齐鲁工业大学（山东省科学院）

电子电气与控制学部研究生招生

QILU UNIVERSITY OF TECHNOLOGY(SHANDONG ACADEMY OF SCIENCES)

FACULTY OF ELECTRONICS, ELECTRICAL AND CONTROL

SCHOOL OF INFORMATION AND AUTOMATION
INSTITUTE OF AUTOMATION, SHANDONG ACADEMY OF SCIENCES

长清校区：山东省济南市长清区大学路3501号

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Add:No.3501, Daxue Road, Changqing,Jinan,Shandong Province,P.R.China
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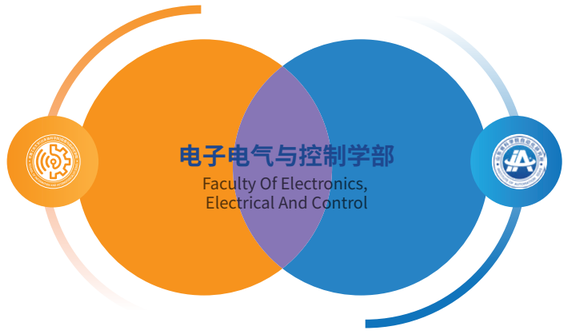
电子电气与控制学部

FACULTY OF ELECTRONICS, ELECTRICAL AND CONTROL

齐鲁工业大学
信息与自动化学院
(1978年)
Qilu University of Technology
School of Information
and Automation



山东省科学院
自动化研究所
(1978年)
Shandong Academy
of Sciences Institute
of Automation

科教融合示范学部

Faculty of Integrated Education and Scientific Research (Demonstration)

Vision: To establish a world-class, internationally influential faculty focused on applied research.
Mission: Nurturing high-caliber, innovative, and application-oriented talents.
Motto: Fostering virtue and serving the nation through science and education.

2234
在校本科生
2234 undergraduate students

339
在校研究生
339 graduate students

信息与自动化学院大楼
School of Information and Automation Building

山东省科学院自动化研究所大楼
Institute of Automation Building, Shandong Academy of Sciences

山东省社会公益性事业单位
Shandong Public Service Institution (Social Welfare Type)

山东省文明单位
Shandong Province Civilized Unit

专业方向
MAJOR FIELD

电子信息工程
国家工程教育专业认证
国家级一流本科专业
Electrical & Information Engineering
China Engineering Education Accreditatio(CEEA)
National First-Class Undergraduate Major

通信工程
山东省一流本科专业
Communication Engineering
Shandong Province First-Class Undergraduate Major

自动化
国家工程教育专业认证
国家级一流本科专业
中外合作办学建设点
Automation
China Engineering Education Accreditatio(CEEA)
National First-Class Undergraduate Major
Newly Approved Sino-foreign Cooperative Education Initiative

电气工程及其自动化
山东省高水平应用型建设专业
Electrical Engineering and Automation
Shandong Province High-Level Applied Construction Major

Three Master's Degree Programs (academic master's degree programs and Professional master's degree Programs)

Control Science and Engineering as a first-level discipline
Control Science and Engineering Program is a doctoral program of Qilu University of Technology (Shandong Academy of Sciences)
Control Theory and Control Engineering, Detection Technology and Automation Equipment, Pattern Recognition and Intelligent Systems

Electronic information major
New generation of electronic information technology (including quantum technology)
Control engineering

Energy and Power major
Electrical engineering

4个 研究领域
4 Research Directions

控制理论与控制工程
主要从事先进控制理论与应用、先进控制技术与系统、过程建模与控制等方面的研究。

Control Theory and Control Engineering
Focuses on advanced control theory and applications, advanced control technologies and systems, process modeling and control.

检测技术与自动化装置
主要从事光电及电磁波探测感知技术、工业过程智能检测及仪器、信号处理与过程工业传感器等方面的研究。

Detection Technology and Automation Equipment
Focuses on researches on photoelectric and electromagnetic wave detection technologies, intelligent industrial process monitoring instruments, signal processing systems, and process industry sensors.

模式识别与智能系统
主要从事机器人与无人系统、机器视觉等方面的研究。

Pattern Recognition and Intelligent Systems
Focuses on researches of robotics and unmanned systems, machine vision and so on.

电力电子与运动控制技术
主要从事电力电子技术、智能网联汽车技术、电机控制技术等方面的研究。

Power Electronics and Motion Control Technology
Focuses on research in power electronics, intelligent connected vehicle technology, and motor control systems.

人才培养
TALENT DEVELOPMENT

根本任务 立德树人

人才培养目标 培养品质好、基础实、专业精、能力强的高素质创新应用型人才

Fundamental Task: Fostering virtue and cultivating talents

The Objective of Talent Training: Develophigh levelpractical innovative talentswith good personality, solid foundation, professional excellence and strong ability

课程体系
Curriculum System

专业方向课　特色实践课　科教/产教融合课

Professional Direction Courses, Characteristic Practical Courses, Science and Education/Industry -Education Integration Courses

国家级一流本科课程 /4门	4 national first-class undergraduate courses
山东省一流本科课程 /8门	8 First-Class Undergraduate Courses in Shandong Province
山东省课程思政示范课 /10门	10 Model Courses of Ideological and Political Education in Shandong Province

电子信息工程专业知识创新中心
Innovation Center of Electronic Information Engineering Professional Knowledge

数智赋能系统规划全景化专业大图谱
Panoramic Professional Map of Digital Empowerment System Planning

可视化6维递进式能力达成与评价模型
Visualized 6-Dimensional Progressive Achievement and Evaluation Model of Competence

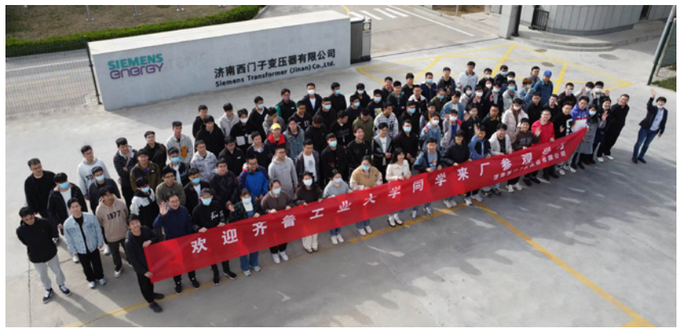
科教融汇
Integration of science and education

产教融合
Integration of Industry and Education

创新创业
Innovation and Entrepreneurship

上课 Lecture

做实验 Perform



企业参观 Field Trip to a Company

学部面向全国
近20个省（市）招生

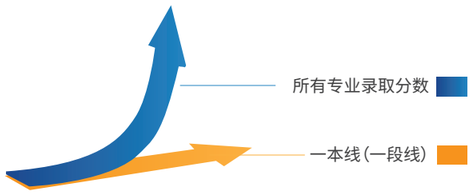
近年来随着
齐鲁工业大学（山东省科学院）

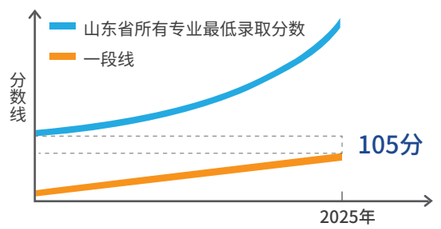
社会声誉逐步提高

学部在全国录取
分数不断攀升

Faculty admits students from nearly 20 provinces (cities) across China. In recent years, with the gradual enhancement of the social reputation of Qilu University of Technology (Shandong Academy of Sciences), the admission scores for the faculty have been continuously rising nationwide.

2025年，在全国15个招生省（市、自治区）中





In 2025, all majors in 15 provinces (cities, autonomous regions) nationwide had admission scores exceeding the local first-tier cutoff (first-stage line), with Shandong Province's lowest admission scores for all majors surpassing the first-stage line by over 105 points.

近三届毕业生

整体就业率 95%

升学率 28%

The overall employment rate of past three years' graduates is 95%, and the higher education rate is 28%.

电子电气与控制学部 2027 年研究生招生目录

联系人：严老师，邮箱：11727388@qq.com；　刘老师，电话：0531-89631757，邮箱：287135857@qq.com。

学位类别	专业（领域）代码、名称及研究方向	拟招生人数	初试科目	复试科目	同等学力加试科目
学术学位	081100 控制科学与工程 01 控制理论与控制工程 02 检测技术与自动化装置 03 模式识别与智能系统 04 低空技术与工程	29 人（含推免名额 2 人）	① 101 思想政治理论 ② 201 英语（一） ③ 301 数学（一） ④ 881 电路	数字电子技术	① 自动控制理论 ② 模拟电子技术
专业学位	电子信息 085401 新一代电子信息技术（含量子技术等） 00 不区分研究方向	31 人（含推免名额 2 人）	① 101 思想政治理论 ② 204 英语（二） ③ 302 数学（二） ④ 881 电路	数字电子技术	① 微机原理 ② 模拟电子技术
	电子信息 085406 控制工程 00 不区分研究方向	82 人（含推免名额 3 人）	① 101 思想政治理论 ② 204 英语（二） ③ 302 数学（二） ④ 881 电路	数字电子技术	① 自动控制理论 ② 模拟电子技术
	能源动力 085801 电气工程 00 不区分研究方向	10 人（含推免名额 1 人）	① 101 思想政治理论 ② 204 英语（二） ③ 302 数学（二） ④ 881 电路	数字电子技术	① 电力系统分析 ② 电机学

详细信息参考：齐鲁工业大学（山东省科学院）2027年硕士研究生招生目录

科学研究

SCIENTIFIC RESEARCH

学部立足“四个面向”，积极融入国家和山东省科技创新战略布局，大力开展应用基础研究和技术集成创新，着力解决产业关键共性技术难题。

The Faculty actively integrates into the national and Shandong Province strategic layout of scientific and technological innovation, vigorously develops applied basic research and technological integration innovation, and focuses on solving key common technical problems of the industry.

2022-2025年

主持承担国家自然科学基金、国家重点研发计划课题、山东省重大科技创新工程项目等各级科研项目207项

授权国家发明专利227件

发表SCI论文265篇

获得中国公路学会科学技术特等奖、山东省科技进步二等奖等各级科技奖励31项

207项
各级科研项目

227件
授权国家发明专利

265篇
发表SCI论文

31项
各级科技奖励

2022-2025, Faculty has presided over and undertaken 207 research projects at various levels, including projects funded by the National Natural Science Foundation of China, the National Key Research and Development Program, and the Shandong Provincial Major Scientific and Technological Innovation Project. Faculty owns 227 national invention patents, published 265 SCI papers, and received 31 scientific and technological awards at various levels, such as the Special Prize for Science and Technology from the China Highway Society.

科研平台
RESEARCH PLATFORM

省级重点实验室
- 山东省人形机器人关键技术与系统重点实验室
- 山东省无人系统智能技术与装备重点实验室

省级工程(技术)研究中心
- 山东省机器人与制造自动化工程技术研究中心
- 山东省汽车电子工程技术研究中心
- 山东省流程工业智能优化制造工程技术研究中心
- 特种作业机器人技术与装备山东省工程研究中心
- 智能网联汽车技术山东省工程研究中心
- 机器人国家工程研究中心山东分中心

中国合格评定国家认可委员会认可实验室CNAS
- 山东省科学院自动化研究所汽车电子技术重点实验室

其它实验室
- 人形机器人关键技术与系统山东省高等学校未来产业实验室
- 山东省工业数字技术创新实验室

行业组织
- 山东省自动化学会(挂靠单位、秘书长单位)
- 山东省电子学会教育专业委员会(会长单位)

Provincial Key Laboratory
·Shandong Key Laboratory of Humanoid Robot Technology and System
·Shandong Provincial Key Laboratory of Unmanned System Intelligent Technology and Equipment

Provincial Engineering (Technology) Research Center
·Shandong Provincial Engineering Research Center for Robotics and Manufacturing Automation
·Shandong Provincial Automotive Electronic Engineering Technology Research Center
·Shandong Province Intelligent Manufacturing Engineering Technology Research Center for Flow Industry
·Shandong Engineering Research Center of Special Operation Robot Technology and Equipment
·Shandong Engineering Research Center for Intelligent Connected Vehicle Technology
·Shandong Branch of the National Engineering Research Center for Robotics

China National Accreditation Service for Conformity Assessment (CNAS) Accredited Laboratory
·Key Laboratory of Automotive Electronics Technology, Institute of Automation, Shandong Academy of Sciences

Other Laboratories
·Key Technologies and Systems of Humanoid Robot Shandong Provincial Higher Education Institutions Future Industry Laboratory
·Shandong Industrial Digital Technology Innovation Laboratory

Industry Organization
·Shandong Automation Society (Affiliated Member, Secretary General Member)
·Education Professional Committee of Shandong Electronics Society (Chairman Member)

科学研究
SCIENTIFIC RESEARCH

控制理论与控制工程
CONTROL THEORY AND CONTROL ENGINEERING

主要从事先进控制理论与应用、先进控制技术与系统、过程建模与控制等方面的研究。

Control Theory and Control Engineering: Focuses on advanced control theory and applications, advanced control technologies and systems, process modeling and control.

承担的主要科研项目 MAIN RESEARCH PROJECTS

国家自然科学基金面上项目

- 非方奇异随机系统有限时间稳定与优化控制
- 铁电人工神经突触的长时短时可塑性构建及其高智能类脑计算应用
- 类脑学习范式下深空探测器自主管控知识更新与决策支持

国家自然科学基金青年项目

- 不连续动态网络系统的固定时间同步分析与控制
- 时序网络边动态系统的可控性研究
- 基于边状态的合作竞争多智能体系统分布式协议设计与群体行为分析

国家重点研发计划项目

- 面向智能产品的主动式服务创新设计

山东省自然科学基金项目

- 非线性正系统的最优保性能脉冲控制及其应用
- 异构网络化系统量化分布式控制研究
- 基于惩罚似然与神经网络的复杂化工过程动态软测量算法研究
- 多平衡点切换线性Hamilton系统的分析与综合
- 复杂受限下的机器人系统滑模智能优化轨迹跟踪控制研究

National Natural Science Foundation of China General Program

Finite-time Stability and Optimal Control of Nonlinear Singular Stochastic Systems

Construction of Long-term and Short-term Plasticity of Ferroelectric Artificial Neural Synapses and Its Application in High-intelligence Brain-like Computing

Knowledge Update and Decision Support of Deep Space Probe Autonomous Control under Brain-like Learning Paradigm

National Natural Science Foundation of China Youth Project

Fixed Time Synchronization Analysis and Control of Discontinuous Dynamic Network System

Controllability of Dynamic System on Edge of Temporal Network

Distributed Protocol Design and Group Behavior Analysis of Cooperative Competition Multi-Agent System Based on Edge State

National Key Research and Development Program

Active Service Innovation Design for Intelligent Products

Shandong Provincial Natural Science Foundation Youth Fund Project

Optimal Guaranteed-Cost Impulsive Control and Its Application for Nonlinear Positive Systems

Research on Quantized Distributed Control for Heterogeneous Networked Systems

Dynamic Soft-Sensing Algorithm for Complex Chemical Processes Based on Penalized Likelihood and Neural Networks

Analysis and Synthesis of Switched Linear Hamiltonian Systems with Multiple Equilibrium Points

Intelligent Optimized Sliding-Mode Trajectory Tracking Control for Robotic Systems under Complex Constraints

核心技术成果 CORE TECHNOLOGICAL ACHIEVEMENTS

复杂结构系统的有限时间稳定性与优化控制技术

Finite-time Stability and Optimal Control of Complex Structures

检测技术与自动化装置

DETECTION TECHNOLOGY AND AUTOMATION EQUIPMENT

主要从事光电及电磁波探测感知技术、工业过程智能检测及仪器、信号处理与过程工业传感器等方面的研究。

Focuses on researches on photoelectric and electromagnetic wave detection technologies, intelligent industrial process monitoring instruments, signal processing systems, and process industry sensors.

承担的主要科研项目 MAIN RESEARCH PROJECTS

国家自然科学基金青年基金项目

- 基于石墨烯与全介质超表面的超灵敏太赫兹生物传感器研究

国家重点研发计划项目

- 毫米波与太赫兹集成电路材料及航空材料电磁特性测试应用开发

国家高端外国专家引进计划

- 基于毫米波雷达的跌倒检测技术研究及应用

山东省自然科学基金

- 新型毫米波混合超表面孔径与计算成像方法研究
- 基于复合材料GMI效应的交换耦合与磁偶极相互作用机理研究

山东省重大科技创新工程项目

- 工业安全实时监测微型传感器制造关键技术研发
- 应急救援装备制造关键技术研究及应用
- 智慧矿山建设综合利用技术与成套装备研发
- Sigma-Delta 型模数转换器芯片研发

科教产融合试点工程重大创新专项“揭榜制”项目

- 离散型制造业关键技术及装备研发与示范应用

枣庄市自主创新及成果转化计划项目

- 矿山装备综合利用智能化与数字化关键技术研发

山东省科技型中小企业创新能力提升工程项目

- 新型保偏多功能光器件及分布式测声系统研发及产业化应用
- 复杂交通环境下特重大交通事故预警与应急处置关键技术研究及应用
- 基于新一代智能计算引擎的矿山反“三违”视觉监测关键技术研究及产业化
- 车载废纸含水率在线检测雷达系统
- 亚太赫兹波动态人流快速安检关键技术研究

National Natural Science Foundation of China Youth Fund Project

Research on Graphene-based All-Media Metasurface for Ultra-sensitive Terahertz Biosensor

National Key Research and Development Program

Development of Electromagnetic Characteristic Testing Application for Millimeter Wave and Terahertz Integrated Circuit Materials and Aviation Materials

National High-end Foreign Expert Introduction Program

Research and Application of Fall Detection Technology Based on Millimeter Wave Radar

Shandong Provincial Natural Science Foundation

Research on Aperture and Computational Imaging Method of Novel Millimeter Wave Hybrid Metasurface

Study on the Exchange Coupling and Magnetic Dipole Interaction Mechanism Based on the GMI Effect of Composite Materials

Shandong Provincial Major Scientific and Technological Innovation Project

Key technology R&D for manufacturing micro-sensors for industrial safety real-time monitoring

Key technology research and application for emergency rescue equipment manufacturing

Integrated utilization technology and complete equipment R&D for smart mine construction

Sigma-Delta analog-to-digital converter chip R&D

Major Innovation Project of the Pilot Program for the Integration of Science, Education, and Technology: The "Open Call System" Project

Research and Demonstration Application of Key Technologies and Equipment for Discrete Manufacturing Industry

Zaozhuang City Independent Innovation and Technology Transfer Program Project

Key Technology Research and Development of Intelligent and Digital Comprehensive Utilization of Mine Equipment

Shandong Province Science and Technology-based Small and Medium-sized Enterprises Innovation Capacity Enhancement Project

New polarization-maintaining multifunctional optical device and distributed acoustic sensing system R&D and industrial application

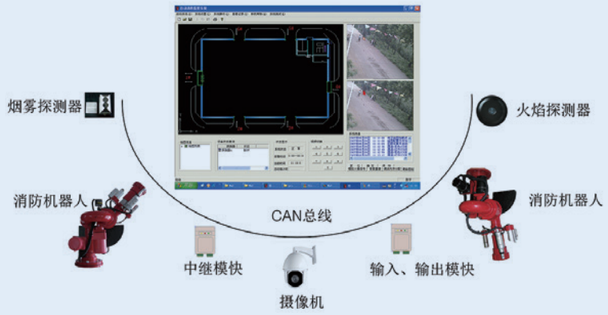
Key technology research and application for early warning and emergency response to major traffic accidents in complex traffic environments

Key technology research and industrialization of mine anti-"three violations" visual monitoring based on next-generation intelligent computing engine

On-board waste paper moisture content online detection radar system

Key technology research for dynamic pedestrian flow rapid security screening using sub-terahertz waves

核心技术成果 CORE TECHNOLOGICAL ACHIEVEMENTS



大空间智能消防机器人系统 山东省科技进步二等奖

Large-space intelligent firefighting robot system —The second prize of Shandong Provincial Science and Technology Progress Award

新型火灾气体检测预警技术及其应用 山东省科技进步三等奖

Novel fire gas detection and early warning technology with its application —The third prize of Shandong Provincial Science and Technology Progress Award

基于多模态融合感知的全地形消防侦察灭火机器人关键技术及应用 中国消防协会科学技术创新三等奖

Key technologies and application of all-terrain fire reconnaissance and extinguishing robot based on multi-modal fusion perception —The third prize of China Fire Protection Association Science and Technology Innovation Award

手持式防爆红紫外火焰探测器现场检测装置 济南市专利三等奖

Hand-held explosion-proof on-site testing device for red/ultraviolet flame detectors —The third prize of Jinan Patent Award

模式识别与智能系统

PATTERN RECOGNITION AND INTELLIGENT SYSTEMS

主要从事机器人与无人系统、机器视觉等方面的研究。

Focuses on researches of robotics and unmanned systems, machine vision and so on.

承担的主要科研项目 MAIN RESEARCH PROJECTS

国家重点研发计划课题

- 钻孔机器人平台自主移动与远程交互控制

Key project of the national key research and development program

Autonomous mobility and remote interactive control for drilling robot platforms

国家外国专家个人类项目(H类)

- 农田除草机器人视觉环境感知技术联合创新

National foreign expert individual project (category H)

Joint innovation in visual environmental perception technology for farmland weeding robots

山东省自然基金面上项目

- 水下多指手柔性抓取与夹持关键技术研究

Shandong provincial natural science foundation general program project

Key technology research on flexible grasping and gripping with underwater multi-fingered hands

山东省重大创新工程项目

- 智能凿岩机器人关键技术研发及产业化
- 喷涂机器人系统关键技术研究与应用
- 面向复杂环境的无人机自主巡检技术及应用

Shandong provincial major innovation engineering project

Key technology R&D and industrialization of intelligent rock drilling robots

Key technology research and application of painting robot systems

Autonomous inspection technology and application of UAVs for complex environments

山东省高等学校青创科技支持计划

- 地空机器人视觉伺服协作控制关键技术研究

Shandong provincial higher education institutions youth innovation and technology support plan

Key technology research on visual servo cooperative control for ground-air robots

科教产融合试点工程成果转化类项目

- 测井机器人与农用飞机机器人产业化

Science-education-industry integration pilot project achievement transformation project

Industrialization of logging robots and agricultural aircraft robots

济南市揭榜挂帅项目

- 面向复杂作业场景的智能抹灰机器人关键技术研究及示范应用

Jinan City "list and lead" project

Key technology research and demonstration application of intelligent plastering robots for complex work scenarios

济南市高校20条

- 水下遥自主清洁机器人关键控制技术研究
- 共融合作型机器人关键技术研究与典型应用

Jinan City "20 measures for universities" policy

Key control technology research for underwater tele-autonomous cleaning robots

Key technology research and typical application of cooperative and symbiotic robots

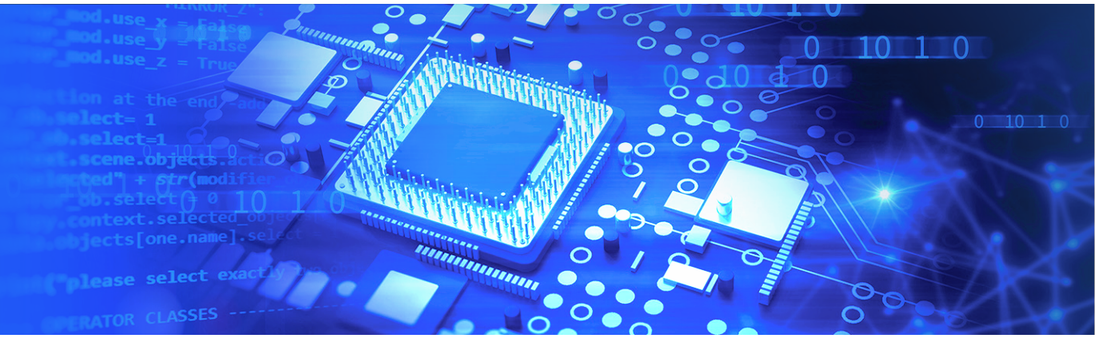
核心技术成果 CORE TECHNOLOGICAL ACHIEVEMENTS

包装搬运与卸载作业机器人系统关键技术及应用　山东省科技进步三等奖

Packaging, handling, and unloading robotic system key technologies and application —The third prize of Shandong Provincial Science and Technology Progress Award

智能拆垛装车机器人系统关键技术及应用　中国物流与采购联合会科技进步三等奖

Intelligent palletizing and truck loading robotic system key technologies and application —The third prize of China Federation of Logistics and Purchasing Science and Technology Progress Award



电力电子与运动控制技术

POWER ELECTRONICS AND MOTION CONTROL TECHNOLOGY

主要从事电力电子技术、智能网联汽车技术、电机控制技术等方面的研究。

Focuses on research in power electronics, intelligent connected vehicle technology, and motor control systems.

承担的主要科研项目 MAIN RESEARCH PROJECTS

国家自然科学基金联合基金重点项目

- 海洋装备电力推进用大容量多支路低速直驱高转矩密度永磁电机系统关键技术研究

国家自然科学基金(重点)

- 驾驶人认知机制驱动的智能车辆决策研究

国家自然科学基金青年基金

- 面向智能驾驶的“人在环中”跨感知域关联感知预测和理解描述

山东省重大科技创新工程项目

- 基于车联网的多车协同自动驾驶关键技术研究与产业化
- 基于软磁复合材料的轻型高效电机系统及规模化应用
- 高性能大功率潜油永磁直驱电泵系统研发及工程化应用

山东省新旧动能转化重大专项

- 氢燃料电池关键零部件性能和可靠性检测研究

科教产重大科技项目

- 煤矿井下复杂巷道重型梭车智能化关键技术研发及产业化

山东省标准化战略重点项目

- 电动商用汽车驱动系统试验测试标准化研究项目

青岛市科技计划关键技术攻关项目

- 10MW级构网型储能系统关键技术研究与示范应用

山东省科技型中小企业创新能力提升工程项目

- 智能高效永磁同步电机驱动系统研发及应用

Key Project of the National Natural Science Foundation of China Joint Fund

Key Technology Research on Large Capacity Multi-Branch Low Speed Direct Drive High Torque Density Permanent Magnet Motor System for Marine Equipment Electric Propulsion(Key)

National Natural Science Foundation of China (Key Program)

Research on Intelligent Vehicle Decision Making Driven by Driver Cognitive Mechanism

National Natural Science Foundation of China Youth Fund

Cross-sensory domain association perception prediction and understanding description for human-in-loop intelligent driving

Shandong Provincial Major Scientific and Technological Innovation Project

Research and Industrialization of Key Technologies for Multi-Vehicle Cooperative Autonomous Driving Based on Internet of Vehicles

Lightweight and High-Efficiency Motor System Based on Soft Magnetic Composites and Its Large-Scale Application

Development and Engineering Application of High-Performance, High-Power Submersible Permanent Magnet Direct-Drive Pump Systems

Shandong Province Major Project for Replacing Old Growth Drivers with New Ones

Research on Performance and Reliability Testing of Key Components of Hydrogen Fuel Cell

Major Science and Technology Projects in Science, Education, and Technology

Key Technology Research and Industrialization of Intelligent Heavy Shuttle for Complex Roadway in Coal Mine

Key Projects of Shandong Province's Standardization Strategy

Research Project on Standardization of Test and Measurement for Electric Commercial Vehicle Drive System

Qingdao Science and Technology Plan Key Technology Research and Development Project

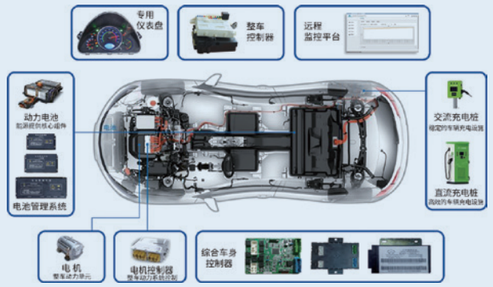
Research and Demonstration Application of Key Technologies for 10MW Grid-connected Energy Storage System

Shandong Province Science and Technology-based Small and Medium-sized Enterprises Innovation Capacity Enhancement Project

Research and Application of Intelligent and Efficient Permanent Magnet Synchronous Motor Drive System

核心技术成果

CORE TECHNOLOGICAL ACHIEVEMENTS

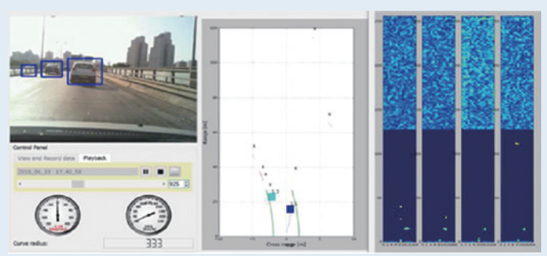


汽车先进动力与车载能源系统关键技术及其在新能源汽车上的应用 山东省科技进步一等奖

Key technologies of advanced automotive powertrain and onboard energy systems and their application in new energy vehicles — The first prize of Shandong Provincial Science and Technology Progress Award

小型发电机组控制系统开发及应用 山东省科技进步三等奖

Development and application of small generator set control systems —The third prize of Shandong Provincial Science and Technology Progress Award

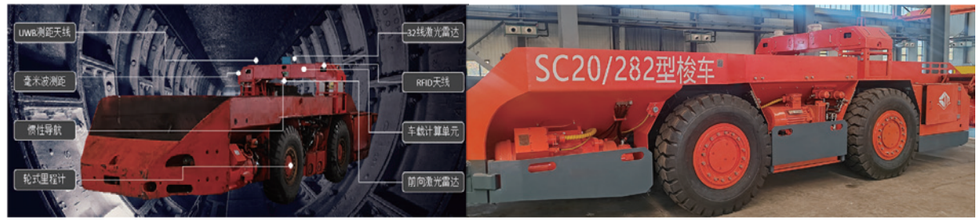


先进驾驶辅助系统与车联网关键共性技术研究及成果转化应用 山东省高等学校科学技术二等奖

Research and commercialization of key common technologies for advanced driver-assistance systems and internet of vehicles — The second prize of Shandong Provincial Higher Education Institutions Science and Technology Award

5G+自动驾驶智能车辆平台（L4等级自动驾驶功能）

5G+ autonomous driving intelligent vehicle platform (level 4 autonomous driving functionality)



煤矿井下自动驾驶梭车

Coal mine underground autonomous driving shuttle vehicle

应急储能电压站

Emergency energy storage power station

开关磁阻电机及其控制系统

Switched reluctance motor and its control system

永磁同步电机及其驱动系统

Permanent magnet synchronous motor and its drive system

基于ANPC拓扑的高压大功率PMSM 驱动系统

High-voltage high-power PMSM drive system based on ANPC topology

新能源发电系统用多电平能量变换系统（PCS）

Multilevel power conversion system (PCS) for new energy power generation systems

服务社会
SERVE SOCIETY

2022-2025年

167项
企业委托技术服务项目
Undertaken 167 technical service projects commissioned by enterprises

23项
知识产权作价1490万元入股实体企业
23 intellectual property rights valued at 14.9 million yuan to invest in real enterprises

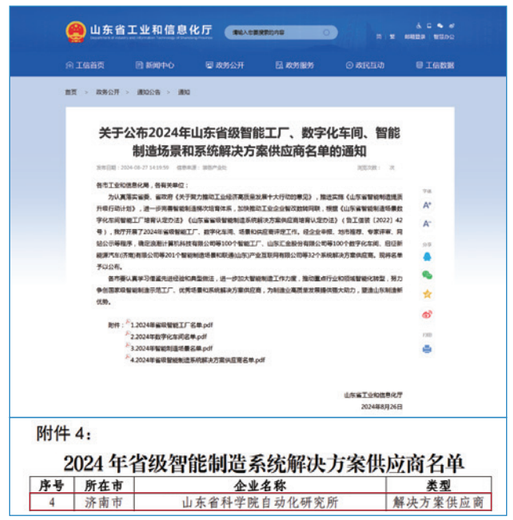
68件
专利（技术）转让（许可）
68 patents (technologies) transferred (licensed)

学部坚持服务地方经济发展宗旨，深入实施“六个一”工程，全面推进科技创新与产业创新深度融合，不断加强与地方政府及行业企业务实合作，一大批科技成果和关键核心技术得到了转化应用，为山东省乃至区域经济和社会发展做出了积极贡献，为国家智能制造成熟度CMMM®咨询机构和山东省级智能制造系统解决方案供应商。

The faculty remains committed to serving local economic development by implementing the "Six Ones" initiative, driving the deep integration of technological and industrial innovation. Strengthening collaboration with local governments and industry partners, faculty has successfully commercialized numerous scientific achievements and core technologies. These efforts have significantly contributed to Shandong Province's economic and social progress, establishing the college as both a CMMM®-certified consulting firm for intelligent manufacturing maturity and a provincial-level smart manufacturing solutions provider.

山东省科学院自动化研究所与济南槐荫区经济开发区管委会战略合作签约仪式
Signing Ceremony for Strategic Cooperation between the Institute of Automation, Shandong Academy of Sciences and the Management Committee of Huaiyin Economic Development Zone, Jinan

智能制造能力成熟度咨询机构
Smart Manufacturing Capability Maturity Consulting Firm



国际交流
INTERNATIONAL COMMUNICATION

学部坚持开放办学，积极开展多渠道、高层次、实质性的国际合作与交流活动，加强国际化能力建设。与俄罗斯、哈萨克斯坦、澳大利亚、新西兰、韩国等10多个国家和港澳台地区的近20所高等院校、科研机构建立了合作交流关系。通过聘请国内外知名高校专家到学部访问讲学、合作研究、开展学术、文化交流、举办国际会议、联合人才培养等，为学部师生学习交流、科技研发等搭建平台，不断提升学部国际声誉和学术影响力。

学部紧紧围绕国家“一带一路”倡议，持续拓宽国际合作领域，积极推动沿线国家的教育科研产业创新发展。获批济南市“一带一路”智能装备技术转移转化外国专家工作室、济南市院士工作站、在学部工作的外国专家连续获得“国际杰青计划”支持、设有哈萨克斯坦国立技术大学机器人与智能控制国际联合实验室、乌兹别克斯坦塔什干国立技术大学智能制造技术国际联合实验室。

The faculty is committed to open education, actively engaging in multi-channel, high-level, and substantive international cooperation and exchange activities to strengthen its international capabilities. It has established cooperative relationships with nearly 20 higher education institutions and research organizations in over 10 countries, including Russia, Kazakhstan, Australia, New Zealand, and South Korea, as well as in Hong Kong, Macao, and Taiwan. By inviting renowned experts from domestic and international universities to visit, conduct lectures, collaborate on research, focuses on academic and cultural exchanges, organize international conferences, and jointly cultivate talent, the faculty provides a platform for faculty and students to learn, exchange ideas, and advance scientific research. These efforts continuously enhance the faculty’s international reputation and academic influence.

The faculty closely revolves around the national "Belt and Road" initiative, continuously expanding the scope of international cooperation and actively promoting the innovative development of education, research, and industry in countries along the route. It has been approved as the Jinan "Belt and Road" Intelligent Equipment Technology Transfer and Transformation Foreign Expert Studio and theJinan Academician and Expert Workstation. Foreign experts working at the faculty have consecutively received support from the "TYSP" program. The faculty also established the Joint Laboratory for Robotics and Intelligent Control Research with Faculty of Mechanics and Mathematics Al-Farabi Kazakh National Universityand the International Joint Laboratory of Intelligent Manufacturing Technology at the National Technical University of Tashkent, Uzbekistan.

2名外国专家荣获“齐鲁友谊奖”，其中1位获国务院总理接见

2 foreign experts awarded the "Qilu Friendship were awarded" and one of them was received by the Chinese Premier of the State Council

“奥克兰理工大学-山东省科学院智能网联技术联合实验室”揭牌

"Auckland University of Technology - Shandong Academy of Sciences intelligent connected technology joint laboratory" inaugurated

机器人与智能控制国际联合实验室签约揭牌

International joint laboratory for robotics and intelligent control signed and inaugurated