

# FCPAE Europe Forum & AIAM2022

13<sup>th</sup> FCPAE Europe Forum &  
4<sup>th</sup> International Conference on Artificial Intelligence and Advanced Manufacturing

## 第十三届 FCPAE 欧洲论坛- 人工智能与先进制造国际会议分论坛

### 会议日程

### Conference Program



德国 汉堡

Hamburg, Germany

2022年10月7日-9日 October 7-9, 2022

# 大会简介

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10月7日-9日，以“新挑战、新机遇”为主题的《第十三届FCPAE-欧洲论坛》将在德国汉堡举行。这将是后疫情时期中欧科技交流的一场盛会，届时中欧企业家、科学家和欧洲华人专业人士优秀代表将齐聚一堂，共同探讨并描绘中欧面向未来，合作创新的美好蓝图。

AIAM国际学术会议是全欧华人专业协会联合会“FCPAE欧洲论坛”的学术分会，大会以“人工智能与先进制造技术”为主题，旨在为全世界从事数字化、智能化、绿色化设计、制造、应用的专家、学者及专业技术人员提供一个交流最新研究成果的平台，并进一步推动全球在人工智能与先进制造领域的发展。

# Conference Introduction

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FCPAE Europe Forum & 4th International Conference on Artificial Intelligence and Advanced Manufacturing (AIAM2022) will be held during October 7-9, 2022 in Hamburg, Germany. FCPAE Europe Forum was founded by AICF and ASICEF in 2009. Since then, it has been successfully held for 12 times in Paris (2009), Copenhagen (2010), Brussels (2011), Vienna (2012), The Hague (2013), Frankfurt (2014), Brussels (2015), Hillerød (2016), Paris (2017), Helsinki (2018), Dublin (2019) and Shanghai (2021) respectively. It has attracted thousands of participants and become a platform with great influence in Chinese and European government, enterprises, scientific research institutions.

As an academic branch of FCPAE Europe Forum, AIAM2022 aims to bring together researchers and scientists from artificial intelligence and advanced manufacture, researchers from various application areas to discuss problems and solutions in the area, to identify new issues, and to shape future directions for research. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

# 组织机构

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## 主办单位

全欧华人专业协会联合会(FCPAE)

## 承办单位

国际应用科学与技术协会 (IAAST)

海外华人科创联盟

湖州师范学院

中国留德学者计算机学会(GCI)

## 协办单位

中国人工智能学会

成都信息工程大学

西安财经大学

浙江理工大学

宁波财经学院

## 大会主席

周盛宗教授，全欧华人专业协会联合会

## 联席主席（按姓名字母排序）

郭毅可，英国皇家工程院院士、帝国理工大学教授

宋梁，加拿大工程院院士、复旦大学教授

张建伟，德国汉堡科学院院士、汉堡大学教授

## 学术委员会成员（按姓名字母排序）

徐泽水，欧洲科学院 院士、四川大学教授

陈晓东，中国科学院上海高等研究院

傅晓明，德国哥廷根大学

Gian Luca Brunetti, 意大利米兰理工大学

何泾沙，北京工业大学

胡文军，湖州师范学院

黄旭，湖州师范学院

蒋林华，海外华人科创联盟、全欧华人专业协会联合会

李俊，中国科学院海西研究院

林海翔，荷兰代尔夫特大学

卢基存，光华临港工程应用技术研发有限公司

Md Abdus Samad KAMAL, 日本群马大学

Mohamed Arezki Mellal, 美国马里兰大学

庞成鑫，海外华人科创联盟

商慧亮，复旦大学

苏代忠，英国诺丁汉特伦特大学

汪镭，同济大学

王文峰，中国科学院、上海临港国际人工智能产业研究院

王泽峰，湖州师范学院

徐立鸿，同济大学

叶菲，中国科学院、复旦大学

葉國暉，台湾国立东华大学

曾新华，复旦大学

张煜东，英国莱斯特大学

周华，复旦大学

Hamid Doost Mohammadian, 德国 FHM 应用科技大学

### **组织委员会主席**

蒋林华教授，海外华人科创联盟、全欧华人专业协会联合会

### **组织委员会成员（按姓名字母排序）**

邢宾、李强、龙伟、叶维彰、余治昊、张冠华、裴颂文、王泽峰

# Organization

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## **Organizer**

Federation of Chinese Professional Associations in Europe (FCPAE)

## **In Association With**

International Association of Applied Science and Technology (IAAST)

Overseas Chinese Science and Technology Innovation Alliance

Huzhou University

Gesellschaft Chinesischer Informatiker in Deutschland e.V. (GCI)

## **Sponsors**

Chinese Association for Artificial Intelligence

Chengdu University of Information Technology

Xi'an University of Finance and Economics

Zhejiang Sci-Tech University

Ningbo University of Finance & Economics

## **General Chair**

Shengzong Zhou, Federation of Chinese Professional Associations in Europe

## **Co-Chairs**

Jianwei Zhang, Universität Hamburg, Germany

Liang Song, Canadian Academy of Engineering, Fudan University, China

Yike Guo, Royal Academy of Engineering, Imperial College London, UK

## **Academic Committee Member**

Zeshui Xu, Academia Europaea, UK; Sichuan University, China

Chengxin Pang, Overseas Chinese Science and Technology Innovation Alliance

Daizhong Su, Nottingham Trent University, UK

Fei Ye, Chinese Academy of Sciences, Fudan University, China

Gian Luca Brunetti, Polytechnic University of Milan, Italy

Guohui Ye, National Dong Hwa University, Taiwan, China

Haixiang Lin, Technische Universiteit Delft, Netherlands

Hua Zhou, Fudan University, China

Huiliang Shang, Professor, Fudan University, China

Jicun Lu, Guanghua Lingang Engineering Applied Technology R & D Co., Ltd, China

Jun Li, Chinese Academy of Sciences, China

Lei Wang, Professor, Tongji University, China

Lihong Xu, Professor, Tongji University, China

Linhua Jiang, Overseas Chinese Science and Technology Innovation Alliance, Federation of Chinese Professional Associations in Europe

Md Abdus Samad KAMAL, Gunma University, Japan

Mohamed Arezki Mellal, University of Maryland, US

Wenfeng Wang, Chinese Academy of Sciences & Shanghai Lingang Artificial Intelligence Laboratory, China

Wenjun Hu, Huzhou University, China

Xiaodong Chen, Shanghai Advanced Research Institute, Chinese Academy of Sciences, China

Xiaoming Fu, University of Göttingen, Germany

Xinhua Zeng, Professor, Fudan University, China

Xu Huang, Huzhou University, China

Yudong Zhang, University of Leicester, UK

Zefeng Wang, Huzhou University, China

Hamid Doost Mohammadian, FHM University of Applied Sciences, Germany.

### **Organizing Committee Chair**

Linhua Jiang, Overseas Chinese Science and Technology Innovation Alliance, Federation of Chinese Professional Associations in Europe

### **Organizing Committee Member**

Bin Xing, Qiang Li, Wei Long, Wei-Chang Yeh, Zhihao Yu, Guanhua Zhang, Songwen Pei, Zefeng Wang



# 会议日程

时间	事项
2022 年 10 月 8 日 (欧洲时 间) 第一阶段	开幕式: 领导致辞 (主持人: 蒋林华教授, 全欧华人专业协会联合会)
	13: 30 周盛宗教授 致辞, 全欧华人专业协会联合会 执行主席
	13: 35 戴琼海院士 致辞, 中国人工智能学会 理事长
2022 年 10 月 8 日 (欧洲时 间) 第二阶段	13: 40 人工智能专题- Session A (AI 理论/方法/图像/通信) 特邀报告 Session Chair: 孙富春教授 清华大学/王文峰教授 中国科学院 报告一: 张煜东教授, 英国莱斯特大学 (线上, 汉堡会场) 报告题目: Recent AI theories and techniques for COVID-19 recognition  张煜东教授于 2010 年获中南大学信号和信息处理博士学位, 2010 年至 2012 年在美国哥伦比亚大学攻读博士后。目前担任英国莱斯特大学信息学教授, 同时担任 Neural Networks, Scientific Reports, IEEE Transactions on Circuits, Systems for Video Technology, IEEE Transactions on Intelligent Transportation Systems 等多本期刊的编辑和客座编辑, 此外, 张教授还是 IET (FIET) 的院士、IEEE 和 ACM 的高级会员。2014 年至 2018 年, 他被 Elsevier 列入“中国被引最多的研究人员(计算机科学)”榜单, 同时被列入 Guide2Research 的“顶尖科学家”。目前已发表学术论文 200 余篇, 其中包括 16 篇“ESI 高被引论文”和 2 篇“ESI 热点论文”。他在谷歌学术和 Web of Science 中的引用指数分别高达 11194 和 6811, 目前已成功完成多项工业项目并获得国家自然科学基金会, 美国国立卫生研究院, 皇家学会, EPSRC, MRC 和英国文化协会等多项学术资助。
	14: 05 报告二: 孙富春教授, 清华大学计算机科学与技术系 (线上, 汉堡会场) 报告题目: 中德合作“跨模态学习”的研究进展与体会  孙富春, 清华大学计算机科学与技术系教授, 博士生导师, IEEE/CAAI/CAA Fellow, 国家杰出青年基金获得者; 兼任清华大学校学术委员会委员, 计算机科学与技术系特聘教授委员会副主任, 清华大学人工智能研究院智能机器人中心主任, 中国海洋工程研究院人工智能中心主任。兼任担任国家重点研发计划机器人总体专家组成员, 中国人工智能学会 (CAAI) 副理事长, 中国自动化学会 (CAA) 和中国认知科学学会 (IACS) 常务理事, 中国计算机学会 (CCF) 智能机器人专业委员会主任。兼任国际刊物《Cognitive Computation and Systems》主编, 中国人工智能学会会刊《CAAI Artificial Intelligence Research》执行主编, 国际刊物《IEEE Trans. on Cognitive and Development Systems》, 《IEEE Trans. on Fuzzy Systems》、《IEEE Trans. Systems, Man and Cybernetics》和《International Journal of Control, Automation, and Systems (IJCAS)》副主编或领域主编, 刊物《Robots and Autonomous Systems》, 《中国科学: F 辑》编委。
	14: 30 报告三: Xun Zhang 教授, 法国巴黎高等电子学院 (线上, 汉堡会场)

报告题目：欧盟地平线 2020 6G BRANS 项目：面向 6G 通感一体化信道测试及精准定位方案



Xun Zhang, 法国巴黎高等电子学院教授, 巴黎萨克雷大学常任研究员, IEEE senior member, 欧盟地平线 2020 IoRL 5G 项目, 欧盟地平线 2020 6G BRAINS 项目。研究方向主要集中在光学无线通信在下一代无线通信网络 (5G 和后 5G) 的融合系统设计以及基于可见光的高精度室内定位系统的算法设计。研究目的在于突破目前通信技术及系统在工业场景下的定位精度低及通信带宽不足导致的工业数字孪生和工业远程控制实现的瓶颈。

**14: 55 报告四: Dimitrios A. Karras 教授, 希腊雅典大学 (线上, 汉堡会场)**

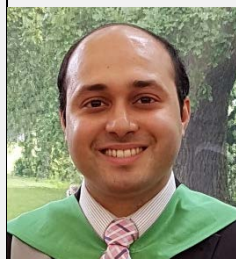
报告题目: On Reliably Managing Uncertainty in Artificial Intelligence and Machine Learning Computations



Dimitrios A.Karras 博士于 1995 年在希腊雅典国立技术大学获得电气工程博士学位 (荣誉)。目前, Dimitrios A.Karras 博士是希腊雅典大学数据与人工智能科学系统教授。他在大学和研究机构工作超过 25 年, 在智能与分布式/多智能体系统、模式识别、图像/信号处理及神经网络领域的国际期刊上发表了 70 多篇论文, 在相关领域的会议上发表了 180 多篇论文。他曾在多个国际会议上担任主席/技术委员会主席, 并在多本国际期刊上担任编委。他的研究论文被引用 2500 多次, 全球研究人员中被引用量前 10%。

**15: 20 报告五: Madhurananda Pahar 博士, 南非斯泰伦博斯大学 (线上, 汉堡会场)**

报告题目: Using machine learning to detect COVID-19 in vocal audio



Madhurananda Pahar 在苏格兰斯特灵大学获得金融市场计算硕士学位和计算神经科学博士学位。目前, 他在南非斯泰伦博斯大学担任博士后研究员。他的研究兴趣是机器学习和音频信号处理以及生物学中的智能传感器。目前, 他参与了将深度学习应用于真实环境中结核病和新冠肺炎咳嗽的检测和分类, 以及使用智能传感器监测患者行为的研究。

**15: 45 报告六: Heng Li 副教授, 约翰斯·霍普金斯大学医学院 (线上, 汉堡会场)**

报告题目: Artificial Intelligence in Radiation Oncology



Heng Li 博士是约翰·霍普金斯大学放射肿瘤学和分子放射科学系的副教授, 也是美国医学物理学家协会的会士。他是约翰·霍普金斯质子治疗中心的首席质子物理学家。2006 年, 在弗吉尼亚大学完成了电气和计算机工程博士学位后, 获得德克萨斯大学 MD 安德森癌症中心博士后奖学金, 在此进行治疗医学物理住院培训。他的研究兴趣包括质子治疗物理学、放射治疗中的运动管理、全球健康以及放射肿瘤学中的人工智能应用。目前, 已在国际学术期刊上发表了 70 多篇论文, 并撰写了 9 本书的章节。

人工智能专题- Session B (医学/生命/机器人/交叉科学) 特邀报告

Session Chair: 尹飞教授 宁波大学 (线下, 汉堡会场)

**13: 40 报告一: 韩忠朝教授, 法国国家技术科学院院士, 法国国家医学科学院外籍通讯院士, 国家干细胞工程技术研究中心 (线上, 汉堡会场)**

2022 年 10 月  
8 日 (欧洲时  
间) 第二阶段

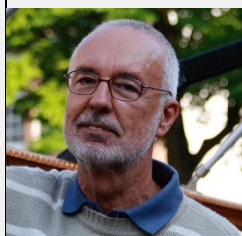
报告题目: Research and development of stem cells based technologies



韩忠朝院士长期从事科研工作, 在内科血液学、血管生物学、干细胞再生医学技术的应用基础研究、产业和临床转化应用方面成绩显著, 取得良好的社会效益。发表论文 500 余篇, 主编参编英文专著 9 部、中文专著 10 部。获授权发明专利 20 余项。获国内外科技奖共 28 项, 包括 1 项国家科技进步一等奖(2014)、1 项国家科技进步二等奖(2009)、1 项国家自然科学基金二等奖(2001)、7 项省部级科技进步一等奖、11 项省部级科技二等奖。获 2011 年科学中国人年度人物、2013 年中国产学研结合创新奖、2016 年法国国家荣誉军团军官勋章等荣誉称号、2019 科技部创新创业人才及共和国成立 70 周年纪念章。韩忠朝院士的研究工作在国际上具有一定的影响, 在国际著名学术刊物《Lancet》、《Nature Medicine》、《Nature Communications》、《Blood》和《Biomaterials》等发表 250 余篇论文, h-指数 48。在 Elsevier 国际评估 2015-2022 连续 7 年度入选中国高被引学者年度榜单。多次获得国家级、国际级、省部级科学技术奖项。

14: 05 报告二: Pietro Morasso 教授, 意大利技术研究院 (线上, 汉堡会场)

报告题目: Tai Chi meets the Cognitive Neuroscience of Action



Pietro Morasso 教授目前是意大利技术研究院机器人、大脑与认知科学系的高级研究员。1968 年从意大利热那亚大学硕士学位后, 他一直担任麻省理工学院的客座教授, 然后返回热那亚大学, 担任生物医学工程系教授, 直到 2009 年, 他加入了新成立的意大利技术研究院。目前, 他已在运动神经科学和人形机器人领域出版了六本著作及 400 多篇研究论文, h 指数为 52, i10 指数为 162, 文章被引用次数为 15050 次 (谷歌学术)。

14: 30 报告三: Murtaza Hasan 副教授, 巴基斯坦巴哈瓦尔布尔伊斯兰大学 (线上, 汉堡会场)

报告题目: Exploring nanostructure deep into the functional green chemistry for advance operations



Murtaza Hasan 于 2014 年在北京理工大学获得生物化学科学博士学位, 随后在北京大学进行博士后研究。他的研究领域是纳米颗粒的绿色合成及其生物医学应用、纳米生物肥料的合成及其对作物的影响、纳米颗粒的表面包覆以及从癌症血清中获取关键生物标志物。目前, 已发表学术论文 80 多篇, 并指导了 5 名博士生和 7 名硕士生。

14: 55 报告四: Wolfgang Orthuber 副主任, 德国基尔大学正畸学系 (线下, 汉堡会场)

报告题目: How to make medical and other digital information precisely comparable and searchable worldwide



Wolfgang Orthuber 在德国 Schleswig-Holstein 大学医院 (UKSH) 担任正畸医生。十多年前, 他开始研究信息的客观性和比较性 (首先在医学领域, 然后在一般领域)。Wolfgang Orthuber 还开发了数字搜索引擎 <http://numericsearch.com> 以证明此类信息的精确可查找性, 这一概念的全球应用将具有巨大的经济、技术和科学潜力。

**15: 20 报告五: 熊小峰博士, 南丹麦大学仿生机器人系 (线下, 汉堡会场)**

报告题目: Embodied computation: an engineering way toward understanding motion intelligence of machines and animals.



熊小峰, 南丹麦大学仿生机器人系助理教授, 德国哥廷根大学计算机博士, 两项丹麦科研基金项目负责人, 欧盟 Erasmus 学者, 期刊 Adaptive behavior 副主编, 主要研究领域是计算神经力学 (neuromechanics)、仿生机器人、可穿戴机器人。他的研究成果发表在顶级期刊 IEEE Trans. Cybernetics and Industrial Electronics, 以及机器人会议 ICRA 和 IROS, 并获得了 Emerald 出版社机器人应用奖 (2013, 英国), 机器人联盟 CLAWAR 最佳技术论文奖 (2020, 英国), 和 WearRAcon 的可穿戴机器人挑战赛奖 (finalist, 2021, 美国)。他开发的基于昆虫仿生的室外定位技术和多功能轻便家用外骨骼被科研基金 Human Frontier Science Program (HFSP) 专题报道。

**15: 45 报告六: Junyi Liang 博士, 美国克利夫兰医学中心勒纳研究所 (线上, 汉堡会场)**

报告题目: Fluorescent protein applications in genetically encodable biosensor development and fluorescence cross-correlation spectroscopy



Junyi Liang 博士曾在中国金陵大学获得博士学位。2014 年, 他加入了由安藤敏夫教授指导的石川县 Bio-AFM 中心, 参加了日本国家资助项目。然后, 他离开日本前往美国, 加入了美国国立卫生研究院拨款的项目, 主要是参与为了进行血管功能的纵向的光学生物传感器小鼠的研发。在这些基础科学研究工作之后, 他帮助一家韩国制药公司与阿克伦大学建立并开展合作, 致力于新化合物作为抗癌药物的商业化潜力。目前, 他进入美国克利夫兰医学中心, 并作为一名高级技术人员进入该医学中心的勒纳研究所, 继续为基础科学领域做出更大贡献。

**2022 年 10 月**

**8 日 (欧洲时间) 第三阶段**

**16: 10 闭幕式: AIAM 组委会主席 蒋林华教授 致辞**

# Conference Schedule

Time	Item
October 08, 2022 (European time)	<b>Welcome Ceremony</b> <b>Host: Prof. Linhua Jiang, Federation of Chinese Professional Associations in Europe</b>
	Prof. Shengzong Zhou, Executive Chairman of Federation of Chinese Professional Associations in Europe Time: 13:30
	Prof. Fuchun Sun, Vice Chairman of Chinese Association for Artificial Intelligence Time: 13:35
October 08, 2022 (European time)	<b>Session A: Artificial Intelligence and Advanced Manufacturing -Keynote Speech</b> <b>Session Chair: Prof. Fuchun Sun/Prof. Wenfeng Wang</b>
	<b>Speaker 1: Yu-Dong Zhang, Professor of University of Leicester, UK (Online)</b> <b>Speech time: 13:40 (European time)</b> <b>Speech title: Recent AI theories and techniques for COVID-19 recognition</b>
	 <p>Prof Yudong Zhang serves as a professor at the School of Computing and Mathematical Sciences, University of Leicester, UK. His research interests include deep learning and medical image analysis. He is the Fellow of IET, Fellow of EAI, and Fellow of BCS. He is the Senior Member of IEEE, IES, and ACM. He is the Distinguished Speaker of ACM. He was the 2019 &amp; 2021 recipient of Highly Cited Researcher by Clarivate. He has (co) authored over 400 peer-reviewed articles in the journals JAMA Psychiatry, Inf Fus, IEEE TFS, IEEE TII, IEEE TIP, IEEE TMI, IEEE IoTJ, Neural Networks, IEEE TITS, Pattern Recognition, IEEE TGRS, IEEE JBHI, IEEE TCSVT, IEEE TETCI, IEEE TCSS, IEEE JSTARS, IEEE TNSRE, IEEE SJ, ACM TKDD, ACM TOMM, IEEE/ACM TCBB, IEEE TCAS-II, IEEE JTEHM, ACM TMIS, etc. There are more than 50 ESI Highly Cited Papers and 5 ESI Hot Papers in his (co) authored publications. His citation reached 21670 in Google Scholar (h-index 82). He has conducted many successful industrial projects and academic grants from NIH, Royal Society, GCRF, EPSRC, MRC, Hope, British Council, and NSFC. He has given over 120 invited talks at international conferences, universities, and companies. He has served as (Co-) Chair for more than 60 international conferences and workshops. His research outputs have been reported by more than 50 news press, such as Reuters, BBC, Telegraph, Physics World, UK Today News, etc.</p>
<b>Speaker 2: Fuchun Sun, Professor, Department of Computer Science and Technology, Tsinghua University (Online)</b> <b>Speech time: 14:05 (European time)</b> <b>Speech title: Research progress and experience of Sino-German cooperation "cross-modal learning"</b>	



Sun Fuchun, Professor of Tsinghua University, deputy director for State Key Laboratory of Intelligent Technology and Systems, senior member of IEEE, director of Chinese Association for Artificial Intelligence, member of Intelligent Control Technology Committee for IEEE Control System Association.

Editorial board of *Mechatronics*, *IEEE Transactions on Neural Networks*, *Soft Computing*, *Journal of Intelligent Technology*, etc.

Research fields: intelligent control, navigation and control of robots and aircraft, network control system, information perception and processing of artificial cognitive system.

**Speaker 3: Xun Zhang, Professor, Institut supérieur d'électronique de Paris (Online)**

**Speech time: 14:30 (European time)**

**Speech title:** EU Horizon 2020 6G BRANS Project: Integrated Channel Testing and Precise Positioning Solution for 6G Sensitivity



Zhang Xun obtained his Ph.D. in electronic communication engineering from the University of Lorraine in France in 2009. From 2009 to 2011, he completed his post-doctoral research in reconfigurable communication system architecture design at the Central University of Technology in France, and served as assistant professor (2012) and lifelong associate professor (2012) at Institut

supérieur d'électronique de Paris. He is a senior member of the International Institute of Electrical and Electronic Engineers (IEEE), director of the French Chinese Association for Science and Technology, member of the IET and vice president of the Sino French Association for Information Science and Engineering. He has successively applied for and organized a number of international scientific research cooperation projects, such as Sino French Natural Science Joint Research Project and Horizon 2020 EU Project; He has published more than 30 papers in electronic engineering conferences and journals, and written 2 treatises.

**Speaker 4: Dimitrios A. Karras, Professor, National and Kapodistrian University of Athens, Greece (Online)**

**Speech time: 14:55 (European time)**




**Speech title:** On Reliably Managing Uncertainty in Artificial Intelligence and Machine Learning Computations



Dr. Dimitrios A. Karras received the Diploma and M.Sc. degrees in electrical and electronic engineering and the Ph.D. degree (with honors) in electrical engineering from the National Technical University of Athens, Athens, Greece, in 1985 and 1995, respectively. Currently, Dr. Dimitrios A. Karras is a professor in Data and AI Science, Digital and autonomous Intelligent Systems with the National & Kapodistrian

University of Athens, Greece, as well as adjunct Prof. Dr. with the GLA University, Mathura, India and EPOKA & CIT universities, Computer Engineering, Tirana. He has served in universities and research institutes for more than 25 years and published more than 75 refereed journal papers and more than 185 research papers in International refereed Conferences in the

	<p>fields of intelligent and distributed/multi-agent systems, pattern recognition, image/signal processing and neural networks. He has served as program/general chair at several international conferences and, moreover as editor at several international journals in the fields of signal, image, communication and automation systems. He has been cited in more than 2500 research papers, being in the highest 10% of worldwide researchers.</p> <p><b>Speaker 5: Madhurananda Pahar, Postdoctoral Fellow, University of Stellenbosch, South Africa (Online)</b>  <b>Speech time: 15:20 (European time)</b>  <b>Speech title: Using machine learning to detect COVID-19 in vocal audio</b></p>  <p>Madhurananda Pahar received his BSc in Mathematics from University of Calcutta, India; MSc in Computing for Financial Markets &amp; PhD in Computational Neuroscience from University of Stirling, Scotland. Currently he is working as a post-doctoral fellow in the University of Stellenbosch, South Africa. His research interests are in machine learning and signal processing for audio signals and smart sensors in bio-medicine. Currently he is involved in the application of deep learning to the detection and classification of TB and COVID coughs in real-world environments as well as the monitoring of patient behavior using smart sensors such as an accelerometer.</p> <p><b>Speaker 6: Heng Li, Associate Professor, Department of Radiation Oncology and Molecular Sciences, Johns Hopkins University School of Medicine, USA. (Online)</b>  <b>Speech time: 15:45 (European time)</b>  <b>Speech title: Artificial Intelligence in Radiation Oncology</b></p>  <p>Dr. Li is an Associate Professor in the Department of Radiation Oncology and Molecular Radiation Sciences at the Johns Hopkins University, and is a fellow of the American Association of Physicists in Medicine. He serves as the Chief Proton Physicist of the Johns Hopkins Proton Therapy Center, located at the Sibley Memorial Hospital, Washington DC. He completed his Ph.D. Degree in Electrical and Computer Engineering at the University of Virginia, Charlottesville, VA in 2006, and received postdoctoral fellowship and therapeutic medical physics residency trainings at the University of Texas MD Anderson Cancer Center. He was a faculty at the University of Texas MD Anderson Cancer Center from 2010-2019. His research interests include proton therapy physics, motion management in radiotherapy, global health, and AI application in radiation oncology. He has published over 70 scientific papers in peer-reviewed academic journals and authored 9 book chapters.</p>
<p><b>October 08, 2022</b></p>	<p><b>Session B: Modern Medicine &amp; Artificial Intelligence-Keynote Speech</b>  <b>Session Chair: Prof. Fei Yin</b></p> <p><b>Speaker 1: Zhongchao Han, Professor, Academician, French Academy of Medicine &amp; French Academy of Technologies; Director, National Stem Cells Engineering Technology Research Center (Online)</b>  <b>Speech time: 13:40 (European time)</b></p>

<p><b>(European time)</b></p>	<p><b>Speech title:</b> Research and development of stem cells based technologies</p>  <p>Professor Zhongchao Han has been engaged in the research work of hematology, stem cells biology &amp; engineering technology for many years. Altogether, he has published over 500 academic theses, among which 250 English theses appear on international journals. He is the chief editor/ editor of six English academic monographs and eight Chinese academic monographs. In the Elsevier International Assessment, he was selected for China's high-income laborer list for 5 consecutive years. (2015-2019). Professor Zhongchao Han and his team has won more than 20 national and international prizes for the scientific and technological work they accomplished.</p>
	<p><b>Speaker 2: Pietro Morasso, Professor, Italian Institute of Technology, Italy (Online)</b></p> <p><b>Speech time: 14:05 (European time)</b></p> <p><b>Speech title:</b> Tai Chi meets the Cognitive Neuroscience of Action</p>  <p>Prof. Pietro Morasso is currently a Senior Researcher at the Department of Robotics, Brain and Cognitive Sciences at the Italian Institute of Technology. After a Master's degree in Electronic Engineering, from Genoa University, Italy, in 1968, he was Visiting Professor at MIT until 1978 in the lab of Prof. Emilio Bizzi, before returning to Genoa, where he served as Full Professor in Biomedical Engineering until 2009, when he joined the newly established Italian Institute of Technology.</p> <p>Awards: Marconi Co. Ltd Chelmsford UK (1968); Fullbright fellowship (1973); NATO fellowship (1978); Honeywell HUSPI Prize (1984); ZIF fellowship, Bielefeld, Germany (1999); Commander of the Order of Merit of the Italian Republic (2000); JSPS fellowship, Tokyo, Japan (2009).</p> <p>He is the author of six books and over 400 publications in the field of motor neuroscience and humanoid robotics, with an h-index of 52, i10 index of 162, and 15050 citations (Google Scholar).</p>
	<p><b>Speaker 3: Murtaza Hasan, Associate Professor, Department of Biotechnology, The Islamia University Bahawalpur, Pakistan (Online)</b></p> <p><b>Speech time: 14:30 (European time)</b></p> <p><b>Speech title:</b> Exploring nanostructure deep into the functional green chemistry for advance operations</p>  <p>Dr. Murtaza Hasan has completed his PhD in in Biochemical Science from Beijing Institute of Technology in 2014 and Post Doctorate in 2016 under of funding of Peking University Beijing China. Dr. Murtaza Hasan has vast experience in Teaching and Research in different institute at national and international level. His research area is green synthesis of nanoparticles and their biomedical application, Synthesis of Nano-Biofertilizers and their impacts on crops, Surface coating of nanoparticles and harvesting key biomarker from cancer serum. Nano-Proteomics and Nano-biosensor. He has published more than 80 international publications with more than 300 impact factors. He has supervised 42 MS research student to be graduated from</p>



Biochemistry and Biotechnology Department. Currently, there are 5 PhD and 7 MS students are working under his supervision.

**Speaker 4: Wolfgang Orthuber, Vice Director, Department of Orthodontics, UKSH Kiel University, Germany (Offline)**

**Speech time: 14:55 (European time)**

**Speech title:** How to make medical and other digital information precisely comparable and searchable worldwide



Wolfgang Orthuber works as an orthodontist and mathematician at the University Hospital Schleswig-Holstein (UKSH). More than a decade ago he started to research objectivity and comparison of information (first in medicine, then in general). The basic analysis showed that any information is a selection from an ordered set or "domain" that must be the same for the sender and all receivers of the information. This can be broadly generalized: we can uniformly and efficiently define the domain of information by defining sequence of numbers online that are relevant to the application of interest. Wolfgang Orthuber also has developed the numerical search engine <http://numericsearch.com> to demonstrate the precise findability of such information. The global application of the concept would have significant economic, technical and scientific potential.

**Speaker 5: Xiaofeng Xiong, Assistant Professor, University of Southern Denmark, SDU (Offline)**

**Speech time: 15:20 (European time)**

**Speech title:** Machines for intelligence and vice versa: neuromechanical ways toward both



Xiaofeng Xiong was born in Hainan, China. He received the Ph.D. degree in computer science from Georg-August-Universität Göttingen, Göttingen, Germany, in 2015. After working in Göttingen Medical Center and Hamburg University, he is currently an Assistant Professor with the SDU Biorobotics, Odense, Denmark. His current research interests include learning-based robot control, motor control and learning, and neuromechanical modeling. Dr. Xiong was the recipient of the Emerald Innovation and CLAWAR Best Technical Paper Awards.

**Speaker 6: Junyi Liang, Senior Technologist, Lerner Research Institute, Cleveland Clinic, USA (Online)**

**Speech time: 15:45 (European time)**

**Speech title:** Fluorescent protein applications in genetically encodable biosensor development and fluorescence cross-correlation spectroscopy

	 <p>Dr. Junyi Liang obtained PhD from the Chinese University of Nanking. His work there has been described as “unique” by globally-renowned biosensor developer. And In 2014, he joined the Ishikawa Prefecture’s Bio-AFM center directed by Prof. Toshio Ando, he took part in one of Japan’s national grants back then – the JST/CREST, where he carried out fast-scanning atomic force microscopy work. He then left Japan for the states and participated in NIH grant R01HL122827 in the creation of optical biosensor mice for longitudinal studies of vascular function at UMB. After these stints in basic science research, he helped form and conduct collaboration between a Korean pharmaceutical company and Akron University, with the potential commercialization of novel compounds as cancer drugs on the horizon. As of now in the month or so leading up to this conference, he is being recruited to Cleveland Clinic and on way to onboard the clinic’s Lerner Research Institute as a senior technologist, continuing his endeavor in the greater basic science.</p>
<p><b>October 08, 2022 (European time)</b></p>	<p><b>Closing ceremony: speech from Prof. Linhua Jiang, Organizing Committee Chair Time: 16:10 (European time)</b></p>