











非暴露空间国际学术论坛(香港)

The International Academic Forum for Non-Exposed Space (Hong Kong)

9 December 2023, Hong Kong

New Released/新发布

- UWB blue paper new released /
- UWB 蓝皮书发布

Main Activities/ 主要活动

- Open Speaking / 开场演讲
- Award Announcement / 奖项颁布
- Photo Taking / 与会合影
- **Keynote Speeches &**
- Panel Discussion/
- 主题演讲 & 圆桌会议
- yaxin-roan.li@polyu.edu.hk
- https://polyu.hk/HrguL
- 2209, 2/F, Block Z, Phase 8, 181 Chatham Road -South, Hung Hom, Kowloon, Hong Kong 香港理工大学(红磡校区) Z座 二层林植豪演讲厅



Conference Registration 会议注册二维码



Conference Live 会议直播二维码

Supporting Organizations/ 支持单位:





























徐冠华 Guanhua Xu 中国科学院院士 Academician of CAS



Zhibin He 国际宇航科学院院士 Academician of the International Academy of Astronautics and Astronautics



Aikebaier.Yilahong 新疆农业大学教授 Professor of Xinjiang Agricultural University



Hongxing Sun 武汉大学副教授 Associate Professor **Wuhan University**



Chong Cao Director of Global New Space-time Information Technology Research Institute and Positioning Association



Quande Zhang 环球新时空信息技术研究院院长 中国卫星导航定位协会总工程师 Chief engineer China Satellite Navigation



Changliang Geng

北京城建勘测设计研究院 测量院院长 President of Surveying Institute of Beijing Urban Construction Survey and Design Institute

> 陈武 Wu Chen

香港理工大学土地测量

及地理资讯学系主任

Polytechnic University



Yanyan Chen

北京工业大学城市交通学院院长 Dean of School of Urban Transportation, Beijing University of Technology



Xiaoli Ding

香港理工大学土 地及空间研究院院长 Chair Professor of Geomatics Director Research Institute for Land and Space



蔺陆洲 Luzhou Lin

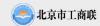
中国卫星导航定位协会副会长 Vice President of Dean of Land Surveying and Geo-Informatics of The Hong Kong China Satellite Navigation and **Positioning Association**



钟涛 Tao Zhong

全图通位置网络有限公司 总工程师 Chief engineer of Quantutong Location Network Co., Ltd.

































The Introduction of Non-Exposed Space

非暴露空间国际学术论坛介绍

The International Academic Forum for Non-exposed Space has been successfully held for eight sessions in China since 2016. The term "non-exposed space positioning" was first defined by academite Yang Yuanxi. At the same time, the academic forum was jointly proposed and promoted by many academists such as Sun Jiadong, Qi Faren, Shen Rongjun, Liu Jingnan, Li Deren, Fan Benyao, He Xibin and Ouyang Ziyuan. The International Academic Forum on Non-exposed Space is a comprehensive, professional, interdisciplinary and innovative academic platform. This paper aims to discuss the application and development of indoor and outdoor PNT (Positioning, Navigaiton and Timing) technology. The forum attracted participants at different levels, fields and channels, including the general public, scientists and engineering applicators, who jointly focused on space technology, urban rail transit technology, as well as the application of UWB technology in non-exposed space and indoor and outdoor fusion positioning. As the leader and participant of the forum, Quantutong Company has been actively supporting and promoting the development of the forum, providing necessary support and resources for it.

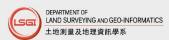
非暴露空间国际学术论坛自2016年在中国已成功举办了八届。"非暴露空间定位"一词由杨元喜院士首次学术定义,同时该学术论坛也得到众多院士如孙家栋、戚发轫、沈荣骏、刘经南李德仁、范本尧、何质彬、欧阳自远等共同倡议和推动,非暴露空间国际学术论坛是一个综合性、专业性、跨学科和创新性的学术平台,旨在探讨室内外 PNT (位置、导航和授时)技术的应用与发展。该论坛吸引了不同层次、领域和渠道的参与者,包括普通公众、科学家和工程应用者,他们共同关注太空技术、城市轨道交通技术以及 UWB 技术在非暴露空间中的应用和室内外融合定位。全图通公司作为论坛的主导者和参与者,一直在积极支持和促进论坛的发展,为其提供必要的支持和资源。















Forum Agenda/会议议程

- 08:30-09:00 Guests Sign-In/ 嘉宾签到
- 09:00-09:25 Opening Ceremony / 开幕式

Forum Chair introduced the participants and academicians delivered speeches/ 论坛主席介绍与会嘉宾及院士致辞

- Opening Speech/ 开场演讲
 - 09:25-09:45 *Principle, application and development of mobile laser scanning system/ 移动激光扫描系统原理、应用与发展*Hongxing Sun-Associate Professor Wuhan University/ 孙红星-武汉大学副教授
 - 09:45-10:05 Commercial SAR remote sensing application exploration/ 商业SAR遥感应用探索
 Weijia Ren-Changsha Tianyi Research Institute CTO(Chief Technology Officer)/

任维佳-长沙天仪研究院CTO(首席技术官)

- 10:05-10:20 Satellite launch cooperation LoI signing ceremony/ 卫星发射合作意向书签署仪式
- 10:20-10:35 UWB blue paper released/UWB 蓝皮书发布

Tao Zhong-Chief Engineer of Quantutong Location Network Co.,Ltd./ 钟涛-全图通位置网络有限公司总工程师

- 10:35-10:45 Award Announcement / 奖项颁布
- 10:45-11:00 Photo Taking / 与会专家合影
- 11:00-11:20 Tea Break/ 茶歇
- Keynote Speeches/ 主题演讲
- 11:20-11:40 Beidou new space-time enabling digital economy research/ 北斗新时空赋能数字经济研究

 Chong Cao-Director of Global New Space-time Information Technology Research Institute/

曹冲-环球新时空信息技术研究院院长

• 11:40-12:00 Application of Beidou in urban intelligent transportation construction/北斗在城市智能交通建设方面的应用

Quande Zhang-Chief engineer of China Satellite Navigation and Positioning Association/

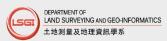
张全德-中国卫星导航定位协会总工程师

• 12:00-13:30 Lunch/午餐













Forum Agenda/会议议程

 Keyno 	ote Speeches/ 主题演讲
---------------------------	--------------------

•		Keynote Speeches/ 王题演讲
•	13:30-13:50	Acquisition and application of spatial big data in the whole life cycle of urban rail transit/
		城市轨道交通全生命周期空间大数据采集与应用
		Changliang Geng-President of Surveying Institute of Beijing Urban Construction Survey
		-and Design Institute/
		耿长良-北京城建勘测设计研究院测量院院长
•	13:50-14:10	Beidou + in the smart development of Hong Kong city/ 北斗+在香港城市方面的智能发展
		Yanyan Chen-Dean of School of Urban Transportation, Beijing University of Technology
		陈艳艳-北京工业大学城市交通学院院长
•	14:10-14:30	UWB-based precision positioning system for coal mine personnel, vehicles and equipment/
		基于UWB的煤矿人员、车辆和设备的精准定位系统
		Siping Liu-Researcher of Beijing Jiaotong University/ 刘思平-北京交通大学研究员
•	14:30-14:50	Train interworking operation control solution under multi-network integration/
		多网融合下列车互联互通运行控制解决方案
		Tao Tang-Dean of School of Electronic Information Engineering of Beijing Jiaotong University/
		唐涛-北京交通大学电子信息工程学院院长
•	14:50-15:10	The key supporting technology of non-exposed space digitalization-The development and application
		of 3D mobile scanning technology非暴露空间数字化关键支撑技术三维移动扫描技术的发展与应用
		Jimmy Li-Head of Greater China, NavVis GmbH/李自明-内芬兹信息科技(上海)有限公司大中华区执行总裁
•	15:10-15:30	Utilization of Underground Space in Hong Kong and Future Potentials/香港地下空间的利用及未来发展潜力
		Xiaoli Ding-Chair Professor of Geomatics Director Research Institute for Land and Space/
		丁晓利-香港理工大学土地及空间研究院院长
	15:30-15:50	Multimode UWB microbase station/ 多模态UWB微基站

- 15:50-16:00 Notes of Thanks by Conference Chair/ 大会主席做结束语
- · Disclaimer by the Quantutong Location Network Co.,Ltd./论坛最终解释权由全图通位置网络有限公司所有
 - Organisers may adjust this agenda, Please refer to the https://polyu.hk/HrguL for the latest agenda/此会议议程可能会有所变动,可以https://polyu.hk/HrguL 网站上获取最新议程

Di Zhang-General manager of Quantutong Location Network Co.,Ltd./ 张迪-全图通位置网络有限公司工程师