

WENJIE CHEN (陈文杰)
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教育背景

博士 毕业论文: Intelligent Control of Robots with Mismatched Dynamics and Mismatched Sensing 导师: Professor Masayoshi Tomizuka	美国加州大学伯克利分校 机械工程 08/2012
硕士 毕业论文: Hybrid Adaptive Friction Compensation of Indirect Drive Trains Using Joint Sensor Fusion 导师: Professor Masayoshi Tomizuka	美国加州大学伯克利分校 机械工程 05/2009
学士 排名: 1/55 (专业) 毕业论文: Coordinated Motion Control of Biaxial Linear-Motor-Driven Stage 导师: 姚斌 教授, 王庆丰 教授	浙江大学 机械电子工程 竺可桢学院工高班 06/2007

工作经历

高端重载机器人全国重点实验室 (美的蓝橙实验室) 常务副主任 负责领导统筹实验室各团队, 推进各领域的整体技术研发、项目管理和日常运营 牵头承担了国家重点研发计划“智能机器人”专项、“工信部产业基础再造和制造业高质量发展”和“工信部产业链链主专项”等三大国家重点专项, 立足核心技术自主化、高端化和智能化, 攻克了重载机器人整机及核心功能部件的“卡脖子”技术, 突破了整机性能跨越式提升成套技术, 实现了在国家重点行业的机器人化制造关键应用, 支撑了战略产业未来发展	12/2022 – 现在
美的集团 中央研究院 机器人研究所 所长 负责研究所的全面工作, 建立了一支近百人的全球化的产业和学术复合型人才梯队 作为集团在机器人与自动化领域的最高研究机构, 布局和探索该领域的核心技术、前沿技术和基础共性技术 领导团队突破了机器人核心部件、整机设计、控制系统、功能安全、智能应用等领域行业领先的关键技术, 实现了在精密减速器、伺服电机、智能控制器、重载机器人、AMR/AGV、安全传感器等产品上的产业化落地, 并成功孵化了减速器、关节模组等新业务, 保障了集团在机器人业务领域垂直整合战略的实现, 极大提升了机器人相关产品和业务的竞争力	12/2019 – 现在
华中科技大学 无锡研究院 特聘研究员 (兼)	01/2024 – 现在
南方科技大学 工学院 产业教授 (兼)	10/2020 – 10/2023
浙江大学 ZJU-UIUC联合学院 副教授 (兼)	01/2019 – 12/2021
思核机器人 CTO、合伙人	07/2018 – 11/2019

• 以工业AI和机器人为重点, 领导和管理公司的研发团队和研发项目

- 探索并确立技术战略以实现公司的商业目标，包括在经编布AI在线质检和变压器缺陷检测等领域的产品落地

发那科株式会社 基础研究所 机器人软件研究部 **主任** 10/2017 – 06/2018

- 下一代机器人软件研发的技术负责人：动作规划和控制、优化和学习、人机协作等
- 作为技术负责人主导跟知名大学的前沿机器人研究合作

发那科株式会社 机器人研究所 学习机器人开发部 **主任** 11/2013 – 09/2017

- 负责公司明星产品“学习机器人”产品的算法研究和技术研发，提出了适用高速重载工况的智能性能调控方法
- 下一代机器人概念控制器研发的技术负责人：动作规划和控制、优化和学习、人机协作等
- 作为技术负责人主导跟知名大学的前沿机器人研究合作

美国加州大学伯克利分校 机械系统控制实验室 **博士后研究员** 08/2012 – 10/2013

- 主导脑机交互研究中的外骨骼机器人的设计和控制
- 主导机械臂的智能控制研究，包括控制、运动规划、传感器融合、系统建模和辨识等

科研项目（节选）

- 2023年国家重点研发计划“智能机器人”重点专项，**课题负责人**， 12/2023 - 11/2026
牵头单位技术负责人，“重载工业机器人研发与应用”，项目总经费：3800万（其中国拨1500万）
- 2023年工信部高质量发展专项，**子任务负责人**，**牵头单位技术负责人** 07/2023 - 12/2025
“汽车制造等行业用重载工业机器人”，项目总经费：3.47亿（其中国拨10000万）

荣誉和获奖（节选）

人才荣誉:

- 2021年批次广东省珠江人才科技创新领军专家 2022
- 2019年批次浙江省千人计划专家 2019
- 美的集团**科技明星**（集团研发人员最高荣誉） 10/2022
- Block Grant 奖，美国加州大学伯克利分校 01/2011
- **蒋震海外留学生奖学金**，中国 2007 – 2008
每年从中国的海外留学生中选拔10名

科技奖项:

- 2025年广东省技术发明**一等奖**，排名3/15
“面向半导体制造的高稳定移动操作机器人关键技术与系统” 06/2026
- 2025年珠江机械工业科学技术奖**特等奖**，排名3/15
“面向半导体制造的高稳定移动操作机器人关键技术与系统” 03/2026
- 2025年广东省机械工程学会科学技术奖**特等奖**，排名3/15

- “面向半导体制造的高稳定移动操作机器人关键技术与系统” 03/2026
- 2025年中国电工技术学会科学技术奖**一等奖**，排名6/15
“光储充系统热电故障预警与管控关键技术及装备” 12/2025
- 2025年中国机械工业科技进步奖三等奖，排名1/5
“高功率密度、高动态、高可靠性国产重载机器人伺服电机研究与应用” 10/2025
- 2024年中国机械工业科技进步奖三等奖，排名1/5
“高功率密度一体化机器人动力轮模组关键技术与应用” 12/2024
- 2024年中国商业联合会科学技术奖二等奖，排名4/10
“高精度长寿命工业机器人用谐波减速机关键技术研究及应用” 12/2024
- 2024年中国商业联合会科学技术奖二等奖，排名5/10
“高功率、高转矩、一体化机器人动力轮模组关键技术与产业化” 12/2024
- 2024年中国自动化学会科技进步奖三等奖，排名4/5
“高功率、高转矩、一体化机器人动力轮模组关键技术与产业化” 12/2024
- 2024年中国物流与采购联合会科技进步奖三等奖，排名1/6
“高功率密度、高转矩密度一体化机器人动力轮模组关键技术与应用” 08/2024
- 2024年中国发明协会创业奖成果奖二等奖，排名1/6
“高功率密度、高转矩密度、高集成度一体化机器人动力轮模组关键技术与产业化” 07/2024
- 2023年度广东省机械工业科学技术奖二等奖，排名3/10
“谐波减速机高精度长寿命关键技术研究及应用” 03/2024
- 2023年第48届日内瓦国际发明展**金奖**，排名1/13
“机器人东风控制器安全平台” 04/2023
- 2023年第48届日内瓦国际发明展**金奖**，排名1/18
“AGV一体化轮毂” 04/2023
- **一等奖**，“潮乡精英引领计划”智能制造创业大赛，浙江海宁 2018
- **第三名**，美国Big Ideas @ Berkeley创新大赛，“The PikaPen” 04/2012
“社会信息科技”类别，125个参赛团队中的5个优胜团队

论文奖项:

- **最佳论文提名奖**，第16届IEEE International Conference on CYBER Technology in Automation, Control, and Intelligent Systems (IEEE-CYBER 2026) 2026
- **最佳学生论文提名奖**，第10届IFAC机电系统国际论坛(MECHATRONICS) 2025
- **最佳应用论文提名奖**，第12届IEEE自动化科学与工程国际会议(CASE) 2016
- **最佳学生论文提名奖**，IEEE/ASME先进智能机电一体化国际会议(AIM) 2015
- **最佳学生论文提名奖**，第6届IFAC机电系统国际论坛(MECHATRONICS) 2013
- **最佳论文**(学习控制分会)，ASME动态系统与控制国际会议(DSCC) 2012

专业领域职务

研究计划评委:

国家重点研发计划“智能机器人”重点专项指南编制专家、评审专家（2024-）

香港政府研究资助局(RGC) – 外部评委 (2013, 2014, 2016, 2017, 2020)
广东省重点研发计划指南编制专家 (2025-)
广东省基础与应用基础研究基金项目评审专家 (2024-)

专业奖项评委:

IEEE/IFR IERA Award (机器人和自动化的创新创业大奖) (2017)

行业协会:

中国自动化学会共融机器人专业委员会委员 (2025-)
广东省机械工程学会/广东省自动化学会-机器人与智能制造分会副理事长 (2024-)

咨询专家、顾问&学术委员会:

粤港澳大湾区国家技术创新中心智能机器人与装备创新中心专家委员会 (2026-)
南方科技大学机器人研究院学术委员会委员 (2025-)
深圳市智能机器人与柔性制造重点实验室 (南方科技大学) 学术委员会委员 (2024-)

期刊编辑委员会:

国际先进机器人系统杂志 (IJARS) 编委会委员 (2013-)

国际会议委员会:

出版副主编 (Publication Co-Chair), 2025年IEEE/ASME先进智能机电一体化国际会议
程序委员会, 2016 ASME 柔性自动化国际论坛 (ISFA)
编委, 2016 美国控制会议 (ACC)
编委和分会组织者, 2015 ASME 动态系统与控制国际会议 (DSCC)
编委, 2015 美国控制会议 (ACC)
专题和分会组织者, 2014 ASME 动态系统与控制国际会议 (DSCC)
程序委员会, 2013 IEEE 信息与自动化国际会议 (ICIA)
程序委员会, 2013 IEEE 机器人与仿生学国际会议 (ROBIO)
分会主席, 2013 ASME 动态系统与控制国际会议 (DSCC)

期刊评审人:

IEEE Transactions on Robotics (T-RO)
IEEE Transactions on Industrial Electronics (TIE)
IEEE Transactions on Industrial Informatics (TII)
IEEE/ASME Transactions on Mechatronics (TMECH)
IEEE Transactions on Control Systems Technology (TCST)
IEEE Transactions on Automation Science and Engineering (T-ASE)
ASME Journal of Dynamic Systems, Measurement, and Control (JDSMC)
Robotics and Computer Integrated Manufacturing (Elsevier-RCIM)
Robotics and Autonomous Systems (RAS)
International Journal of Advanced Robotic Systems (IJARS)
International Journal of Intelligent Robotics and Applications (JIRA)
Advanced Robotics (RSJ-AR)
Asian Journal of Control (AJC)
Control and Cybernetics Sensors (MDPI Journal)
Journal of Zhejiang University Science C (Computers & Electronics) (ZUSC)

学术会议评审人:

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)

IEEE International Conference on Robotics and Automation (ICRA)
 IEEE Conference on Decision and Control (CDC)
 American Control Conference (ACC)
 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM)
 ASME Dynamic Systems and Control Conference (DSCC)
 ASME International Symposium on Flexible Automation (ISFA)
 IFAC Symposium on Robot Control (SYROCO)
 IEEE International Conference on Information and Automation (ICIA)
 IEEE International Conference on Robotics and Biomimetics (ROBIO)

科技成果鉴定

1. 中国机械工程学会，“面向半导体制造的高稳定移动操作机器人关键技术与系统”，整体技术达到国际先进水平，其中移动操作稳定性控制技术与动态精密操控技术达到**国际领先水平**，3/16
12/2025
2. 中国机械工业联合会，“350-1200kg 高性能重载机器人正向设计及应用”，整体技术达到国际先进水平，其中基于重载机器人整体性能模型的正向设计技术、基于关键零部件数据库的高保真机器人全闭环仿真技术达到**国际领先水平**，2/46
11/2025
3. 中国机械工业联合会，“基于多核异构SOC的高性能机器人控制平台研制”，整体技术达到国际先进水平，其中基于多核异构SoC的集成化高性能可变结构安全控制技术达到**国际领先水平**，1/32
10/2024
4. 中国机械工业联合会，“高功率密度、高动态、高可靠性重载工业机器人伺服电机”，整体技术达到国际先进水平，其中伺服电机集中绕组扁线融合取向硅钢铁芯新型结构达到**国际领先水平**，1/28
10/2024
5. 中国机械工业联合会，“高精度过程实时视觉伺服机器人系统”，整体技术达到国际先进水平，其中力位异步融合的双环自适应视觉伺服控制技术达到**国际领先水平**，2/23
10/2024
6. 中国机械工业联合会，“高功率密度一体化机器人动力轮模组关键技术”，整体技术达到国际先进水平，其中高功率密度一体化机器人动力轮模组技术达到**国际领先水平**，1/18
10/2023
7. 中国机械工业联合会，“高功率密度、高刚度、长寿命RV减速器研制”，整体技术达到国际先进水平，其中摆线轮齿形修形和集成式主轴承参数设计方法达到**国际领先水平**，1/31
10/2023
8. 中国机械工业联合会，“工业机器人高安全性双通道控制平台关键技术及应用”，整体技术达到国际先进水平，其中工业机器人高安全性双通道控制技术达到**国际领先水平**，1/13
10/2023
9. 中国机械工业联合会，“轻量化设计的高安全性智能化自主移动机器人关键技术与应用”，整体技术达到国际先进水平，其中高安全性智能化自主移动机器人轻量化设计技术达到了**国际领先水平**，2/15
10/2023
10. 广东省机械工程学会，“谐波减速机高精度长寿命关键技术研究及应用”，整体技术达到国际先进水平，其中凸轮形状、柔轮壁厚及齿形设计技术达到**国际领先水平**，3/25
08/2022

标准制订

1. 《工业机器人动静刚度测试方法》，20255698-T-604，**国家标准**，2025年
2. 《工业重载移动机器人性能要求及测试方法》，20250118-T-604，**国家标准**，2025年
3. 《工业机器人动态稳定性试验方法》，GB/T 45509-2025，**国家标准**，2025年

4. 《机器人自适应能力技术要求》，GB/T 44589-2024，**国家标准**，2024年
5. 《机器人一体化关节性能及试验方法》，GB/T 43200-2023，**国家标准**，2023年
6. 《家庭服务机器人智能化分级评价规范》，T/CIE 174-2023，**团体标准**，2023年
7. 《家用电器机器人化设计导则》，T/CAS 576-2022，**团体标准**，2022年

专利授权

63 项专利已授权（55 项发明 + 7 项实用新型 + 1 项PCT，清单如下），另有 73 项专利（发明 56项 + 实用新型 2项 + PCT 15项）申请中（或已公开），涵盖中国、日本、美国、德国等国

公开(公告)号	标题	专利类型
CN106514712B	物体的姿势计算系统	授权发明
CN106584489B	具备计算传感器的位置和方向的功能的机器人系统	授权发明
CN106965171B	具备学习功能的机器人装置	授权发明
CN107756423B	机器人控制装置	授权发明
CN108422420B	具有学习控制功能的机器人系统以及学习控制方法	授权发明
CN108687770B	自动地生成机器人的动作轨迹的装置、系统以及方法	授权发明
CN108932363B	形状识别装置、形状识别方法以及计算机可读介质	授权发明
CN109202942B	手控制装置、手控制方法以及手的模拟装置	授权发明
CN109421049B	机器人系统	授权发明
CN110355774B	手控制装置及手控制系统	授权发明
CN110385694B	机器人的动作示教装置、机器人系统以及机器人控制装置	授权发明
CN110722550B	机器人系统	授权发明
CN116079763B	一种机器人、安全扭矩关断电路及安全扭矩控制方法	授权发明
CN116100576B	一种移动机器人及其安全监测模块	授权发明
CN116100577B	扭矩关断模块、方法、安全控制模块及机器人	授权发明
CN116117839B	一种移动机器人及其安全控制系统	授权发明
CN118254154B	传动设备及机器人动力机构	授权发明

CN118381489B	信号产生电路、定时电路、安全控制模块及机器人	授权发明
CN118386253B	扭矩关断模块、扭矩关断方法、安全控制模块及机器人	授权发明
CN118578369B	机器人控制方法、装置、机器人及存储介质	授权发明
CN216649479U	驱动电机和动力设备	实用新型
CN220261019U	一种机器人的安全控制系统、扭矩关断模块及机器人	实用新型
CN220261031U	一种移动机器人及其安全控制电路	实用新型
CN220816434U	摆线齿轮传动组件、减速机和工业机器人	实用新型
CN221033826U	传动组件、减速器和工业机器人	实用新型
CN221221299U	传动组件、减速器和工业机器人	实用新型
CN223671264U	直线关节模组及机器人	实用新型
DE102016012065B4	Robotersystem mit Funktion zum Berechnen von Position und Ausrichtung eines Sensors	授权发明
DE102017000063B4	Robotereinrichtung mit Lernfunktion	授权发明
DE102017118276B4	Robotersteuervorrichtung	授权发明
DE102018001026B4	Robotersystem mit einer lernenden Steuerungsfunktion und lernendes Steuerungsverfahren	授权发明
DE102018107857B4	Vorrichtung, System und Verfahren zur automatischen Erzeugung eines Bewegungspfades eines Roboters	授权发明
DE102018115451B4	Greifersteuereinrichtung, Greifersteuerverfahren und Greifersimulationseinrichtung	授权发明
DE102018214272B4	Robotersystem	授权发明
DE102019108787B4	Handsteuervorrichtung und Handsteuerungssystem	授权发明
DE102019109624B4	Roboterbewegungseinlernvorrichtung, Robotersystem und Robotersteuerung	授权发明
DE102019118202B4	Robotersystem	授权发明
JP6174654B2	センサの位置と向きを算出する機能を備えたロボットシステム	授权发明
JP6208724B2	物体の姿勢算出システム	授权发明
JP6386516B2	学習機能を備えたロボット装置	授权发明

JP6499716B2	形状認識装置、形状認識方法及びプログラム	授权发明
JP6514156B2	ロボット制御装置	授权发明
JP6564433B2	ロボットシステム	授权发明
JP6640792B2	ハンド制御装置、ハンド制御方法、およびハンドのシミュレーション装置	授权发明
JP6680720B2	ロボットの動作軌跡を自動で生成する装置、システム、および方法	授权发明
JP6823015B2	ロボットシステム	授权发明
JP6826069B2	ロボットの動作教示装置、ロボットシステムおよびロボット制御装置	授权发明
JP6841852B2	制御装置及び制御方法	授权发明
JP6912415B2	ハンド制御装置およびハンド制御システム	授权发明
JP7111498B2	ロボットの制御装置およびロボットの制御方法	授权发明
JP7718770B2	ロボット、移動ロボット及びその安全制御システム	授权发明
US10254741B2	Robot apparatus having learning function	授权发明
US10507581B2	Robot system	授权发明
US10507583B2	Robot control device	授权发明
US10521687B2	Shape recognition device, shape recognition method, and program	授权发明
US10618164B2	Robot system having learning control function and learning control method	授权发明
US10744654B2	Gripper control device, gripper control method, and gripper simulation device	授权发明
US10814485B2	Device, system, and method for automatically generating motion path of robot	授权发明
US11130236B2	Robot movement teaching apparatus, robot system, and robot controller	授权发明
US11207788B2	Hand control apparatus and hand control system	授权发明
US12030187B2	Robot system	授权发明
US9937620B2	Robot system having function to calculate position and orientation of sensor	授权发明
WO2023124714A1	开关门装置和电器设备	PCT

论文

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以上会议论文演讲之外

- 06/18/2026 “Research and Practice of Leapfrog Performance Enhancement for Heavy-Duty Robots”, *机器人研究院 2026 业界峰会*, 香港科技大学
- 10/17/2025 “新一代重载机器人性能跨越式倍增的研究与实践”, 主旨报告, *机器人产业沙龙—机器人与智能制造*, 美的集团, 佛山
- 07/15/2025 “Research and Practice of Leapfrog Performance Enhancement for Heavy-Duty Robots”, 主旨报告, *the 2025 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM 2025)*, Hangzhou, China
- 03/13/2025 “重载机器人刚度精度跨越式倍增的探索实践”, 主旨报告, *佛山大学*, 佛山
- 03/08/2025 “重载机器人刚度精度跨越式倍增的探索实践”, 主旨报告, *首届重载机器人学术论坛*, 佛山
- 09/25/2021 “工业消费化——机器人行业趋势与技术演进”, 主旨报告, *2021年国家机器人发展论坛*, 深圳
- 10/31/2023 · 12/16/2022 · 12/25/2021 “机器人智能化”, *浙江大学工程师学院*, 杭州
- 01/04/2020 “智能机器人: 机器人学习及其工业应用”, *浙江大学工程师学院*, 杭州
- 12/22/2018 “智能机器人技术及其产业应用”, *浙江大学工程师学院*, 杭州
- 05/29/2017 “Robotic Learning in Industrial Applications”, Keynote Talk, in Workshop “Recent Advances in Dynamics for Industrial Applications”, *the 2017 IEEE International Conference on Robotics and Automation (ICRA)*, Singapore
- 08/14/2014 “Mechatronic Considerations for Mismatched Robotic Systems”, *Google Robotics*
- 04/10/2013 “EFRI-M3C: A hybrid control systems approach to brain-machine interfaces for exoskeleton control (Overview)”, *Qiushi Academy for Advanced Studies, Zhejiang University, China*
- 03/11/2013 “Mechatronic Considerations for Mismatched Robotic Systems”, Department of Mechanical Engineering, *Carnegie Mellon University*
- 03/04/2013 “Mechatronic Considerations for Mismatched Robotic Systems”, Department of Mechanical Engineering, *Worcester Polytechnic Institute*
- 02/26/2013 “Mechatronic Considerations for Mismatched Robotic Systems”, Department of Mechanical Engineering and Engineering Science, *University of North Carolina at Charlotte*
- 08/09/2012 “Intelligent Control of Robots with Mismatched Dynamics and Mismatched Sensing”, *Ph.D. seminar, University of California, Berkeley*
- 03/08/2012 “EFRI-M3C: A hybrid control systems approach to brain-machine interfaces for exoskeleton control (NSF EFRI-M3C 1137267)”, *Poster presentation (group work), NSF EFRI Grantees Conference*, Arlington, VA, Mar. 07–09, 2012
- 02/28/2012 “Estimation in Robots with Mismatched Sensing”, *The 1st International Workshop between University of California Berkeley and Keio University*, Berkeley, CA
- 04/26/2011 “Disturbance Cancellation Schemes for Indirect Drive Robot Manipulator”, *FANUC Corporation*, Japan

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