

# Zhixiang Chen

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## RESEARCH INTEREST

Computer vision, machine learning, deep learning, representation learning, 3D shape analysis and synthesis

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## ACADEMIC APPOINTMENTS

<b>Imperial College London</b> Department of Electrical and Electronic Engineering <i>Research Associate in Computer Vision and Machine Learning</i> (Advisor: Dr. Tae-Kyun Kim)	Aug. 2019 – present <i>London, UK</i>
<b>Tsinghua University</b> Department of Automation <i>Postdoctoral Research Fellow</i> (Advisor: Prof. Jie Zhou)	July 2017 – Aug. 2019 <i>Beijing, P.R.China</i>

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## EDUCATION

<b>Department of Automation, Tsinghua University</b> <i>Ph.D. in Pattern Recognition and Intelligent System</i> <ul style="list-style-type: none"><li>• Thesis: Nonlinear Hashing Learning for Quick Visual Retrieval</li><li>• Advisor: Prof. Jie Zhou and Prof. Jiwen Lu</li></ul>	Beijing, P.R.China <i>Sep. 2010 – June 2017</i>
<b>Department of Electronic Engineering, Xi'an Jiaotong University</b> <i>B.E. in Microelectronics</i>	Xi'an, P.R.China <i>Sep. 2006 – July 2010</i>

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## RECOGNITION & AWARDS

<b>Doctoral Dissertation Award</b> by China Society of Image and Graphics (10 recipients nationwide)	2019
<b>Best Paper Award</b> as a co-author at the IEEE International Conference on Multimedia and Expo (ICME)	2018
<b>National Postdoctoral Program for Innovative Talents</b> by Ministry of Human Resources and Social Security of the P.R.China and Postdoctoral Management Committee of China (300 recipients nationwide)	2017
<b>Postdoctoral Support Program</b> by Tsinghua University	2017
<b>Outstanding Graduation Thesis</b> by Tsinghua University	2017
<b>Outstanding Graduate</b> by Xi'an Jiaotong University	2010

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## SELECTED PUBLICATIONS

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### Refereed conference publications:

8. **Zhixiang Chen**, Tae-Kyun Kim, *Learning Feature Aggregation for Deep 3D Morphable Models*, in IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), pp. 1-10, 2021. (accepted)
7. Xuepeng Shi, **Zhixiang Chen**<sup>#</sup>, Tae-Kyun Kim, *Distance-Normalized Unified Representation for Monocular 3D Object Detection*, in European Conference on Computer Vision (ECCV), pp. 91-107, 2020. (<sup>#</sup>Corresponding author)
6. Shuyan Li, **Zhixiang Chen**, Jiwen Lu, Xiu Li, Jie Zhou, *Neighborhood Preserving Hashing for Scalable Video Retrieval*, in IEEE International Conference on Computer Vision (ICCV), pp. 8212-8221, 2019.
5. **Zhixiang Chen**, Xin Yuan, Jiwen Lu, Qi Tian, Jie Zhou, *Deep Hashing via Discrepancy Minimization*, in IEEE Conference on Computer Vision and Pattern Recognition (CVPR), pp. 6838-6847, 2018.
4. Cheng Ma, **Zhixiang Chen**, Jiwen Lu, Jie Zhou, *Rank-Consistency Multi-Label Deep Hashing*, in IEEE International Conference on Multimedia and Expo (ICME), pp. 1-6, 2018. (**Platinum Best Paper**)
3. **Zhixiang Chen**<sup>\*</sup>, Ruojin Cai<sup>\*</sup>, Jiwen Lu, Jianjiang Feng, Jie Zhou, *Order-Sensitive Deep Hashing for Multimorbidity Medical Image Retrieval*, in International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI), pp. 620-628, 2018. (<sup>\*</sup>equal contribution)

2. Xin Yuan, **Zhixiang Chen**, Jiwen Lu, Jianjiang Feng, Jie Zhou, *Reconstruction-based Supervised Hashing*, in IEEE International Conference on Multimedia and Expo (ICME), pp. 1404-1409, 2017.
1. **Zhixiang Chen**, Yi Fang, Fang Wang, Zhaolin Li, *Implementation of H. 264 Intra-Frame Encoding on Clustered Stream Architectures*, in IEEE 10th International Conference on ASIC. (ASICON), pp. 1-4, 2013.

#### Refereed journal publications:

8. Shuyan Li, **Zhixiang Chen**, Xiu Li, Jiwen Lu, Jie Zhou, *Unsupervised Variational Video Hashing with 1D-CNN-LSTM Networks*, IEEE Transactions on Multimedia, 22(6), pp. 1542-1555, 2020.
7. Xin Yuan, **Zhixiang Chen**, Jiwen Lu, Jianjiang Feng, Jie Zhou, *Reconstruction-based Supervised Hashing*, Pattern Recognition, vol. 79, pp. 147-161, 2018.
6. **Zhixiang Chen**, Jie Zhou, *Collaborative Multiview Hashing*, Pattern Recognition, vol. 75, pp. 149-160, 2018.
5. **Zhixiang Chen**, Jiwen Lu, Jianjiang Feng, Jie Zhou, *Nonlinear Structural Hashing for Scalable Video Search*, IEEE Transactions on Circuits and Systems for Video Technology, 28(6), pp. 1421-1433, 2018.
4. **Zhixiang Chen**, Jiwen Lu, Jianjiang Feng, Jie Zhou, *Nonlinear Sparse Hashing*, IEEE Transaction on Multimedia, 19(9), pp. 1996-2009, 2017.
3. **Zhixiang Chen**, Jiwen Lu, Jianjiang Feng, Jie Zhou, *Nonlinear Discrete Hashing*, IEEE Transaction on Multimedia, 19(1), pp. 123-135, 2017.
2. Baohua Chen, **Zhixiang Chen**, Lei Deng, Yueqi Duan, Jie Zhou, *Building Change Detection with RGB-D Map Generated From UAV Images*, Neurocomputing, 208, pp. 350-364, 2016.
1. Lei Deng, **Zhixiang Chen**, Baohua Chen, Yueqi Duan, Jie Zhou, *Incremental Image Set Querying Based Localization*, Neurocomputing, 208, pp. 315-324, 2016.

#### INVITED TALKS

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Deep Hashing Learning for Large Scale Visual Retrieval, <i>Shanghai University, Shanghai</i>	July 2019
Hashing Learning in the Context of Large Scale Visual Retrieval, <i>Sun Yat-sen University, Guangzhou</i>	Dec. 2018
Deep Variational Hashing, <i>Artificial Intelligence Industry Technology Innovation Alliance, Xiamen</i>	Dec. 2018
Deep Learning Based Hashing Learning and Its Application in Medical Image Analysis, <i>Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing</i>	Dec. 2018
Nonlinear Hashing Learning for Quick Visual Retrieval, <i>Doctoral Symposium at ICIP, Beijing</i>	Sep. 2017