

# Fuhai Chen

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Final-year PHD student · Xiamen University

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## RESEARCH INTEREST

Computer Vision, Multimedia, Machine Learning.

Recent works: structured semantic modeling and its representation learning, vision-language/multimedia content understanding, and their applications.

## EDUCATION

*M.S.-Ph.D. candidate of Artificial Intelligence* 2016.09 - PRESENT  
Xiamen University (XMU), Xiamen, China  
Advisor: Rongrong Ji

*Master of Pattern Recognition and Systems Engineering* 2014.09 - 2016.06  
Xiamen University (XMU), Xiamen, China  
Advisor: Rongrong Ji

*Bachelor of Artificial Intelligence* 2010.09 - 2014.06  
Xiamen University (XMU), Xiamen, China

## PUBLICATION

**Fuhai Chen**, Rongrong Ji, Jiayi Ji, Xiaoshuai Sun, Baochang Zhang, Xuri Ge, Yongjian Wu, Feiyue Huang, Yan Wang. Variational Structured Semantic Inference for Diverse Image Captioning. *Advances in Neural Information Processing Systems* 2019 (NeurIPS 2019).

Xuri Ge, **Fuhai Chen**, Chen Shen, Rongrong Ji. Colloquial Image Captioning. *IEEE International Conference on Multimedia and Expo 2019 (ICME 2019)*.

Zongyue Liu, **Fuhai Chen**, Jinsong Su, Chen Shen, Rongrong Ji. Topic-Guided Automatic Human-Simulated Tweeting System. *Pacific Rim International Conference on Artificial Intelligence 2018 (PRICAI 2018)*.

**Fuhai Chen**, Rongrong Ji, Xiaoshuai Sun, Yongjian Wu, Jinsong Su. GroupCap: Group-based Image Captioning with Structured Relevance and Diversity Constraints. *IEEE Conference on Computer Vision and Pattern Recognition 2018 (CVPR 2018)*.

Rongrong Ji, **Fuhai Chen**, Liujuan Cao, Yue Gao. Cross-Modality Microblog Sentiment Prediction via Bi-Layer Multimodal Hypergraph Learning. *IEEE Transactions on Multimedia*, 21(4): 1062-1075, 2018.

Mingliang Xu, **Fuhai Chen**, Lu Li, Chen Shen, Pei Lv, Bing Zhou, Rongrong Ji. Bio-Inspired Deep Attribute Learning Towards Facial Aesthetic Prediction. *IEEE Transactions on Affective Computing*, DOI: 10.1109/TAFFC.2018.2868651, 2018.

**Fuhai Chen**, Rongrong Ji, Jinsong Su, Donglin Cao, and Yue Gao. Predicting Microblog Sentiments via Weakly Supervised Multi-Modal Deep Learning. *IEEE Transactions on Multimedia*, 20(4): 997-1007, 2017.

**Fuhai Chen**, Rongrong Ji, Jinsong Su, Yongjian Wu, Yunsheng Wu. StructCap: Structured Semantic Embedding for Image Captioning. *ACM International Confer-*

ence on Multimedia 2017 (ACM MM 2017).

Rongrong Ji, Donglin Cao, Yiyi Zhou, **Fuhai Chen**. Survey of visual sentiment prediction for social media analysis. *Frontiers of Computer Science*, 10(4): 602-611, 2016.

Yue Gao, Weizhi Nie, Anan Liu, Yuting Su, Qionghai Dai, Le An, **Fuhai Chen**, et al. 3D object retrieval with multimodal views. *Eurographics Workshop on 3D Object Retrieval 2016* (Eurographics 2016).

**Fuhai Chen**, Rongrong Ji, Liujuan Cao. Multimodal learning for view-based 3D object classification. *Neurocomputing*, 195: 23-29, 2016.

Chao Chen, **Fuhai Chen**, Donglin Cao, Rongrong Ji. A cross-media sentiment analytics platform for microblog. *ACM International Conference on Multimedia 2015* (ACM MM 2015).

**Fuhai Chen**, Yue Gao, Donglin Cao, Rongrong Ji. Multimodal hypergraph learning for microblog sentiment prediction. *IEEE International Conference on Multimedia and Expo 2015* (ICME 2015).

Fei Chao, **Fuhai Chen**, Yunhang Shen, Wenli He, Yan Sun, Zhengshuai Wang, Changle Zhou, Min Jiang. Robotic free writing of Chinese characters via human-robot interactions. *International journal of humanoid robotics*, 11(01): 1450007, 2014.

#### Pre-print

**Fuhai Chen**, Rongrong Ji\*, Chengpeng Dai, Xiaoshuai Sun, Chia-Wen Lin, Jiayi Ji, Baochang Zhang, Feiyue Huang, Liujuan Cao. Semantic-aware Image Deblurring. ArXiv:1910.03853.

Chen Shen, Rongrong Ji, **Fuhai Chen**, Xiangming Li. Scene-based Factored Attention for Image Captioning. ArXiv:1908.02632.

**Fuhai Chen**, Xiaoshuai Sun\*, Xuri Ge, Jianzhuang Liu, Yongjian Wu, Feiyue Huang, Rongrong Ji. Differentiated Relevances Embedding for Group-based Referring Expression Comprehension. *Submitted to TNNLS (under review)*.

#### RESEARCH EXPERIENCE

*Research Intern* 2019.05 - PRESENT  
Peng Cheng Laboratory (PCL), Shenzhen, China

- Structured Knowledge (Abnormity) Graph Construction of Multi-view Medical Image
- Automatic Medical Report Generation

#### ACTIVITIES

Organizing committee of AutoGen-CDR19 challenge in MICCAI 2019.

Reviewer: IEEE TMM, ACM TOMM, NePL, NCIG 2018.

#### TALKS

StructCap: Structured Semantic Embedding for Image Captioning, The 27th ACM International Conference on Multimedia (ACM MM 2017), Mountain View, USA, 2017.

Automatic Generation of Cardiovascular Diagnostic Report, The 22th Medical Image Computing Computer Assisted Intervention (MICCAI 2019), Shenzhen, China, 2019.

<b>AWARDS</b>	National Scholarship, China	2018
	Highlights in SHREC Track “3D Object Retrieval with Multimodal Views”	2015
	Best Graduate, XMU	2014
	Academic Excellence Scholarship, XMU	2014
	Award of Innovation and Entrepreneurship Training Project, XMU	2014
	Academic Innovation Scholarship, XMU	2014
	National “Huawei Cup” Intelligent Design Competition (1st class), China	2013
	Merit Student Award, XMU	2013
	National “Freescale Cup” Smart Car Competition (2nd class), China	2012
	Outstanding Merit Student Award, XMU	2011
	National Scholarship, China	2011
<b>PROGRAM SKILLS</b>	Proficiency with Python, C/C++, Matlab, Java.	
	Experienced in PHP, Javascript, HTML, C#.	