马利庄

人物经历

马利庄，男，理学博士，博士后，博士生导师，上海交通大学特聘教授、华东师范大学特聘教授，上海交通大学人工智能研究院副院长。中国图象图形学会理事、动画与数字娱乐专委会主任，中国人工智能学会理事、"智能创意与数字艺术专委会"副主任，CAD&CG 专委会副主任。马利庄博士是国家杰出青年基金（信息学部专家初审和复审名列第一），上海市科技进步特等奖（第一完成人）、一等奖、二等奖，中国青年科技奖，国家教育部科技进步二等奖；国家"百千万人才工程"(国家级)首批人选，浙江省跨世纪学术与技术带头人；国务院特殊津贴获得者。

马利庄博士多年来在计算机图形图像、计算机视觉、数字媒体、智能信息处理等领域前沿问题积极探索，取得了一系列创新性成果，在国内外重要学术刊物上发表论文 300 多篇。面向国家重大需求，在视觉无损的大数据智能压缩技术、人脸大数据智能分析与处理、人体姿态估计、自动驾驶的场景感知等方面先后与腾讯优图实验室、商汤科技、思谋科技、华为研究院等多家行业领衔的 AI 公司合作，研发健康码、远程身份核实系统等系列产品，获得上海市科技进步特等奖等成果。1998 年作为德国国际图形学研究院（Fraunhofer IGD）访问教授，1999 年至 2000 年作为新加坡南洋理工大学先进多媒体中心（CAMTech）客座教授，2001-2003 年兼任浙江财经大学信息学院特聘院长。

科学研究

马利庄负责国家杰出青年基金、国家自然科学基金（12 项）、国家 863、973、霍英东优秀青年教师基金等重要课题，1998 年作为德国国际图形学研究院（Fraunhofer IGD）的访问教授参与了重大国际合作项目"Virtual Prototype"，1999 年至 2000 年作为新加坡南洋理工大学先进多媒体中心（CAMTech）客座教授参与了新加坡-德国国际合作项目"Virtual Factory"。科研成果得到国内外著名同行学者苏步青先生、唐容锡先生、G. Farin 等的高度评价，闭曲面造型成果图被国际刊物《Computer Graphics》录入封面首页，其论文、专著也被广泛引用，在国内外重要学术刊物上发表论文 300 多篇。

2002 年加入上海交通大学以后，创立数字媒体与数据重建实验室（现数字媒体与计算机视觉实验室），重点开展了计算机视觉、数字多媒体、计算机图形学、计算机辅助设计、数字图像处理等方面的研究工作，取得了创新性的研究成果。他在国内外具有较高的学术地位和影响，是中国图像图形学会理事、"动画与数字娱乐专委会"主任，中国人工智能学会理事、"智能创意与数字艺术专委会"副主任等。在学科建设方面，作为计算机应用的学科带头人，为本学科取得上海市重点以及全国重点学科做出了贡献。在科研、教学和人才培养方面都取得了重要成果。

研究方向

计算机视觉　计算机图形　数字图像处理　数字多媒体　人工智能技术应用

工作经历

- 1991.07-1991.12 浙江大学 CAD&CG 国家重点实验室，讲师；
- 1991.12-1993.12 浙江大学计算机系计算机应用博士后流动站，博士后；
- 1993.12-1995.12 浙江大学 CAD&CG 国家重点实验室，副研究员；
- 1995.12-1998.07 浙江大学 CAD&CG 国家重点实验室，研究员、博士生导师；
- 1998.07-1998.12 德国国际图形学研究员，访问教授；
- 1998.12-1999.09 浙江大学 CAD&CG 国家重点实验室，研究员、博士生导师；
- 1999.09-2000.10 新加坡南洋理工大学先进多媒体中心，客座教授；
- 2000.10-2002.02 浙江大学 CAD&CG 国家重点实验室研究员、博士生导师；
- 2001.10-2003.10 浙江财经学院信息学院特聘院长（兼）；
- 2005.07-2020.03 上海中医药大学信息科学与技术中心主任（兼）；

- 2002.03--至今 上海交通大学计算机系特聘教授、博导；
- 2017.09--至今 华东师范 CAD/Graphics，GDC，CVM，CIDE，CSIG 等系列会议程序委员会委员；大学计算机学院特聘教授，博导。

荣誉奖励

- 1995 年 获霍英东优秀青年教师基金；
- 1996 年 获国家杰出青年基金(信息学部专家初审和复审名列第一)；
- 1996 年 被列为浙江省高校青年学科带头人；
- 1997 年 列入国家"百千万人才工程"首批人选（第一、二层次）；
- 1997 年 浙江省跨世纪学术和技术带头人第一层次培养人员；
- 1998 年 获中国青年科技奖；
- 1998 年 获国务院特殊津贴；
- 1998 年 浙江省青年科技奖；
- 1999 年 获国家教育部科技进步二等奖：曲面造型与绘制的基本理论与算法，排名第二，98-125；
- 2007 年 上海市中青年科技领军人才；
- 2014 年 上海市科技进步二等奖:可视媒体智能生成与处理技术，20144067-2-R01；
- 2019 年 世界人工智能大会卓越人工智能引领者奖(SAIL)TOP30 榜单项目 第一完成人；
- 2020 年 上海市科技进步特等奖：面向复杂场景的人物视觉理解技术及应用，第一完成人；
- 2022 年 地理信息科技进步奖；
- 2022 年 中国计算机图形学杰出奖；

社会兼职

- CAD/Graphics、GDC、CVM、CIDE、CSIG 等系列会议程序委员会委员；
- ICEC2007，DEA2013，CIDE2014、2018、2020，GDC2015，CAD/Graphics2015 程序委员会主席；
- 中国图像图形学理事会、动画与数字娱乐专委会主任；
- 上海电影特效工程技术中心学术委员会副主任；
- 中国人工智能学会理事、智能创意与数字艺术副主任；
- 中国计算机学会 CAD&CG 专委会副主任；
- 计算机辅助设计与图形学专业委员会，人工心理专业委员会委员；
- 南京市大数据技术与应用工程中心学术委员会委员，
- 浙江大学 CAD&CG 国家重点实验室学术专委会委员；
- 计算机辅助设计与图形学学报编委；
- 上海交通大学学报编委。

科研项目

- 国家自然科学基金社科重大项目，"机器行为与人机协同决策理论与方法研究" ，298 万，2022.01.01-2026.12.31
- 国家自然科学基金重大项目，"机器行为与人机协同决策理论与方法研究" 298 万，2022.01-至 2026.12，
- 上海市科技创新行动计划人工智能科技支撑项目，项目负责人：马利庄。"人工智能新型社会实验与治理方法研究与应用示范"（21511101200），300 万，2021.09-2024.08。
- 国家重点研发计划，课题负责人：马利庄。"智慧博物馆关键技术研发和示范--观众行为感知与精准画像及智慧服务关键技术研究"，251 万，2020.01~2022.12。
- 上海市经信委重大项目，课题负责人：马利庄。"财联社星矿金融信息人工智能平台建设"，250/8000 万，2019.10-2022.10。

- 国家自然科学基金,项目负责人:马利庄。"基于RGBD的三维场景的层次化细粒度理解与重建"(61972157），62万，2020.01-2023.12。
- 上海市科技创新计划，项目负责人：马利庄。"面向互联网金融的人脸大数据智能识别与规模化应用"（16511101300），204万，2016.06-2018.06。
- 国家自然科学基金，项目负责人：马利庄。"基于层次化显著性与年龄演化特征的逆向人脸美化方法"（61472245），84万，2015.01-2018.12。
- 国家自然科学基金重点，项目负责人：马利庄。"复杂场景建模与超高清渲染技术"（61133009 ），270万 2012.01-2016.12。
- 上海市科委科技创新计划，项目负责人：马利庄。"网络可视媒体大数据的智能处理技术与系统"（13511505000）150万 2013.07-2015.06 。
- 国家自然科学基金，项目负责人：马利庄。"基于图像的高光物体高度真实感建模与绘制技术研究"（60873136），38万，2009.01-2011.12。
- 上海市科委科技创新计划，项目负责人：马利庄。"网络可视媒体的素材融合与动画创作关键技术研究"，100万，2010.06-2012.06。
- 国家863重点，项目负责人：马利庄。"交互式高效动画创作技术与系统"（2009AA01Z334），270万，2009.01-2010.12。
- 国家973重大专项，子课题负责人：马利庄。"可视媒体的交互与融合处理"（2006CB303105），70万，2006.09-2011.09。
- 国家973 重大专项，子课题负责人：马利庄。"肝硬化虚损生积的中医病因学研究"（2006CB504801），70万，2006.09-2011.09。
- 国家自然科学基金，项目负责人：马利庄。"数据驱动的真实感人体建模与运动控制技术"（60573147），26万，2006.01-2008.12。
- 国家博士点基金，项目负责人：马利庄。"基于图像的光照模型"（20050248046），5万，2006.01-2008.12。
- 国家自然科学基金创新群体，子课题负责人：马利庄。"片上系统的互连问题与高端IP核研究"（60521002），35万，2006.1-2008.12。
- 上海市科委世博专题项目，项目负责人：马利庄。"中西医信息融合的智能化综合诊断系统"（06dz05815），230万，2006.10-2008.6。
- 国家自然科学基金项目，项目负责人：马利庄。"基于RBF插值与多分辩率表示的扫描数据重建"（60373070），20万元，2004.01-2006.12。
- 国家863 CIMS项目，项目负责人：马利庄。"基于知识的概念创新设计系统"（2003AA411310），70万，2003.10-2005.10。
- 国家杰出青年科学基金项目，项目负责人：马利庄。"数据体造型的理论和方法"（69625304），60万，1997.01-1999.12。
- 国家自然科学基金项目，项目负责人：马利庄。"基于运动捕获数据的人体运动合成"（60173035），18万，2002.01-2004.12。
- 国家自然科学基金项目，项目负责人：马利庄。"基于运动标架与层次表示的NURBS扫描体"（69973043），12万，2000.01-2002.12。
- 德国Fraunhofer IGD重大科研基金项目，核心人员。"Virtual Prototype"，约120万马克(DM)（总经费），1998.01-2000.12。
- 新加坡-德国科研合作项目，第二负责人：马利庄 。"Virtual Factory"，约40万新加坡元(S$)，1999.01-2001.12。
- 霍英东青年教师基金，项目负责人：马利庄。"面向体素造型的参数化复杂拓扑曲面设计与造型"，16000美金，1996.06-1998.01。
- 国家863CIMS项目，子课题负责人：马利庄。"CAD/CAPP/CAM机械产品集成制造系统一曲面造型模块"，（863-511-05-0205），10万，1992.01-1994.12。

- 百千万人才基金（浙江省配套），项目负责人：马利庄。"科学数据可视化中的数据体造型"，5 万，1999.01-2001.12。
- 国家自然科学基金创新群体基金项目，核心人员。"网络视觉计算的基础理论与算法研究"，360 万（总经费），2001.01-2003.12。
- 国家自然科学基金项目，项目负责人：马利庄。"基于多面体拓扑与几何连续拼接的闭曲面造型"（69203009），4 万，1993.01-1994.12。
- 国家自然科学基金项目，项目负责人：马利庄。"自由曲面间递归 变换及算法"（69373038），5.5 万，1994.01-1995.12。
- 国家博士后科学基金，项目负责人：马利庄。"面向 CIMS 的自由曲面与实体的集成造型"，0.5 万+1,000 美金，1992.07-1994.12。

学术论文

马利庄共发表学术论文 300 多篇，科学出版社与上海交通大学出版社专著各一部，发表论文的刊物包括 IEEE Transactions on Pattern Analysis and Machine Intelligence, IEEE Transactions on Image Processing, International Journal of Computer Vision, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Multimedia, CAGD、Computers & Graphics，Annual of Numeric Math、中国科学、Progress in Natural Science、计算机学报等。

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- Yang You, Yujing Lou, Ruoxi Shi, Qi Liu, Yu-Wing Tai, Lizhuang Ma, Weiming Wang, Cewu Lu. PRIN/SPRIN: On Extracting Point-Wise Rotation Invariant Features[J]. IEEE Trans. on Pattern Analysis and Machine Intelligence (IEEE TPAMI), 2022
- Xuequan Lu, Scott Schaefer, Jun Luo, Lizhuang Ma, Ying He. Low Rank Matrix Approximation for 3D Geometry Filtering[J]. IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG), 2022
- Qianyu Zhou, Zhengyang Feng, Qiqi Gu, Jiangmiao Pang, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma. Context-Aware Mixup for Domain Adaptive Semantic Segmentation[J]. IEEE Transactions on Circuits and Systems for Video Technology (IEEE TCSVT), 2022
- Zhiwen Shao, Jianfei Cai, Tat-Jen Cham, Xuequan Lu, Lizhuang Ma. Unconstrained Facial Action Unit Detection via Latent Feature Domain[J]. IEEE Transactions on Affective Computing (IEEE TAFFC), 2022
- Zhiwen Shao, Zhilei Liu, Jianfei Cai, Yunsheng Wu, Lizhuang Ma. Facial Action Unit Detection Using Attention and Relation Learning[J]. IEEE Transactions on Affective Computing (IEEE TAFFC), 2022
- Qianyu Zhou, Zhengyang Feng, Qiqi Gu, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma. Uncertainty-Aware Consistency Regularization for Cross-Domain Semantic Segmentation[J]. Computer Vision and Image Understanding (CVIU), 2022
- Zhengyang Feng, Qianyu Zhou, Qiqi Gu, Xin Tan, Guangliang Cheng, Xuequan Lu, Jianping Shi, Lizhuang Ma. DMT: Dynamic Mutual Training for Semi-Supervised Learning[J]. Patter Recognition (PR), 2022
- Mengtian Li, Yuan Xie, Lizhuang Ma. Paying Attention for Adjacent Areas: Learning Discriminative Features for Large-Scale 3D Scene Segmentation[J]. Patter Recognition (PR), 2022.
- Jingyu Gong, Zhou Ye, Lizhuang Ma. Neighborhood co-occurrence modeling in 3D point cloud segmentation [J]. Computational Visual Media(CVM), 2022

- Zhiwen Shao, Hengliang Zhu, Junshu Tang, Xuequan Lu, Lizhuang Ma, Explicit Facial Expression Transfer via Fine-Grained Representations, IEEE Transactions on Image Processing[J] (TIP), 2021
- Min Wang, Feng Qiu, Wentao Liu, Chen Qian, Xiaowei Zhou, Lizhuang Ma. Monocular Human Pose and Shape Reconstruction using Part Differentiable Rendering. Computer Graphics Forum[J], 2020
- Zhiwen Shao, Zhilei Liu, Jianfei Cai, Lizhuang Ma, JÂA-Net: Joint Facial Action Unit Detection and Face Alignment Via Adaptive Attention. International Journal of Computer Vision[J] (IJCV), 2020
- Yuan Xie, Bingqian Lin, Yanyun Qu, Cuihua Li, Wensheng Zhang, Lizhuang Ma, Yonggang Wen, Dacheng Tao. Joint Deep Multi-View Learning for Image Clustering, IEEE Transactions on Knowledge and Data Engineering[J] (TKDE), 2020.
- Zhiwen Shao, Hengliang Zhu, Xin Tan, Yangyang Hao, Lizhuang Ma. Deep multi-center learning for face alignment, Neurocomputing[J], 2020
- Yuan Xie, Bingqian Lin, Yanyun Qu, Cuihua Li, Wensheng Zhang, Lizhuang Ma, Yonggang Wen, Dacheng Tao. Joint Deep Multi-View Learning for Image Clustering, IEEE Transactions on Knowledge and Data Engineering[J] (TKDE), 2020.
- Zhiwen Shao, Zhilei Liu, Jianfei Cai, Yunsheng Wu, Lizhuang Ma. Facial action unit detection using attention and relation learning[J], IEEE Transactions on Affective Computing, 2019.
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Computer, 26(3): 227–240, 2010.

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