Zehuan Yuan

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EDUCATION BACKGROUND

Nanjing University, Nanjing, China   *Ph.D. 2014.09 - now*
Department of Computer Science and Technology

* Supervisor: Prof. Tong Lu

Nanjing University, Nanjing, China   *M.S. 2012.09 - 2014.06*
Department of Computer Science and Technology

* Supervisor: Prof. Tong Lu

Nanjing University, Nanjing, China   *B.S. 2008.09 - 2012.06*
Department of Computer Science and Technology

* Overall GPA: 4.36/5   Major GPA: 4.45/5

RESEARCH INTERESTS

Computer Vision: Unsupervised vision problems including large-scale object co-segmentation and category discovery; high-level vision problems such as semantic scene understanding and action understanding in videos.

Machine Learning: Deep learning and optimization methods, especially on efficient learning for deep networks and understanding deep networks.

RESEARCH EXPERIENCE

State Key Lab for Novel Software Tech. of Nanjing University   *2012.09 - now*
* Postgraduate mentored by Prof. Tong Lu.
* We mainly focus on image cosegmentation and action understanding in videos.

University of Michigan, Ann Arbor, U.S.   *Visiting Student. 2015.10 - 2017.03*
* Mentored by Prof. Jia Deng.
* We focus on action recognition and detection in videos.

Undergraduate Innovation Project of the Ministry of Education, China   *2010.12 - 2011.12*
* Team leader of the project advised by Prof. Tong Lu.
* We propose an incremental 3D reconstruction framework to refine an existing 3D model using online images of the same object.

PUBLICATIONS

Journal papers

[J01]. **Zehuan Yuan**, Tong Lu, Chew Lim Tan. Learning Discriminated and Correlated Patches for Multi-view Object Detection Using Sparse Coding. *Pattern Recognition* (*PR*). 2017. To appear.

[J02]. Yirui Wu, Tong Lu, **Zehuan Yuan** and Hao Wang. FreeScup: A Novel Platform for Assisting Sculpture Pose Design. *IEEE Transactions on Multimedia* (*TMM*), 19(1): 183-195, 2017.

[J03]. **Zehuan Yuan**, Hao Wang, Liming Wang and Tong Lu. Modeling Spatial Layout for Scene Image Understanding via a Novel Multiscale Sum-Product Network. *Expert Systems with Applications* (*ESWA*), 63: 231-240, 2016.

[J04]. Palaiahnakote Shivakumara, **Zehuan Yuan**, Danni Zhao, Tong Lu, and Chew Lim Tan. New Gradient-Spatial-Structural Features for Video Script Identification. *Computer Vision and Image Understanding* (*CVIU*), 34(6): 559-564, 2014.

[J05]. **Zehuan Yuan**, and Tong Lu. Incremental 3D Reconstruction Using Bayesian Learning. *Applied Intelligence*, 39(4): 761-771, 2013.

Conference papers

[C01]. **Zehuan Yuan**, Jonathan Stroud, Tong Lu, Jia Deng. Temporal Action Localization by Structured Maximal Sums. *Computer Vision and Pattern Recognition* (*CVPR*) 2017. To appear.

[C02]. **Zehuan Yuan**, Tong Lu, Yirui Wu. Deep-dense Conditional Random Fields for Object Co-segmentation. *International Joint Conference on Artificial Intelligence* (*IJCAI*) 2017. To appear.

[C03]. Yirui Wu, Tong Lu, **Zehuan Yuan** and Hao Wang. FreeScup: A Novel Platform for Assisting Sculpture Pose Design. *International Conference on Multimedia and Expo* (*ICME*). pp.1-6, 2015. **(Oral)**.

[C04]. **Zehuan Yuan**, Tong Lu, and Palaiahnakote Shivakumara. A Novel Topic-level Random Walk Framework for Scene Image Co-Segmentation. *European Conference on Computer Vision* (*ECCV*). pp.695-709, 2014.

[C05]. **Zehuan Yuan**, and Tong Lu. A Novel Context-Aware Topic Model for Category Discovery in Natural Scenes. *Asian Conference on Computer Vision* (*ACCV*). pp.158-171, 2014.

[C06]. **Zehuan Yuan**, Tong Lu, Haoyi Zhou, Chen Bin, and Jianing Li. Incremental 3D Reconstruction Using Bayesian Learning. *International Conference on Industrial, Engineering* & *Other Applications of Applied Intelligent Systems* (*IEA/AIE*). pp.754-763, 2012. **(Best Paper Award)**

PATENT

Zehuan Yuan, and Tong Lu. An Incremental 3D Reconstruction Method Based on PMVS and Bayesian Model. ZL201110411429.6. (**National Invention Patent, China**)

CONTEST

National Graduate Contest on Smart-City Technology and Design *2014*

* Project: We propose a new concept to design a scalable and intelligent building management system.
* Team member: Qisu Li, **Zehuan Yuan**, Yirui Wu, and Guozhu Liang.
* Grade: National Second Prize.

"Challenge Cup" of Chinese College Students of Academic Science and Technology *2012*

* Project: We design an intelligent building system platform on which many applications of diverse functions can be designed and programmed easily.
* Team member: Run Xing, Zhi Qu, **Zehuan Yuan**, Wenliang Dai, Yu Yin, Xuanjun Dong, Runhua Chen, and Zhun Shi.
* Grade: National Bronze Prize and Golden Prize at Jiangsu Province.
* Remark: It is the highest level contest for graduate and undergraduate students in China.

INTERNATIONAL EXCHANGE

* An one-month short visit to National University of Singapore	*2012*
* An 18-month long visit to the University of Michigan	*2015.10 - 2017.03*

HONORS & AWARDS

Honors

* Outstanding Student Leader of Nanjing University.	*2014*
* Outstanding Student of Nanjing University.	*2013*
* Best 100 Excellent College Students of China Computer Federation (CCF).	*2012*
* Outstanding Graduate of Nanjing University.	*2012*
* Outstanding Student of Nanjing University.	*2011*

Awards

* Selected into the Talent Project of Nanjing University.	*2014*
* Second Prize in National Intelligent City Contest for Graduate Students in China.	*2014*
* Graduate National Scholarship.	*2013*
* Best Paper Award by ISAI (International Society of Applied Intelligence) in IEA/AIE.	*2012*
* National Bronze Prize in the Eighth "Colledge Cup" of Chinese College Students.	*2012*
* Golden Prize in the Seventh "Colledge Cup" of College Students at Jiangsu Province.	*2012*
* Excellent Thesis for Bachelor's Degree of Nanjing University.	*2012*
* Excellent Undergraduate Innovation Project of Nanjing University.	*2012*
* National Motivational Scholarship.	*2012*
* National Motivational Scholarship.	*2011*
* National Motivational Scholarship.	*2010*