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个人资料:

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主要经历:

- (1) 2020.04-至今 天津大学 电气自动化与信息工程学院, 电子信息工程系, 副教授
- (2) 2018.02-2020.04 天津大学 电气自动化与信息工程学院, 电子信息工程系, 讲师
- (3) 2014.09-2015.09 新加坡国立大学, 计算机学院, 博士联合培养 (联培导师: Tat-Seng CHUA)
- (4) 2013.09-2018.01 天津大学 电气自动化与信息工程学院, 博士生

井佩光, 博士, 副教授, 天津大学信息与通信工程专业硕士生导师。2013 年 1 月与 2018 年 1 月分别于天津大学电子信息工程学院及电气自动化与信息工程学院获信息与通信工程专业硕士学位及博士学位。2014 年 9 月至 2015 年 9 月于新加坡国立大学计算机学院进行博士联合培养。2018 年 1 月至今, 天津大学任教。作为项目及主要参与人负责人及承担 4 项国家自然科学基金, 及 2 项省部级科研项。已经发表科研论文六十余篇, 包括多媒体及数据挖掘等相关领域的国际顶级期刊或会议 IEEE TKDE, IEEE TIP, IEEE TMM, IEEE TCYB, IEEE TSCVT, IEEE SPL, ACM MM 等。目前受邀成为十余种 SCI 期刊或会议审稿人, 包括 IEEE TPAMI, IEEE TGRS, IEEE TCYB, IEEE TMM, ACM TWEB, ACM MM 等。研究方向包括多媒体计算, 时尚智能穿搭, 短视频内容分析, 多媒体抽象语义理解 (情感分析, 记忆度分析等), 张量分解, 高阶时序数据预测等。

主要研究方向:

(1) 多模态短视频语义理解及分析

当今, 短视频成为新媒体时代下极具代表性的多媒体数据类型之一。短视频兴起以传播为导向, 具有天然的“时短”特性, 并且具备“视觉”、“音频”、“文本”等多种模态信息。申请人研究紧随这一趋势变化, 在短视频产业快速发展背景下, 聚焦于短视频语义分析这一核心问题进行研究, 从多模态短视频流行度预测, 短视频事件检测及多模态短视频分类、短视频记忆度预测等问题逐步展开研究。

(2) 经典媒体数据语义分析

语义分析是视觉理解中高层认知的重点和难点问题, 研究的重点在于解决低层视觉特征和高层语义概念之间的语义鸿沟问题。当前研究趋势中, 对以图像为代表的经典媒体数据的研究逐渐聚焦到高层抽象的语义概念上。申请人从表示学习出发, 针对多媒体数据的情感分析、记忆度分析、时尚多媒体的兼容度预测等方面展开研究。

(3) 时序数据分析

快速增长的数据量和多变的数据类型给多媒体领域发展带来新挑战。当今，随着各种传感器设备的迅猛发展以及实际需求的推动，我们所观测到的真实世界的的数据通常具有多路结构或被多因素诱导，这些数据可以很自然地用高阶数据的形式表示。为更好的解决时序数据中的语境、时域平滑性和高阶等问题，申请人在张量分解与深度学习等框架下，通过深入研究数据在时域上的规律，自适应学习的方式获取数据时域上关联性模式等。代表性成果列表如下：

主要科研项目：

- (1) 国家自然科学基金青年项目，“新媒体环境下短视频事件检测研究”，负责人
- (2) 博士后科学基金面上项目，“面向短视频复杂事件检测的关键技术研究”，负责人
- (3) 天津大学自主基金—“天津大学北洋学者-青年骨干教师项目”，负责人
- (4) 天津市自然科学基金青年项目“面向短视频语义分类的多模态数据表示方法研究”，负责人

代表性论著、学术著作：

- [1] Yuting Su, Wei Zhao, **Peiguang Jing***, Liqiang Nie. Exploiting Low-rank Latent Gaussian Graphical Model Estimation for Visual Sentiment Distribution. IEEE Transactions on Multimedia, 2022. DOI: 10.1109/TMM.2022.3140892
- [2] Wei Lu, Desheng Li, Liqiang Nie, **Peiguang Jing***, Yuting Su. Learning Dual Low-rank Representation for Multi-label Micro-video Classification[J]. IEEE Transactions on Multimedia, 2021. DOI: 10.1109/TMM.2021.3121567
- [3] Xiao Jin, **Peiguang Jing**, Jiasheng Wu, Jing Xu, Yuting Su. Visual Sentiment Classification via Low-rank Regularization and Label Relaxation. IEEE Transactions on Cognitive and Developmental Systems, 2021. DOI: 10.1109/TCDS.2021.3135948
- [4] **Peiguang Jing**, Yaxin Li, Xinhui Li, Yuting Wu*, Yuting Su. Joint nuclear-and ℓ_2 , 1-norm regularized heterogeneous tensor decomposition for robust classification[J]. Neurocomputing, 2021, 464: 317-329.
- [5] 褚晶辉,史李栋,**井佩光**,吕卫.适用于目标检测的上下文感知知识蒸馏网络[J].浙江大学学报(工学版),2022,56(03):503-509.
- [6] 井佩光,李亚鑫,苏育挺.一种多模态特征编码的短视频多标签分类方法[J/OL].西安电子科技大学学报. <https://kns.cnki.net/kcms/detail/61.1076.TN.20220301.1823.004.html>
- [7] 吕卫,韩稼泽,褚晶辉,井佩光.基于多模态自注意力网络的视频记忆度预测[J/OL].吉林大学学报(工学版):1-9[2022-06-17].DOI:10.13229/j.cnki.jdxbgxb20210842.
- [8] Yuting Su, Junyu Xu, Daozheng Hong, Fugui Fan, Jing Zhang*, **Peiguang Jing**. Deep low-rank matrix factorization with latent correlation estimation for micro-video multi-label classification[J]. Information Sciences, 2021, 575: 587-598.
- [9] **Peiguang Jing**, Jing Zhang, Liqiang Nie, Shu Ye, Jing Liu, Yuting Su*. Tripartite Graph Regularized Latent Low-Rank Representation for Fashion Compatibility Prediction[J]. IEEE Transactions on Multimedia, 2021, 24: 1277-1287. (中科院分区 Top 期刊)
- [10] **Peiguang Jing**, Yuechen Shang, Liqiang Nie, Yuting Su*, Jing Liu, Meng Wang. Learning Low-rank Sparse Representations with Robust Relationship Inference for Image Memorability

- Prediction. IEEE Transactions on Multimedia, 2021, 23: 2259-2272, 2021 (中科院分区 Top 期刊)
- [11] **Peiguang Jing**, Yuting Su*, Zhengnan Li, Liqiang Nie. Learning robust affinity graph representation for multi-view clustering. Information Sciences, 2021 544: 155-167. (中科院分区 Top 期刊)
- [12] 张丽娟, 崔天舒, **井佩光***, 苏育挺. 基于深度多模态特征融合的短视频分类[J].北京航空航天大学学报, 2021, 47(03): 478-485.
- [13] **Peiguang Jing**, Shu Ye, Liqiang Nie, Jing Liu, Yuting Su*. Low-rank regularized multi-representation learning for fashion compatibility prediction. IEEE Transactions on Multimedia, 2020, 22(6): 1555-1566. (中科院分区 Top 期刊)
- [14] Jing Zhang, Yuting Wu, Jinghui Liu, **Peiguang Jing***, Yuting Su. Low-Rank Regularized Multimodal Representation for Micro-Video Event Detection. IEEE Access, 2020, 8: 87266-87274.
- [15] Yuting Su, Daozheng Hong, Yang Li, **Peiguang Jing***. Low-Rank Regularized Deep Collaborative Matrix Factorization for Micro-Video Multi-Label Classification. IEEE Signal Processing Letters, 2020, 27: 740-744.
- [16] Yuting Su, Yang Li, Xu Bai, **Peiguang Jing***. Predicting the popularity of micro-videos via a feature-discrimination transductive model. Multimedia Systems, 2020, 26:519-534
- [17] **Peiguang Jing**, Weili Guan, Xu Bai, Hongbin Guo*, Yuting Su. Single image super-resolution via low-rank tensor representation and hierarchical dictionary learning. Multimedia Tools and Applications, 2020: 79:11767-11785.
- [18] Xue Dong, Xuemeng Song, Fuli Feng, **Peiguang Jing**, Xin-Shun Xu, Liqiang Nie. Personalized Capsule Wardrobe Creation with Garment and User Modeling. In Proceedings of ACM International Conference on Multimedia, 2019: 302-310.
- [19] **Peiguang Jing**, Yuting Su*, Xiao Jin, Chengqian Zhang. High-Order Temporal Correlation Model Learning for Time-Series Prediction. IEEE Transactions on Cybernetics, 2019, 49(6):2385-2397. (中科院分区 Top 期刊)
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- [22] **Peiguang Jing**, Yuting Su, Zhengnan Li, Jing Liu, Liqiang Nie. Low-rank regularized tensor discriminant representation for image set classification. Signal Processing, 2019, 156:62-70.
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- [26] Jing Zhang, Yue Shi, **Peiguang Jing***, Jing Liu, Yuting Su. A structure-transfer-driven temporal subspace clustering for video summarization, *Multimedia Tools and Applications*, 2019, 78(17), 24123–24145
- [27] Jing Zhang, Zhengnan Li, **Peiguang Jing***, Ye Liu, Yuting Su. Tensor-driven low-rank discriminant analysis for image set classification, *Multimedia Tools and Applications*, 2019, 78(4):4001-4020.
- [28] Yuting Su, Xu Bai, Pu Jian, **Peiguang Jing***, Jing Zhang. Low-rank approximation-based tensor decomposition model for subspace clustering, *Electronics Letters*, 2019, 55(7) 406 – 408
- [29] **Peiguang Jing**, Yuting Su*, Liqiang Nie, Xu Bai, Jing Liu, Meng Wang. Low-rank Multi-view Embedding Learning for Micro-video Popularity Prediction. *IEEE Transactions on Knowledge and Data Engineering*, 2018, 30(8): 1519-1532. (ESI 高被引)
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- [36] Luming Zhang, **Peiguang Jing#**, Yuting Su, Chao Zhang, Ling Shao. SnapVideo: Personalized Video Generation for a Sightseeing Trip. *IEEE Transactions on Cybernetics*, 2017 47 (11), 3866 – 3878. (中科院分区 Top 期刊)
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其他 (社会兼职等) :

IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Geoscience and Remote Sensing, IEEE Transactions on Cybernetics, IEEE Transactions on Multimedia, IEEE Signal Processing Letters, ACM Transactions on Multimedia Computing Communications and Applications, ACM Transactions on the Web, IEEE Access, Neurocomputing, Information Science, Signal Processing, Pattern Recognition. Pattern Recognition Letters, Journal of Visual Communication and Image Representation, Multimedia Tools and Applications, Mathematical Problems in Engineering, Science China-Information Science, ACM MM, MMM 等国际期刊与国际会议审稿人。