

## 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 consensus," *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.