China; 2012, Taiwan; 2013, India; 2014, Thailand
- G10. International Symposium on Agents and Multi-Agent Systems Technologies & Applications (KES-AMSTA)

  KES-AMSTA 2007, Poland; 2008, Korea
- G11. Pacific-Asia Workshop on Web Mining and Web-based Application (WMWA) WMWA 2008, Japan
- G12. Asian Conference on Machine Learning (ACML) ACML 2009, China; 2010, Japan; 2011, Taiwan
- G13. Semantic Search Workshop (SEMSEARCH) SEMSEARCH 2009, Spain; 2010, USA; 2011, India
- G14. International Conference on Asian Language Processing (IALP)

  IALP 2009, Singapore; 2010, China; 2011, Malaysia; 2012, Vietnam; 2013, China; 2014, Malaysia; 2015, China; 2016, Taiwan; 2017, Singapore; 2018, Indonesia; 2020, Malaysia; 2021, China; 2022, China; 2023, Singapore; 2024, China
- G15. Asian Conference on Intelligent Information and Database Systems (ACIIDS)

  ACIIDS 2009, 2010, 2016 Vietnam; 2017, Japan; 2018, Vietnam; 2019, Indonesia; 2020, Thailand
- G16. International Conference on Intelligent Human-Machine Systems and Cybernetics (IHMSC) IHMSC 2009, China

- G17. International Symposium on Integrated Uncertainty Management and Applications (IUM) IUM 2010, Japan
- G18. International Conference on Advances in Semantic Processing (SEMAPRO) SEMAPRO 2011, Portugal; 2012, Spain; 2013, Portugal; 2014, Italy
- G19. International Symposium on Integrated Uncertainty in Knowledge Modeling and Decision Making (IUKM)

  IUKM 2011, China; 2015, 2018, Vietnam; 2019, Japan; 2020, Thailand; 2022, Japan; 2023, Japan
- G20. International Conference on Information Integration and Web-based Applications & Services (iiWAS) iiWAS 2011, Vietnam
- G21. International Conference on Computational Collective Intelligence, Technologies and Applications (ICCCI)

  ICCCI 2012, Vietnam; 2013, Romania
- G22. International Conference on Simulated Evolution And Learning (SEAL) SEAL 2012, Vietnam
- G23. IEEE Symposium Series on Computational Intelligence (SSCI) SSCI 2013, Singapore; 2014, USA; 2015, South Africa; 2016, UK
- G24. Workshop on Human-Semantic Web Interaction (HSWI) HSWI 2013, Spain; 2014, Greece
- G25. IEEE International Conference on Big Data and Smart Computing (BIGCOMP)
  BIGCOMP 2015, Korea; 2016, China; 2017, Korea; 2018, China; 2019, Japan; 2020, Korea
- G26. IFIP International Conference on Artificial Intelligence in Theory and Practice (AITP) AITP 2015, Korea
- G27. International Semantic Web Conference, Poster and Demo Track (ISWC-PD) ISWC-PD 2016, Japan; 2017, Austria; 2018, USA; 2020, Greece
- G28. International Conference on Emerging Databases Technologies, Applications, and Theory (EDB) EDB 2016, 2017, Korea
- G29. International Conference on Software Engineering Research, Management and Applications (SERA) SERA 2016
- G30. ACM Symposium on Applied Computing, Social Network and Media Analysis Track (SAC-SONAMA) SAC-SONAMA 2017, Morocco; 2018, France; 2019, Cyprus; 2020, Czech Republic; 2021, Korea; 2022, Czech Republic; 2023, Estonia; 2024, Spain
- G31. International Conference on Social Networks Analysis, Management and Security (SNAMS) SNAMS 2017, Czech Republic; 2018, 2019, Spain
- G32. IEEE International Conference on Big Data Computing and Communications (BIGCOM) BIGCOM 2017, China

- G33. Asia Pacific Symposium on Intelligent and Evolutionary Systems (IES) IES 2017, Vietnam
- G34. The Joint 4th International Symposium on Affective Science and Engineering, and 29th Modern Artificial Intelligence and Cognitive Science Conference (ISASE-MAICS)
  ISASE-MAICS 2018, USA
- G35. IEEE International Conference on Data Science and Advanced Analytics (DSAA) DSAA 2020, Australia; 2021, Portugal
- G36. The Second International Conference on Innovations in Computing Research (ICR) ICR 2023, Spain; 2024, Greece
- G37. AMIA Annual Symposium 2023, New Orleans; 2024, San Francisco

#### **Journal Reviewer**

Total number of reviewed papers: 54

Data and Knowledge Engineering

Fuzzy Sets and Systems

Mathematical Reviews

KSII Transactions on Internet and Information Systems

Journal of Ambient Intelligence and Humanized Computing

Applied Clinical Informatics Journal

The Computer Journal

International Journal of Intelligent Systems

**Decision Support Systems** 

International Journal of Intelligent Information and Database Systems

IEEE Transactions on Fuzzy Systems

International Journal of Computational Intelligence Systems

International Journal of Semantic Web and Information Systems

Journal of Web Semantics

Frontiers in Digital Health

Frontiers in Psychology

Journal of Probability and Statistics

International of Approximate Reasoning

Computer, Informatics, Nursing

Scientific Reports