

# Zhengping Ji

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**RESEARCH AREAS** Computer vision; data mining; pattern recognition; driver assistance system.

**EDUCATION**      **Ph.D. Candidate, Computer Science & Engineering,**      **09/2004 - Present**  
Michigan State University, (GPA 3.78/4.0)  
**B.S., Electronic Information Systems,**      **09/1999 - 07/2003**  
Sichuan University, China, (GPA 3.92/4.0)

**HONORS AND AWARDS**      Dissertation Completion Fellowship, College of Engineering, Michigan State University, 2007

Graduate Office Fellowship, Graduate School, Michigan State University, 2007

Outstanding Undergraduate Award, Sichuan University, 2003

Undergraduate Scholarship, Sichuan University, 1999-2003

Top Undergraduate Student Award, Sichuan University, 1999-2002

**WORK EXPERIENCES**      **Toyota Technical Center,** Ann Arbor, USA

Research Internship      **05/2007-12/2007**

- Developed a vision-based learning system by two cameras. Both lane detection and target recognition were accomplished for the real-time sequential decision task.
- Designed a perceptual learning system with the prediction to dynamic driving environments.

**RESEARCH EXPERIENCES**      **Embodied Intelligence Laboratory,** College of Engineering, Michigan State University, USA

Research Assistant      **08/2004 - Present**

- Object classification by information fusion: developed an object classification module in a information fusion framework, integrated by both camera and radar systems.
- Internet traffic classification: classified internet traffic flows into different applications, using the extracted discriminant features.
- Visual attention selection: develop functional models that simulate the elements of visual attention by humans, so as to solve some fundamental problems in computer vision, e.g., object segmentation.

**IBM Research Laboratory**, College of Eli Broad Business, Michigan State University, USA

Research Assistant

**05/2005 - 10/2005**

Implemented grid computing technology using network architectures of IBM research lab in business school. Composed tutorials for the future research related to grid computing of educational use.

**INVITED TALKS & PRESENTATIONS** Z. Ji, **A Developmental Learning System for Perceptual Awareness in Vehicle-Based Robots**, International Conference on Epigenetic Robotics, Rutgers, 2007.

J. Weng, Z.Ji, M. Luciw, **Developmental Object Learning Using Video and Radar for a Driver Assistance System**, General Motors, Research and Development, Warren, April 16, 2007.

Z. Ji, **On-line Learning for Covert and Overt Perceptual Capabilities**, IEEE International Conference on Development and Learning, Bloomington, June 2, 2006

**PUBLICATIONS** **Book Chapter:**

- S. Zhang, K. Liao, **Z. Ji, Protel DXP– Circuit and PCB Design**. Tsinghua University Press, 2004, ISBN 7-302-07716-9.

**Papers:**

- **Z. Ji**, M. Luciw, J. Weng and S. Zeng, **A Developmental Learning System for Perceptual Awareness in Vehicle-Based Robots**, International Conference on Epigenetic Robotics, Rutgers, 2007.
- H. Zhao, **Z. Ji** and J. Weng, **Developmental Learning for Avoiding Dynamic Obstacles Using Attention**, IEEE International Conference on Development and Learning, London, 2007.
- M. Luciw and **Z. Ji**, **Building Blocks of Development**, IEEE Computational Intelligence Magazine, vol. 1, no. 3, pp. 5-9, 2006.
- **Z. Ji**, X. Huang, W. Tong, J. Weng, **On-line Learning of Covert and Overt Perceptual Capability for Vision-based Navigation**, IEEE International Conference on Development and Learning, Bloomington, Indiana, 2006.
- J. Wang, **Z. Ji**, **A Dynamic Image Processing System for Plasma Display Panels**, Journal of Image Display, vol.5, pp. 37-40, 2004.

**TECHNICAL QUALIFICATION**

Programming Languages: MATLAB, C, C++, Shell Scripts

Tools: Latex

Operating Systems: Linux, Windows.

**COURSES**

Computer Vision, Analysis of Stochastic Systems, Pattern Recognition, Artificial Intelligence, Machine learning, Data Mining, Theory of Algorithms, Network Security.