

# 磁活性智能材料的研究进展

## Developments in Magneto-Active Intelligent Materials



苏比哈什 如凯迦

Subhash.Rakheja

苏比哈什 如凯迦 (Subhash.Rakheja)，加拿大肯考迪娅(Concordia)大学终身正教授，加拿大工程研究院院士 (EIC)，在汽车工程、人机工程学及机电一体化等领域有卓越贡献和重要国际学术影响力，曾获得加拿大国家学术领域最高荣誉称号-加拿大国家研究讲席教授(Canada Research Chair)。目前担任汽车领域的权威国际期刊《Int. J. of Industrial Ergonomics》主编，《Int. J. of Vehicle Performance》执行主编, 以及包括《IMechE Part D: Journal of Automobile Engineering》等在内5个国际期刊的副主编或编委。

Subhash Rakheja, tenured professor at Concordia University and academician of the Engineering Institute of Canada (EIC); outstanding contributor and major international academic influencer in automobile engineering, ergonomics, and mechatronics; Canada Research Chair (the highest title in Canadian academia); editor-in-chief of the Int. J. of Industrial Ergonomics, executive editor of the Int. J. of Vehicle Performance, associate editor or editorial board member of five international journals, including IMechE Part D: Journal of Automobile Engineering.



# 河南科技大学机械工程学科介绍

## Introduction to Mechanical Engineering of Henan University of Science and Technology



谷瑞杰

Gu Ruijie

谷瑞杰，博士，河南科技大学机电工程学院院长、特聘教授、正高级工程师，省重点科技创新团队带头人，曾荣获省青年五四奖章、省优秀青年科技新星等10多项荣誉。主要从事金属材料先进加工技术与大型机电液成套智能装备的研究，承担了40多项重大、重点项目的研发，获得省部级以上科技奖励10项，发表学术论文60余篇，获授权专利60余件。

Gu Ruijie, Ph.D., dean of the School of Mechatronics Engineering, distinguished professor, senior engineer of Henan University of Science and Technology, Leader of provincial key science and technology innovation team; winner of more than ten honors such as Henan Youth May Fourth Medal and Henan Outstanding Young Rising Star of Science and Technology; researcher on advanced processing technology of metal materials and large complete intelligent machine-electric-hydraulic equipment; leader of research and development of more than 40 major and key projects; winner of ten science and technology awards at the provincial/ministerial level and higher; author of over 60 academic papers; owner of more than 60 authorized patents.



# 超薄碳纤维复合材料的发展与应用

## Development and application of ultra-thin carbon fiber composites



吴海宏

Wu Haihong

吴海宏，博士，河南工业大学教授，博士生导师，碳纤维复合材料河南省国际合作实验室主任，SAMPE学会理事，中国复合材料学会高级会员。先后承担国家重点研发计划、国家自然科学基金重点项目、河南省重点科技攻关项目。主要研究方向为超总轻、超薄碳纤维复合材料制备及成型工艺、智能结构与储能结构设计；复合材料结构功能一体化设计。

Wu Haihong, Ph.D., professor of Henan University of Technology, doctoral supervisor, director of the International Cooperation Laboratory of Carbon Fiber Composites in Henan, director of SAMPE, senior member of the Chinese Society for Composite Materials; leader of national key research and development programs, key programs of the National Natural Science Foundation of China, and key programs of science and technology development of Henan Province; specialized in the preparation and molding processes of ultralight and ultra-thin carbon fiber composites, design of the intelligent structure and the energy storage structure, and integrated design of structure and function of composites.



# 电场对电动汽车零部件润滑的影响

## Electric Field Effects on Lubrication of Electric Vehicle Components-Future Trends



盖瑞 巴伯

Barber, Gary

Gary Barber, 博士, 美国奥克兰大学教授, 博士生导师, 美国摩擦学者和润滑工程师学会 (STLE) 资深会员, STLE《摩擦学学报》副主编 (Associate Editor for STLE Tribology Transactions), 技术期刊和会议论文的审稿人 (Reviewer of papers for technical journals and conferences)。研究方向: 发动机汽缸套件摩擦学、刀具磨损对加工表面形貌的影响。

Gary Barber, Ph.D., professor of Oakland University, doctoral supervisor, senior member of the Society of Tribologists & Lubrication Engineers (STLE), associate editor for STLE Tribology Transactions, reviewer of papers for technical journals and conferences; specialized in engine cylinder kit tribology and the effect of tool wear on the shape of the finished surface.



# 起重机与智能制造

## Cranes and intelligent manufacturing



聂富全

Nie Fuquan

聂福全，教授级高工，博士生导师，卫华集团有限公司副总经理、起重装备轻量化设计国家地方联合工程研究中心主任，河南省智能化起重装备关键技术工程研究中心主任，河南省起重机械公共技术研发设计中心主任，河南省起重物装备重点实验室主任。泰山学者，楚天学者，中原千人计划评审专家，国家万人计划专家，国家创新人才推进计划领军人才。

Nie Fuquan, professor-level senior engineer, doctoral supervisor, deputy general manager of Weihua Group Co. Ltd., director of National and Local Joint Engineering Research Center for Lightweight Design of Lifting Equipment, director of Henan Engineering Research Center for Key Technologies of Intelligent Lifting Equipment, director of Henan Research, Development and Design Center for the Public Technologies of Hoisting Machinery, and director of Henan Provincial Key Laboratory of Heavy Duty Lift & Equipment; Taishan Scholar, Chutian Scholar, review expert of the Thousand Talents Program of Central Plains, expert of national Ten Thousand Talent Program, leading person of the national Innovative Talent Advancement Program.



# 基于人工智能的机械臂前端触觉感知

## Tactile Perception of Robotic Forearm based on Artificial Intelligence



王 慰

Wang Wei

王 慰，博士，曾任美国纽约州立大学纳米学院的教授，博士生导师，美国国家纳米科研机构SRC，NRI和Sematech的主要领导成员，主持了美国的数个重大的纳米电子和人工智能类脑芯片的科技专项。。主要从事人工智能，智能传感器，触觉感知和计算机视觉等领域的研究。曾获加拿大纳米新技术CFI奖、美国普渡大学科技创新奖、IBM教授奖等5项加拿大/美国的重大纳米电子领域大奖。

Wang Wei, Ph.D., former professor at the State University of New York, doctoral supervisor, leading member of American nanometer research institutes such as SRC, NRI, and Sematech; leader of several US major science and technology programs in nanoelectronics and AI brain-like chips; specialized in AI, smart sensors, visual perception, and computer vision; winner of five Canadian/US major awards in nanoelectronics, including the award from Canada Foundation for Innovation for New Nanotechnology, Purdue University Award of Technology and Innovation, and IBM Faculty Award.



# 机械工程材料的火安全策略

## Fire safety strategies for mechanical engineering materials



王德义

Wang Deyi

王德义，博士，现任西班牙马德里高等材料研究院(IMDEA Materials Institute) 资深科学家/研究教授，西班牙马德里理工大学及卡洛斯三世大学博士生导师，欧盟阻燃材料科研合作联盟(西班牙国家代表)，联合国工业与发展组织项目顾问专家，德国洪堡学者，欧盟玛丽居里学者，美国杜邦青年教授奖获得者，西班牙杰出青年科学家基金获得者。目前担任英国皇家化学会RSC Advances杂志副主编(Associate Editor)，Journal of Thermal Analysis and Calorimetry (JTAC) 副主编。

Wang Deyi, Ph.D., senior scientist/research professor at IMDEA Materials Institute in Madrid, Spain, doctoral supervisor at the Universidad Politécnica de Madrid and Universidad Carlos III de Madrid of Spanish; national representative of Spain at the EU Alliance for Research Cooperation on Flame Retardant Materials; project counselor of United Nations Industrial Development Organization; owner of Humboldt Research Fellowship for Experienced Researchers, Marie Skłodowska-Curie Individual Fellowships, DuPont Young Professor Award, and Excellent Young Scientists Fund of Spain; current associate editor of RSC Advances and Journal of Thermal Analysis and Calorimetry (JTAC).



# 先进材料力学

## Advanced material mechanics



卢春生

Lu Chunsheng

卢春生，博士，澳大利亚科廷大学教授，博士生导师，主要从事损伤断裂力学、先进材料力学及其相关领域的研究工作，已在PRL, Nano Letters, Nature Communications, JMPS, APL, Acta Materialia等刊物发表论文230余篇，论文被引用2800多次。先后获得澳大利亚国家自然科学基金，中国国家自然科学基金委海外及港澳学者合作研究基金、中国国家自然科学基金重点项目、面上项目等多项。

Lu Chunsheng, Ph.D., professor of Curtin University, doctoral supervisor; specialized in damage and fracture mechanics, advanced material mechanics, and related fields; author of over 230 papers published on PRL, Nano Letters, Nature Communications, JMPS, APL, Acta Materialia and other journals, with papers being quoted for more than 2,800 times; leader of programs of the National Natural Science Fund of Australia, programs of the Joint Research Fund for Overseas Chinese Scholars and Scholars in Hong Kong and Macao of the National Natural Science Foundation of China, and key and general programs of the National Natural Science Foundation of China.



# 双目视觉技术的定位精度分析与工程应用

## Positioning accuracy analysis and engineering application based on binocular vision technology



费致根

Fei Zhigen

费致根，博士，郑州轻工业大学教授，硕士生导师。主要研究领域为机器视觉技术及工程应用。发表论文30余篇，获国家发明专利10项，出版教材2部，获得河南省科技进步奖二等奖1项，主持企业项目5项。

Fei Zhigen, Ph.D., professor of Zhengzhou University of Light Industry, master supervisor; specialized in machine vision technology and engineering applications; author of more than 30 papers and 2 textbooks, and owner of 10 national invention patents; winner of the second prize of Henan Provincial Science and Technology Progress Award; leader of over five enterprise engineering projects.



# 基于脑机接口的康复机器人及其大数据系统

## Rehabilitation robot and its big data system based on brain computer interface



尚 鹏

Shang Peng

尚 鹏，博士，博士生导师，深圳市地方级领军人才，河南省特聘教授。中国科学院深圳先进技术研究院研究员，广东省个性化骨科工程技术研究中心主任，中国科学院柳州康养产业创新中心主任，曾任国际矫形外科（SICOT）中国常委。主要从事骨科智能康复研究，目前研究方向集中于康复、康养机器人加大数据研究、开发，已开发多项康复、康养机器人并成功进入产业化进程。

Shang Peng, Ph.D., doctoral supervisor, local leading talent of Shenzhen City, distinguished professor of Henan Province; researcher of Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, director of Patient-specific Orthopedic Technology Research Center in Guangdong Province, director of Liuzhou Innovation Center for Health and Wellness Industry, Chinese Academy of Sciences, former member of the standing committee of International Society of Orthopaedic Surgery and Traumatology (SICOT); specialized in the research on intelligent rehabilitation of orthopedic patients and now in the research and development of rehabilitation and health care robots and big data, with some robots developed successfully and being produced in mass.



## 低速风洞中湍流强度对风轮机性能及尾流恢复能力影响的试验研究

# Experimental Study of Turbulence Intensity Influence on Wind Turbine Performance and Wake Recovery in a Low-Speed Wind Tunnel



束方军

Shu Fangjun

束方军，博士，查普曼基金会终身副教授，美国新墨西哥州立大学教授。曾在卡内基梅隆大学（2006年）和匹兹堡大学（2007-08年）担任博士后研究助理。研究涵盖了广泛的实验流体力学领域，包括医疗设备、风能、流量控制、扑翼飞行和高超音速飞行等研究方向。

Dr. Shu Fangjun is currently the D. L. and A. G. Chapman Endowed Associate Professor of the Mechanical and Aerospace Engineering department at New Mexico State University. He worked as a postdoctoral research associate at Carnegie Mellon University (2006) and the University of Pittsburgh (2007-08). Dr. Shu's research covers various experimental fluid mechanics, including medical devices, wind energy, flow control, flapping flight, and hypersonics.



# 烟气冷凝与CO<sub>2</sub>捕获的集成系统研究

## Integration of flue gas condensation with CO<sub>2</sub> capture



张文楠

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张文楠，博士，研究员，瑞典中部大学教授、博士生导师。领域方向带头人，百人计划候选人。先后在瑞典查尔姆斯理工大学、瑞典中部大学等研究机构学习或工作。担任第四次欧盟框架计划项目课题项目总主持，第六次欧盟框架计划项目审题专家，瑞典中部大学生物能源研究组组长。从事循环流化床、生物质燃烧、气化方面的研究工作。

Zhang Wennan, Ph.D., researcher, professor of Mid Sweden University, doctoral supervisor; field leader, and candidate for the Hundred Talents Program; scholar or researcher at the Chalmers University of Technology and Mid Sweden University; host of projects of the 4th EU Framework Programme for Research; review expert of project titles of the 6th EU Framework Programme for Research, and leader of the bioenergy research group of Mid Sweden University; specialized in circulating fluid bed, biomass burning, and gasification.