

## Chair Professor Zhang Du

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### Academic Qualification:

**Ph.D. in** Computer Science, University of Illinois, USA

**MS in** Computer Science, Nanjing University, China

### Teaching Area

Machine Learning, Artificial Intelligence, Operating System Principles,  
Knowledge-based Systems.

### Research Area

STEP perpetual learning, knowledge-based systems,  
big data analytics, and software engineering.

### Working Experience

Department Chair, California State University, Sacramento, 2004 - 2010

Visiting Professor, Hong Kong Polytechnic University, Sept. 2008 - Jan. 2009

Visiting Professor, Naval Postgraduate School, Sept. - Dec. 2000; Jan. - May 1995

Visiting Professor, University of Minnesota, Minneapolis, Sept. - Dec. 1994

Professor, Department of Computer Science, California State University, Sacramento, 1993-2015

Assistant/Associate Professor, Department of Computer Science, California State University, Sacramento, 1987-1993

### Selected Journal Papers

Jinxiang Zeng, **Du Zhang**, Zhiyi Li, and Xiaolin Li, "Semi-supervised Training of Transformer and Causal Dilated Convolution  
*Applied Sciences*, Vol.11, 5712, 2021. doi: 10.3390/app11125712.

Zhiyi Li, Xiaomian Xu, **Du Zhang** and Peng Zhang, "Cross-Model Hashing Retrieval based on Deep Residual Network,  
*Computer Systems Science and Engineering*, Vol.36, No.2, 2021, pp.383-405. doi: 10.32604/csse.2021.014563

**H. Qin and Du Zhang**, "A Perpetual Learning Algorithm that Incrementally Improves Performance with Deliberation,  
*IEEE Access*, Vol. 8, 2020, pp.131425-131438, doi: 10.1109/ACCESS.2020.3009718.

H. Qin, **Du Zhang**, X. Sun, J.Tang and J. Peng, "An Efficient Perpetual Learning Algorithm," *International Journal on Artificial Intelligence Tools*

É. Grégoire, Y. Izza, and **Du Zhang**, "On admissible consensuses," *International Journal on Artificial Intelligence Tools*, Vol.27, No.1, 2018, pp.1-20.

É. Grégoire, **J-M. Lagniez, and Du Zhang**, "Consensus-finding that preserves mutually conflicting hypothetical information from a same agent," *AI Communications*, Vol.31, No.3, 2018, pp.303-317

Ning Xu, Yunzhou Zhang, **Du Zhang**, Shuying Zhao, and Wenyan Fu. "Moving Target Tracking in Three Dimensional Space with Wireless Sensor Network," *Wireless Personal Communications*, 94 (4), 2017, pp.3403-3413.

K.B. Zhang, M.A. Orgun, R. Shankaran, and **Du Zhang**, "Classifying High Dimensional Data by Interactive Visual Analysis," *Journal of Visual Languages and Computing*, Vol.33, April 2016, pp.24-36.

**Du Zhang**, "Granularities and Inconsistencies in Big Data Analysis," *International Journal of Software Engineering and Knowledge Engineering*, Vol.23, No.6, 2013, pp.887-893.

Du Zhang and É. Grégoire, "The Landscape of Inconsistency: A Perspective," *International Journal of Semantic Computing*, Vol. 5, No. 3, September 2011, pp.235-256.

É. Grégoire and **Du Zhang**, "A Framework for Handling Logical Inconsistencies in the Fusion of Boolean Knowledge Bases," *International Journal of Semantic Computing*, Vol. 5, No. 3, September 2011, pp.323-334.

#### Selected Conference Papers

Jun Peng, Wu Yang, Shangzhu Jin, Shaoning Pang, Dedong Tang, Junjie Bai and Du Zhang, "Image Encryption based on Fractional-order Chen Hyperchaotic System," the Proceedings of the Fifteenth IEEE Conference on Industrial Electronics & Applications, Kristiansand, Norway, November 2020, pp.213-217.

Yingxu Wang, Kostas N. Plataniotis, Jane Z. Wang, Ming Hou, Mengchu Zhou, Newton Howard, Jun Peng, Runhe Hwang, Shushma Patel and **Du Zhang**, "The Cognitive and Mathematical Foundations of Analytic Epidemiology," the Proceedings of the *Nineteenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, Beijing, China, Sept. 26-28, 2020, pp.6-14 (Best Paper Award).

Jun Peng, Shaoning Pang, **Du Zhang**, Shangzhu Jin, Lixiao Feng and Zuojin Li, "S-boxes Construction Based on Quantum Chaos and PWLCM Chaotic Mapping," the Proceedings of the *Eighteenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, Milan, Italy, July 2019, pp.293-298.

**Du Zhang**, "From One-off Machine Learning to Perpetual Learning: A STEP Perspective," the Proceedings of the *2018 IEEE International Conference on Systems, Man and Cybernetics*, Miyazaki, Japan, October 2018, pp. 17-23.

J.H. Tang and **Du Zhang**, "SmartCalendar: Improving Scheduling through Overcoming Temporal Inconsistencies," the Proceedings of the *Seventeenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, Berkeley, CA, USA, July 2018, pp. 30-37.

X.B. Sun, **Du Zhang**, M. Liu, Z. He, H. Li and J. Li, "Detecting and Resolving Inconsistencies in Snort," the Proceedings of the *Seventeenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, Berkeley, CA, USA, July 2018, pp. 552-560.

**Du Zhang** and É. Grégoire, "Learning through Overcoming Inconsistencies," the 1<sup>st</sup> International Workshop on Consistency and Inconsistency, the Proceedings of the *Twenty-Seventh International Workshop on Database and Expert Systems Applications (DEXA 2016)*, *IEEE Computer Society CPS*, Porto, Portugal, Sept., 2016, pp. 121-128.

É. Grégoire, Jean-Marie Lagniez and **Du Zhang**, "On Computing Non-Hypocritical Consensuses," the 1<sup>st</sup> International Workshop on Consistency and Inconsistency, the Proceedings of the *Twenty-Seventh International Workshop on Database and Expert Systems Applications (DEXA 2016)*, *IEEE Computer Society CPS*, Porto, Portugal, Sept., 2016, pp. 97-101.

É. Grégoire, Jean-Marie Lagniez and **Du Zhang**, "Logical Consensuses for Case-based Reasoning and for Mathematical Engineering of AI," the Proceedings of the *Fifteenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, Stanford, USA, August 2016, pp. 29-33.

**Du Zhang**, "Learning through Overcoming Temporal Inconsistencies," the Proceedings of the *Fourteenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, Beijing, China, July 2015, pp. 141-148.

Jose Andres Bolaños Perera, **Du Zhang** and Meiliu Lu, "Smart Maps through Semantic Web, Social Media and Sentiment Analysis," the Proceedings of the *Sixteenth IEEE International Conference on Information Reuse and Integration*, San Francisco Bay, CA, August 2015, pp. 49-56.

T. Le and **Du Zhang**, "DBLPMiner: A Tool for Exploring Bibliographic Data," the Proceedings of the *Sixteenth IEEE International Conference on Information Reuse and Integration*, San Francisco Bay, CA, August 2015, pp. 435-442.

Kathy Applebaum and **Du Zhang**, "Classifying Galaxy Images through Support Vector Machines," the Proceedings of the *Sixteenth IEEE International Conference on Information Reuse and Integration*, San Francisco Bay, CA, August 2015, pp. 357-363.

**Du Zhang**, "Learning through Explaining Observed Inconsistencies," the Proceedings of the *Thirteenth IEEE International Conference on Cognitive Informatics & Cognitive Computing*, London, UK, August, 2014, pp.133-139.

Y. Zhang and **Du Zhang**, "Automatically Predicting the Helpfulness of Online Reviews," the Proceedings of the *Fifteenth IEEE International Conference on Information Reuse and Integration*, San Francisco Bay, CA, August 2014, pp.662-668.

**Du Zhang**, L. Jujavarapu, and M. Lu "Detecting and Resolving Inconsistencies in Firewalls," the Proceedings of *the Fifteenth IEEE International Conference on Information Reuse and Integration* , San Francisco Bay, CA, August 2014, pp.1-7.

**Du Zhang**, "Perpetual,

## Professional Society Membership

Senior member, Association for Computing Machinery (ACM).

Senior Member, IEEE.