



Special Session II

Special Session Basic Information:

专栏题目 Session Title	中文：极端光学测量中的新方法 英文：New Methods in Extreme Optical Measurement
专栏介绍和征稿主题 Introduction and topics	
<p>中文：本专题聚焦在极高速、极大/极小尺度、极高分辨率、极复杂环境干扰等极端条件下，光学与视觉测量的新原理、新装置与新算法，打通从测量原理—系统方案—误差建模—标定流程—工程应用的全链条。会议旨在汇聚超快振动测量、远距离与开放大气精密测量、大尺度在线测量、微纳超分辨成像与测量、复杂反光表面测量、透过散射介质成像新方法、弱信息处理方法等方向的最新成果，讨论新型光学计算成像方法在极端测量中的应用，推动精密制造的应用质量控制、在机/在线计量与闭环工艺升级。</p> <p>英文：This session focuses on novel principles, devices, and algorithms for optical and visual measurement under extreme conditions—including ultra-high speeds, extreme scales (macro/micro), ultra-high resolution, and highly complex environmental interference. It establishes a comprehensive chain spanning measurement principles, system design, error modeling, calibration workflows, and engineering applications. It aims to gather the latest achievements in ultra-fast vibration measurement, long-range and open-air precision measurement, large-scale online measurement, micro/nano super-resolution imaging and measurement, complex reflective surface measurement, novel imaging methods through scattering media, and weak signal processing techniques. It will discuss the application of novel optical computational imaging methods in extreme measurement scenarios, driving advancements in precision manufacturing quality control, in-machine/online metrology, and closed-loop process upgrades.</p>	

Special Session Chair(s):

	姓名 Name	傅愉 (Yu Fu)
	称谓 Prefix	教授 Prof.
	部门 Department	物理与光电工程学院 College of Physics and Optoelectronic Engineering
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Organizer's Brief Biography		
<p>中文：傅愉，教授，博士生导师，2005 年获新加坡国立大学博士学位，2007 年在德国斯图加特大学担任洪堡学者，主要研究光学动态测量、光学干涉测量、计算机视觉。发表论文 100 余篇，目前是国际光学工程学会(SPIE)会士，中国力学学会实验力学专业委员会委员。</p> <p>英文：Yu Fu received his PhD degree from the National University of Singapore in 2005. In 2007, he was a Humboldt Research Fellow at the University of Stuttgart, Germany. His main research interests include optical dynamic measurement, optical interferometric measurement, and computer vision. He has published more than 100 academic papers. He is currently a Fellow member of the International Society for Optics and Photonics (SPIE) and a member of the Experimental Mechanics Committee of the Chinese Society of Theoretical and Applied Mechanics.</p>		

	姓名 Name	刘晓利 Xiaoli Liu
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Organizer's Brief Biography		
<p>中文：刘晓利，教授，博士生导师，2008 年获天津大学博士学位，主要研究结构光三维测量、计算光场三维测量、计算机视觉。发表论文 100 余篇，获授权发明专利 50 项，曾获广东省科技进步二等奖、深圳市技术发明一等奖等科技奖励。</p> <p>英文：Liu Xiaoli received his PhD degree from Tianjin University in 2008. He is now a professor in Shenzhen University. His research interests are structured light 3D measurement, light field 3D imaging, and computer vision. He has published more than 100 papers, awarded two Second Prizes in the Guangdong Provincial Science and Technology Progress Award, and held more than 50 authorized invention patents.</p>		

	姓名 Name	何文奇 He Wenqi
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Organizer's Brief Biography		
<p>中文：何文奇，副教授，博导，2012 年获深圳大学博士学位，主要研究兴趣有：计算光学成像与光学加密。先后以第一作者/通讯作者身份发表 SCI 论文 41 篇。入选 2024 年、2025 年斯坦福全球前 2%科学家榜单。</p> <p>英文：He Wenqi received his PhD degree from Shenzhen University in 2012. He is now an Associate Professor at Shenzhen University, with primary research interests in computational optical imaging and optical encryption. He has published 41 SCI-indexed papers as first author or corresponding author. He was listed among the Stanford World's Top 2% Scientists in 2024 and 2025.</p>		

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