

柯永振，教授，博士生导师，福建省屏南县人，工程教学实习训练中心主任（正处级）；教育部工程训练教指委委员，天津市政协委员、西青区人大代表，九三学社天津市委员会教育文化专委会副主任；天津市计算机学会常务理事，天津市元宇宙学会理事，天津体视学会虚拟仿真技术与精准医疗专委会副主任；中国图象图形学会高级会员、多媒体专委会委员，中国计算机学会会员。入选天津市高校“中青年骨干创新人才培养计划”、天津市委统战部“十百千工程”人才库，被评为年天津市优秀科技特派员，天津市工程专业学位优秀指导教师。获得九三学社全国优秀社员，九三学社天津市委员会先进个人、参政议政标兵、参政议政优秀成果，桑麻奖教金等荣誉。

作为第一/通讯作者已发表学术论文 70 余篇，其中 SCI/EI 60 余篇；申请 22 项国家发明专利（已授权 12 项），获得 11 项软件著作权；获得天津市科技进步二等奖 1 项；是科技部、天津市、河南、江苏、江西、河北、山西、福建、上海等科技项目评审专家和天津市智能科技产业专家咨询委员会智能商贸物流分领域专家组成员，教育部学位论文评审专家、天津市高校贵重仪器设备论证专家、天津市政务信息化评审专家。是包括 Transactions on Pattern Analysis and Machine Intelligence、IEEE Transactions on Image Processing、IEEE Transactions on Multimedia、IEEE Transactions on Visualization and Computer Graphics、IEEE Transactions on Circuits and Systems for Video Technology，ACM Transactions on Multimedia Computing Communications and Applications、Pattern Recognition、Applied Intelligence、Computer Vision and Image Understanding、Computers in Industry、The Visual Computer、Multimedia Systems、ACM MM、NeurIPS、ICLR、计算机科学等 30 余个学术期刊和会议审稿人。

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学习经历

1997.7 天津工业大学，获计算机应用技术工学学士学位

2000.1 天津大学，获计算机应用技术工学硕士学位

2008.8 天津大学，获计算机应用技术工学博士学位。

主要研究方向

图像处理、计算美学、机器视觉、智能体等。团队围绕图像美学质量评价、图像美学描述与优化、素描画的美学评价与优化指导、美学引导的图像生成取得了一系列研究成果；团队将机器视觉、大模型技术应用于工业场景，开展工业品表面缺陷严重程度预测、工业品缺陷报告生成、缺陷根因分析、缺陷图像生成、以及多模态数据对齐等研究；团队基于知识图谱、智能体开展质检报告正确性验证、多模态文档识别等研究。

近几年主持和参与的项目

2026 天津市科学技术普及项目，以科技为翼，承传统之美——科普基地建设与服务能力提升，负责人

2026 面向工业文档的多模态内容结构化提取与智能体辅助功能开发与测试，100 万，企业委托，负责人

2026 基于扩散模型的纺织面料纹样智能生成与设计关键技术研究，纺织服装科技与文化福建省高校应用技术工程中心课题，负责人

2025 天津市人工智能科技重大专项，智能工厂多模态垂类模型与智能体协同平台研发及示范应用，280 万，子课题负责人

2025 天津市技术创新引导专项，基于扩散模型的工业品表面缺陷样本生成方法研究与应用，第二

2024 基于大模型技术的缺陷数据生成与图文分析报告生成的研究，50 万，企业委托，负责人

2022 AI 多任务目标检测模型研发，企业委托，30 万，负责人

2021 工信部产业技术基础公共服务平台：建设智能制造标准试验验证公共服务平台(5G新一代信息技术与纺织行业融合)，参与

2026 “纺织之光”中国纺织工业联合会高等教育教学改革项目，人工智能与虚拟现实技术融合的纺织智能制造实训课程改革研究，第二

2026 “纺织之光”中国纺织工业联合会高等教育教学改革项目，“AI+制造”背景下“机电计智”交叉协同的工程实践平台建设 with 教学改革研究，负责人

2024 新工科背景下面向一流人才培养的综合性工程实践平台，天津工业大学“新四科”本科人才培养重点项目，负责人

近几年发表的研究论文

1. Kai Tian, Dehao Meng, Kai Wang, **Yongzhen Ke***, Shuai Yang, Liming Chen, Jianghong Hu, Changku Sun, Xiaodong Zhang, A Coarse-to-Fine Grouping Network for Surface Defect Rating, Engineering Applications of Artificial Intelligence (1区 top CCF C), Aug 2026, Vol.182, 116025, <https://doi.org/10.1016/j.engappai.2026.116025>,
2. Xiaohui Li, **Yongzhen Ke***, Kai Wang, Shuai Yang, SGIN: Star-shaped Graph Interaction Network for Multi-attribute Aesthetic Quality Assessment of Portrait Sketches, In Proceedings of the 34th ACM International Conference on Multimedia (CCF A), 2026, <https://doi.org/10.1145/3767308.3836190>,
3. Huaning Liu, Jing Guo, Kai Wang, Shuai Yang, Wen Guo, **Yongzhen Ke***, Sketch Diffusion: A Sketch-Drawing Optimization Method via Diffusion Model, Image and Vision Computing (2区 CCF C), Jun 2026, 174:106106, <https://doi.org/10.1016/j.imavis.2026.106106>,
4. Shuai Yang, Zhengyu Miao, Kai Tian, Kai Wang, Liming Chen, **Yongzhen Ke***, Jianghong Hu, Bin Cao, Reference Image Guided Industrial Defect Generation with Specified Region and Strength, Applied Intelligence (3区 CCF C), June 2026, 56:307, <https://doi.org/10.1007/s10489-026-07332-9>,
5. Yongkun Han, Kai Wang, Liming Chen, **Yongzhen Ke***, Shuai Yang, Kai Tian, Group-Driven Causal Modeling and Root Cause Analysis for High-Dimensional Time Series, Int'l Journal of Software Engineering and Knowledge Engineering, 2026, <https://doi.org/10.1142/S0218194026500415>

6. Shuai Yang,Guangao Wang, **Yongzhen Ke***, Kai Wang, Wen Guo, Jing Guo, Fan Qin, MUSE: a Novel Multimodal Unified Sketch Evaluator for Comprehensive Aesthetic Assessment , Knowledge-Based Systems(1st Top CCF C) , May 2026 , Vol.347 , 116298 , <https://doi.org/10.1016/j.knosys.2026.116298>
7. Shuai Yang, Yin Wang, Dehao Meng, Yang Chen, **Yongzhen Ke***, Jing Guo, Peirong Tang , AesFA-ST: Aesthetic Feature-Aware Style Transfer for Controllable Image Generation, Journal of the Franklin Institute , April 2026 , Volume 363, Issue 6, 108549 , <https://doi.org/10.1016/j.jfranklin.2026.108549>
8. Aizhe Wu , Jing Guo, Kai Wang, Shuai Yang, **Yongzhen Ke***, High-Fidelity Human Image Animation: Preserving Identity and Pose Consistency, Signal, Image and Video Processing, Feb 2026, Vol.20,No.120, <https://doi.org/10.1007/s11760-026-05195-8>
9. Hao Li, **Yongzhen Ke***, Shuai Yang, Kai Wang, Yemeng Wu, EFE-SDG: Efficient Feature Extraction of Finetuning-Free Model in Subject-Driven Generation, Multimedia Systems (CCF C) , March 2026, Vol.32:194, <https://doi.org/10.1007/s00530-026-02248-3>,
10. Yongjiang Xue, Congwei Guo , Aizhe Wu , Yang Chen , **Yongzhen Ke*** , Peirong Tang, X2Fashion: Temporally consistent fashion video generation guided by image, pose and text , Multimedia Systems, Jan 2026, Vol.32,No.71 , <https://doi.org/10.1007/s00530-025-02136-2>,
11. Xinyue Sun, Jing Guo, **Yongzhen Ke***, Shuai Yang, Kai Wang, Yemeng Wu , SAST: Semantic-Aware Stylized Text-to-Image Generation, Journal of Visual Communication and Image Representation(CCF C) , 2026 , Vol.115,104685 , <https://doi.org/10.1016/j.jvcir.2025.104685>,
12. Shuai Yang, Xinyue Sun, Jing Guo, Kai Wang, **Yongzhen Ke***, Xingjian Zhang, Stylized Image Generation based on Multi-attribute Decomposition, Pattern Analysis and Applications, 22 Nov. 2025, Vol.22:No.202, <https://doi.org/10.1007/s10044-025-01577-9>
13. Kai Tian, Shuai Yang , Liming Chen, Kai Wang, **Yongzhen Ke***, Zhengyu Miao, Jianghong Hu, Changku Sun, Xiaodong Zhang , DDSPNet: A Two-stage Defect Detection and Severity Prediction Model for Industrial Products, Applied Intelligence, Oct 2025, Vol.55, No.1024, <https://doi.org/10.1007/s10489-025-06924-1>
14. Guanjun Sheng, **Yongzhen Ke***, Shuai Yang, Kai Wang, AesBLIP2: Generating Image Aesthetic Caption via Prompting , Multimedia Systems, Aug 2025, Vol.31, No.362, <https://doi.org/10.1007/s00530-025-01947-7>,
15. Guangao Wang, **Yongzhen Ke***, Shuai Yang, Kai Wang, Wen Guo, Fan Qin, A Novel Framework for Aesthetic Assessment of Portrait Sketches via Multi-Feature Integration and Self-Supervised Learning, Expert Systems With Applications(1st Top CCF C), 1 November 2025 (online June 2025) , Volume 292, 128659 , <https://doi.org/10.1016/j.eswa.2025.128659>,
16. Ze Gao, Jing Guo, Liming Chen, Kai Wang, Yang Chen, **Yongzhen Ke***, Shuai Yang, AnDR-BLIP2: Enhanced Semantic Understanding Framework for Industrial Image Anomaly Detection and Report Generation, Journal of the Franklin Institute, 2025, Volume 362, Issue 12, 107816, 1 August 2025 (21 Jun 2025 online), <https://doi.org/10.1016/j.jfranklin.2025.107816>,

17. Yin Wang, Jing guo, **Yongzhen Ke***, Kai Wang, shuai yang, Liming Chen , Image Aesthetic Assessment with Weighted Multi-region Aggregation based on Information Theory, Pattern Analysis and Applications, May 2025, 28:115, <https://doi.org/10.1007/s10044-025-01490-1>,
18. Nan Sheng, Shuai Yang, Huaning Liu, Kai Wang, **Yongzhen Ke*** and Fan Qin, Optimizing Photographic Composition with Deep Reinforcement Learning, Neurocomputing (2 ☒ CCF C) , 2025 , Volume 640, 1 August 2025, 130363 , <https://doi.org/10.1016/j.neucom.2025.130363>
19. Wenjing Cao, **Yongzhen Ke***, Kai Wang, Shuai Yang, Fan Qin, Multi-theme Image Aesthetic Assessment based on Incremental Learning, Signal, Image and Video Processing(4 ☒), 2025, Vol.19, No.5, Article No.421, 29 March, <https://doi.org/10.1007/s11760-025-04029-3>,
20. Minrui Jia , Guangao Wang, Zibei Wang, Shuai Yang, **Yongzhen Ke***, Kai Wang, Self-supervised Image Aesthetic Assessment Based on Transformer, International Journal of Computational Intelligence and Applications , 2025, Volume No. 24, Issue No. 01, Article No. 2450029, <https://doi.org/10.1142/S1469026824500299>,
21. Nan Sheng, **Yongzhen Ke***, shuai yang, Yong Yang, Liming Chen, View Adjustment: Helping Users Improve Photographic Composition, Multimedia Systems (3 ☒ CCF C), 2024, Volume 30, article number 293, 26 September, <https://doi.org/10.1007/s00530-024-01490-x>,
22. Shuai Yang, Mengxue Wang, Jing Guo, Ze Gao, **Yongzhen Ke***, Fan Qin, Sketch to Chinese Paintings: A Three-Stage Progressive Generation Network via Enhancing Sketch, Journal of the Franklin Institute, 2024(107246) , Vol.361, No.18, 7 Sep 2024(Online), <https://doi.org/10.1016/j.jfranklin.2024.107246>
23. Shuai Yang, Zibei Wang, Guangao Wang, **Yongzhen Ke***, Fan Qin, Jing Guo, Liming Chen, A Self-Supervised Image Aesthetic Assessment Combining Masked Image Modeling and Contrastive Learning, Journal of Visual Communication and Image Representation(CCF C) , Vol.101, 104184, 2024, online 21 May , <https://doi.org/10.1016/j.jvcir.2024.104184>,
24. Huiying Shi, Jing Guo, **Yongzhen Ke***, Kai Wang, Shuai Yang, Fan Qin, Liming Chen, Personalized Image Aesthetic Assessment via Graph Neural Network with Collaborative Filtering, Knowledge-Based Systems (1 ☒ Top CCF C), 2024.4.2(Online), Volume 294, 21 June 2024, 111749, <https://doi.org/10.1016/j.knosys.2024.111749>,
25. Qinggang Hou, **Yongzhen Ke**, Kai Wang, Fan Qin*, Yaoting Wang, Synchronous Composition and Semantic Line Detection Network Based on Cross-Attention, Multimedia Systems (CCF C) , 2024, <https://doi.org/10.1007/s00530-024-01307-x>,
26. Kai Wang, Hongming Lu, Jing Guo, **Yongzhen Ke***, Shuai Yang , Kai Tian, Person Image Generation Guided by Posture, Expression and Illumination, International Journal of Computational Intelligence and Applications, 2024, 25 April, Volume No. 23, Issue No. 03, Article No. 2450010, <https://doi.org/10.1142/S146902682450010X>,
27. Yaoting Wang ,**Yongzhen Ke*** , Kai Wang, Cuijiao Zhang, Fan Qin , Aesthetic feature design and aesthetic quality assessment for group photograph, Multimedia Tools and Applications (CCF C) ,Jan 2024,
28. Congwei Guo, **Yongzhen Ke**, Zhenkai Wan, Minrui Jia*, Kai Wang, Shuai Yang, Human Image Animation via Semantic Guidance, Computers & Graphics (CCF C), Vol.118, Feb 2024, pp:102-110,
29. Zhenquan Shi, Hongming Lu, Xinyue Sun, Jing Guo, **Yongzhen Ke***, Kai Wang, Fan Qin, Virtual Group Photography Based on Scene and Person Perception, Heliyon , Vol.10, No.1, JAN 15

- 2024, <https://doi.org/10.1016/j.heliyon.2023.e23568>,
- Yin Wang, Wenjing Cao, Nan Sheng, Huiying Shi, Congwei Guo and **Yongzhen Ke***, TSC-Net: Theme-Style-Color guided Artistic Image Aesthetics Assessment Network , Computer Graphics International (CGI) 2023 Conference (CCF C), 29 August 2023; Lecture Notes in Computer Science (LNCS), volume 14495, Pages 193-203,20 January 2024;
30. Zhenquan Shi, Qinggang Hou, Guanjun Sheng, **Yongzhen Ke***, Kai Wang, and Yungang Jia, Where2Stand: Towards a Framework for Portrait Position Recommendation in Photography, IEEE Access(3 Online ISSN: 2169-3536), Vol.11, pp: 108864-108875,05 October 2023, <https://doi.org/10.1109/ACCESS.2023.3322363>
 31. Kai Wang, Jiaying Liu, Shuai Yang, Jing Guo, **Yongzhen Ke***, Automatic simulated dental implants method with implant parameter estimation based on CBCT images, Engineering Computations (4 Online), Oct 13, 2023
 32. **Yongzhen Ke** ,Yin Wang, Kai Wang*,Fan Qin,Jing Guo,Shuai Yang ,Image Aesthetics Assessment Using Composite Features from Transformer and CNN , Multimedia Systems (CCF C), online: 01 August 2023, <https://doi.org/10.1007/s00530-023-01141-7>,
 33. Kai Wang, Congwei Guo, Zhuang Zhao,**Yongzhen Ke***, Shuai Yang, Styling Classification of Group Photos Fusing Head and Posture Features , International Journal of Computational Intelligence and Applications, 2023, <https://doi.org/10.1142/S1469026823500104>,
 34. **Yongzhen Ke***, Nan Sheng, Gang Wei, Kai Wang, Fan Qin,Jing Guo, Subject-Aware Image Outpainting, Signal, Image and Video Processing, Jan 5 2023(online),10.1007/s11760-022-02444-4,
 35. Yaoting Wang, **Yongzhen Ke***,Kai Wang,Jing Guo, Shuai Yang, Spatial-invariant Convolutional Neural Network for Photographic Composition Prediction and Automatic Correction, Journal of Visual Communication and Image Representation(CCF C) , 7 Jan 2023 <https://authors.elsevier.com/a/1gOuM3k8X3qORJ>, vol.2023,172351
 36. Gang Wei,Jing Guo,**Yongzhen Ke***,Kai Wang, Nan Sheng, A Three-stage GAN Model Based on Edge and Color Prediction, Expert Systems With Applications, 9 Nov 2022 (网络版) , (1 Online CCF C) Vol.214, 119136
 37. Yaoting Wang, **Yongzhen Ke***,Kai Wang,Jing Guo,Fan Qin, A Composition-oriented Aesthetic View Recommendation Network Supervised by the Simplified Golden Ratio Theory, Expert Systems With Applications, 2022, Vol.195, 116500
 38. Kai Wang, Shasha Lv,**Yongzhen Ke***, Jing Guo, Ruikun Wang, Image Aesthetic Description Based on Semantic Addition Transformer Model , International Journal of Cognitive Informatics and Natural Intelligence, 2021,Vol.15, Issue 4
 39. Shuai Yang, Wenjing Shi, **Yongzhen Ke***, A Two-stage Registration Method for Dental Volumetric Data and Mesh Data , International Journal of Healthcare Information Systems and Informatics, 2021, Vol.16, Issue 4,
 40. Shuai Yang, Wenjie Zhao, **Yongzhen Ke***, Jiaying Liu, Yongjiang Xue, A Three-Dimensional Dental Model Restoration Method based on Tooth Feature Contours , Engineering Computations, 2021, Vol.38, No.9, pp.3608-362
 41. **Yongzhen Ke***, Yiping Cui, Multiple Fusion Strategies in Localization of Local Deformation Tampering , International Journal of Digital Crime and Forensics, 2021, Vo.13, Issue 2, pp:103-114
 42. **Yongzhen Ke**, Wenjie Zhao, Shuai Yang*, Kai Wang, Jiaying Liu, A User-friendly Method for

专利及软件著作权

1. 一种基于阴影光源强度一致性的图像伪造检测方法(201310616586.X),2013
2. 一种基于阴影纹理一致性的图像伪造检测方法(201310616590.6),2013
3. 一种基于噪声估计的伪造图像检测方法, (201410729186.4),2014
4. 一种基于二次缝裁剪特征的图像盲检测方法, (ZL201510049619.6), 授权 2017
5. 一种针对物体删除的缝裁剪图像定位取证方法, ZL201710205138.9,授权 2019
6. 一种基于上下牙颌的牙弓线绘制方法, 201810186928.1,2021 授权
7. 一种针对 CT 与光学扫描牙齿模型的高效配准方法, 201810340764.3, 2018
8. 一种基于增强现实技术的汉字辅助学习系统及方法, 201811240081.7, 2018
9. 针对非结构化文本的个人隐私信息自动检测方法及系统, 201910147987.2, 2019
10. 一种基于各向异性度量的牙齿分割方法, 201910067399.8, 2022, 授权
11. 一种构建真实感牙列模型的方法, 201910698286.8, 2022, 授权
12. 一种合影图像的美学质量评价方法及实时拍摄指导系统, 201911343106.0,2019
13. 一种基于二维美齿特征线的三维牙齿形状修复方法,202010122150.5,2021 授权
14. 工业品表面缺陷检测及严重等级预测模型、方法及应用, 202410393795.0, 授权
15. 一种素描美学评估系统及方法, 202510451144.7, 2025
16. 工业缺陷的评级方法、电子设备和存储介质, 202510733883.5, 2025
17. 一种基于参考图像引导的工业品缺陷样本可控生成方法, 202510985661.2, 授权
18. 基于大语言模型的根本原因分析方法、设备和存储介质, 202511007722.4, 2025
19. 一种高维时间序列中基于分组的根因定位方法, 202610132021.1, 2026
20. 基于潜分布重锚定动态注入的扩散风格迁移方法及系统, ZL 202610024829.8 授权
21. 一种工业品表面缺陷定级方法, 202610720045.9, 2026
22. 一种基于原型对比与双视图筛选的工业图像缺陷识别方法, ZL202610829800.7, 授权
23. 软件著作权: 本科毕业设计过程管理与监控系统 V1.0, 软著登字第 0380729 号, 2012
24. 软件著作权: 科学技术奖申报系统, 软著登字第 0422802 号, 2012
25. 软件著作权: 节能监管手机平台, 软著登字第 0398337 号, 2012
26. 软件著作权: 节能监管碳交易系统, 软著登字第 0398334 号, 2012
27. 软件著作权: 基于 RFID 的档案管理系统, 软著登字第 0620176 号, 2013
28. 软件著作权: 成人本科申请学士学位外语考试网上报名系统,软著登字第 0725325 号, 2014
29. 软件著作权: 成人本科申请学士学位外语考试现场确认系统, 软著登字第 0725195 号, 2014
30. 软件著作权: 成人本科申请学士学位外语考试考务及入场验证系统, 软著登字第 0725192 号, 2014
31. 软件著作权: 基于云平台的节能管理预测系统, 软著登字第 00978063 号, 2015
32. 软件著作权: 膜装置过滤远程监控与可视化分析系统, 软著登字第 2041351 号, 2017
33. 软件著作权: 基于 Web 的图像三维可视化系统, 软著登字第 2747554 号, 2018

获奖情况

- 1、高等院校节约型校园能源与水资源健康监管平台，天津市科技进步二等奖，第四完成人，2012 年
- 2、面向全局网络的入侵检测、防御与追踪技术，张家口科学技术进步奖二等奖，第四完成人,2008 年
- 3、天津工业大学校级优秀教师、校级师德标兵、桑麻奖教金；天津市优秀科技特派员、天津市工程专业学位优秀指导教师。