

IEEE UV2022

General Information



Organizing Committee

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IEEE Xplore



THE 6TH IEEE UV2022

INTERNATIONAL CONFERENCE ON UNIVERSAL VILLAGE



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OCTOBER 22-25 | BOSTON AND VIRTUAL



UV Concept & UV Conference

Universal Village (UV) is a new concept proposed by MIT's Universal Village Program in 2012. UV exemplifies an ideal future society that pursues harmony between humans and nature through the wise use of technologies.

Led by MIT professors who initiated the MIT UV program as well as the UV conferences, the IEEE UV Conferences call for collective efforts from world-renowned experts across multi-disciplinary fields to collaborate beyond traditional field boundaries. Previous IEEE UV conferences (UV2013, UV2014, UV2016, UV2018, and UV2020) were groundbreaking international venues that inspired successful collaboration among governments, academia, industries, and civil society.

<https://universalvillage.org/ieee-uv-conference/>



UV 理念 UV Concept

Universal Village (UV) & Future Lifestyle

新型智慧城市和未来生活方式

--集智慧环境、智慧医疗、智慧交通系统、智慧节能与环保为一体的智慧宜居空间



Universal

遵从宇宙自然的规律

Follow the law of Universe

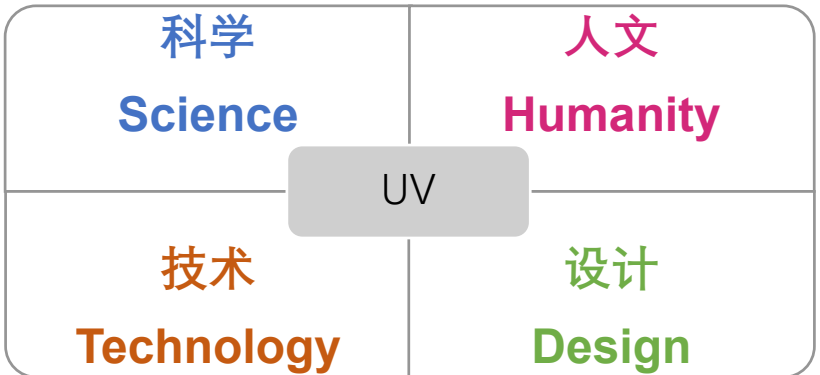
Village

城市不应是唯一的生活环境

Cities are not the only living environment



UV 系统 UV Element



4个影响因素 4 Impacting Factors

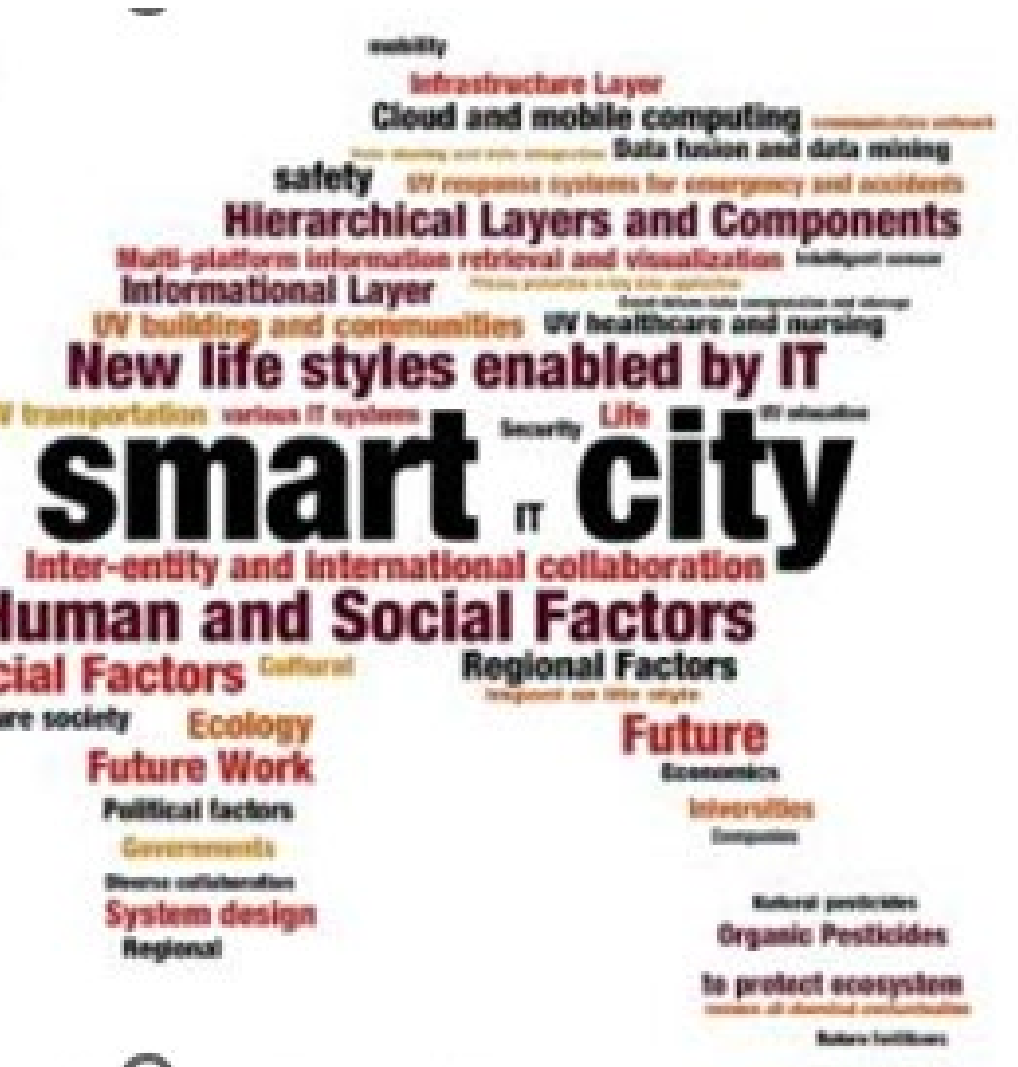
- ❖ UV 信息流 UV Information Flow
- ❖ UV 物质流 UV Material Cycles
- ❖ UV 生活方式 UV Lifestyles
- ❖ UV 社团 UV Communities

8 UV 子系统 8 UV Sub-systems

1. 智慧家居 Smart Home and Community
2. 智慧医疗 Smart Medicine and Healthcare
3. 智慧交通 ITS, Urban Planning and Crowd Management
4. 智慧能源 Smart Energy Management
5. 智慧基建 Smart City Infrastructure
6. 智慧应急系统 Smart Response System for City Emergency
7. 智慧环保 Smart Environmental Protection
8. 智慧人文 Smart Humanity



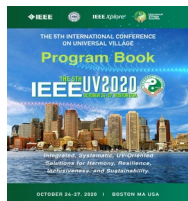
UV 范畴 UV SCOPE





Previous UV Conferences 主题

UV2020
Boston



实现UV和谐、韧性、包容、可持续性，探索整合、系统、UV方案
INTEGRATED, SYSTEMATIC, UV-ORIENTED, SOLUTIONS FOR HARMONY, RESILIENCE, INCLUSIVENESS AND SUSTAINABILITY

UV2018
Boston



通向UV和谐：多样、流动、连接
DIVERSITY, MOBILITY AND CONNECTIVITY FOR EMERGENCE OF HARMONY IN UNIVERSAL VILLAGE

UV2016
Nagoya



地域、发展阶段、技术背景、人文因素考量
UV FOR REGIONS AT DIFFERENT DEVELOPMENT PHASES, PEOPLE AT DIFFERENT AGES WITH VARIOUS TECHNOLOGY & CULTURE BACKGROUNDS

UV2014
Boston



创新生活方式
INNOVATE FUTURE LIFESTYLE FOR SUSTAINABLE HAPPINESS

UV2013
Beijing



人与自然
HUMANKIND IN HARMONY WITH NATURE THROUGH WISE USE OF TECHNOLOGY

后疫情时代对健康、和谐、可持续性的反思 Post-Pandemic Reflection on Health, Harmony, and Sustainability



- *Responsiveness & Resilience*
- *Inclusiveness & Integration*

- *Mobility & Virtual Connection*
- *Diversity & System Efficiency*

IEEE UV2022

The 6th IEEE International Conference on Universal Village

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Website: www.UniversalVillage.org



The banner features a dark green background. At the top left, it displays the text "IEEE INTERNATIONAL CONFERENCE ON UNIVERSAL VILLAGE" in white, accompanied by the Universal Village logo (a yin-yang symbol with hands) and the ITSS logo. To the right are the IEEE logo and the Universal Village Society logo. The central focus is the large white text "UV2022", where the "20" is replaced by a blue and green globe with a light blue surgical mask resting on it. Below the main text, it reads "OCTOBER 22-25 | VIRTUAL" in white capital letters.

General Chairs

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IEEE UV2022 Topics

- ◆ **Developing systematic methodologies to advance UV technologies and to develop UV systems,** including Intelligent Transportation Systems, Urban Planning and Crowd Management, Smart Infrastructure, Smart Response Systems for Emergencies, Smart Energy Management, Smart Environmental Protection, Smart Home and Community, Smart Medicine and Healthcare, and Smart Humanity
- ◆ **New lifestyles** enabled by IT / New energy / New materials / Effective microorganism technology and environmental protection
- ◆ **Exploring UV development paths** from theoretical exploration, research development, framework design, implementation, and engineering through to integration, appropriate for different regions at different development phases
- ◆ **Inspiring successful collaboration** among governments, academia, industries, and civil society to address different UV challenges and seeking practical UV solutions

1. **[TS1]** *UV Vision, Development, and Evaluation*

- **[TS1-A]** Vision for Universal Village and UV Indices
- **[TS1-B]** Development Status of Universal Village
- **[TS1-C]** Evaluation of Smart City-Related Methods, Technologies, and Systems

2. **[TS2]** *UV Framework Design, Modeling, and System Integration*

- **[TS2-A]** Systematic and Integrated Frameworks for UV Subsystems and Contributing Factors
- **[TS2-B]** Intelligent Modeling, Simulation, and System Analysis

3. **[TS3]** *Mobility, Planning, Management, and Infrastructure Innovations for Safety, Efficiency, and Connectivity*

- **[TS3-A]** Intelligent Transportation, Urban Planning, and Smart City Infrastructure
- **[TS3-B]** Intelligent Vehicles, Mobility Support for Vulnerable Groups
- **[TS3-C]** Crowd Management, Smart Response Systems for Emergencies
- **[TS3-D]** Information Flow, Communication, Networks, and Security

4. **[TS4]** *Energy and Material Innovations for Efficiency, Safety, and Sustainability*
 - **[TS4-A]** Renewable Energy and Smart Energy Management
 - **[TS4-B]** Smart Materials and Devices

5. **[TS5]** *Manufacturing and Agriculture Innovations for Sustainability*
 - **[TS5-A]** Smart Manufacturing
 - **[TS5-B]** Smart Agriculture

6. **[TS6]** *Environmental Resilience for Harmony between Humans and Nature*
 - **[TS6-A]** Smart Environmental Protection, Ecological and Environmental Systems
 - **[TS6-B]** Mobility Enabled Material Cycles, the Circular Economy, Trash and Scrap Collection, Processing, Reuse, and Recycling

7. **[TS7]** *Lifestyle Innovations for Mobility, Connectivity, Efficiency, and Happiness*
 - [TS7-A]** Smart Homes and Community, Virtual Living
 - [TS7-B]** Mobility, Connectivity, and Innovative Lifestyles

8. **[TS8]** *Healthcare Innovations for Safety and Well-Being*
 - **[TS8-A]** Advanced Technologies for Healthcare Monitoring at Home, in Vehicles, and in Communities
 - **[TS8-B]** Smart Medicine and Smart Healthcare
 - **[TS8-C]** Public Health, Epidemic Prevention and Control

9. **[TS9]** *Human-Centered Social Innovations for Diversity, Inclusiveness, Fairness, and Preservation of Cultural Heritage*
 - **[TS9-A]** Urbanization and Smart Communities
 - **[TS9-B]** Smart Government and Social Services
 - **[TS9-C]** Integrated Solutions for Smart Humanity
 - **[TS9-D]** Smart Design and Design Ethics



Part I: Technical Sessions (D)

10. **[TS10]** *Data Management and Algorithm Development*
 - **[TS10-A]** Responsible and Ethical Data Management and Processing
 - **[TS10-B]** Learning Algorithm Development, Analysis and Interpretability

11. **[TS11]** *Special Sessions - New Proposed Sessions*
 - **[TS11-A]** Future Lifestyles and Smart Communities: UV Intelligent Design for Vulnerable Groups
 - **[TS11-B]** UV Data Science Competition: Algorithm Report Session
 - **[TS11-C]** Advance in Distributed Energy System: Design, Simulation and Operation



Forums

1. **[CF]** *UV City Forum - SuZhou*
2. **[SF]** *UV Student Forum*
3. **[AF]** *UV Art Forum*

Competitions

1. **[DSC]** *UV Data Science Competition*
2. **[PC]** *UV Pitch Competition*
3. **[K12C]** *UV K-12 Challenge*

Exhibition

- [PE]** *UV Poster and Exhibition*

Workshop

- [WS-UV]** *UV Workshop*

Interactive Programs

1. [**RMD**] *UV Roadmap Discussion*
2. [**PD**] *UV Panel Discussion*
 - [**PD1**] Post-Pandemic Reflection
 - [**PD2**] New Legal, Social, and Ethical Challenges Posed by Applications of AI
3. [**RTD**] *UV Round Table Discussion*

Thank You!

*Let's Work Together to Make IEEE UV2022
Another UV Milestone!*



October 22-25

Boston USA

IEEE INTERNATIONAL CONFERENCE
ON UNIVERSAL VILLAGE

