

IEEE UV2022

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THE 6TH IEEE UV2022 INTERNATIONAL CONFERENCE ON UNIVERSAL VILLAGE



IEEE INTERNATIONAL CONFERENCE ON UNIVERSAL VILLAGE



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IEEE INTERNATIONAL CONFERENCE ON UNIVERSAL VILLAGE



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/>

Universal Village (UV) & Future Lifestyle

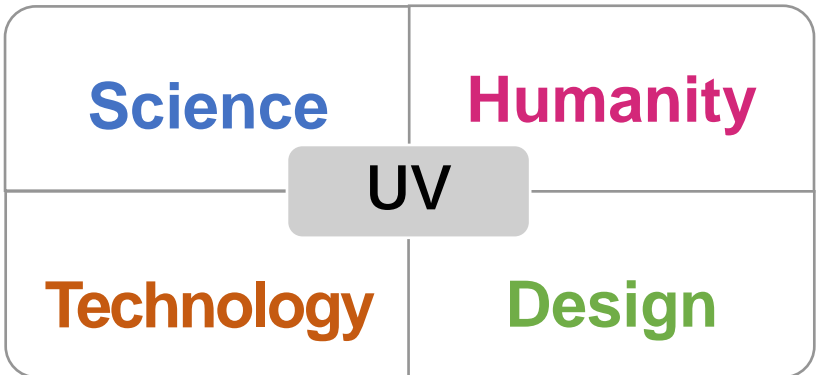


Universal

Follow the law of Universe

Village

Cities are not the only living environment



4 Impacting Factors

- ❖ UV Information Flow
- ❖ UV Material Cycles
- ❖ UV Lifestyles
- ❖ UV Communities

8 UV Sub-systems

1. Smart Home and Community
2. Smart Medicine and Healthcare
3. ITS, Urban Planning and Crowd Management
4. Smart Energy Management
5. Smart City Infrastructure
6. Smart Response System for City Emergency
7. Smart Environmental Protection
8. Smart Humanity

UV SCOPE





Previous UV Conferences

UV2020
Boston



INTEGRATED, SYSTEMATIC, UV-ORIENTED, SOLUTIONS FOR HARMONY, RESILIENCE, INCLUSIVENESS AND SUSTAINABILITY

UV2018
Boston



DIVERSITY, MOBILITY AND CONNECTIVITY FOR EMERGENCE OF HARMONY IN UNIVERSAL VILLAGE

UV2016
Nagoya



UV FOR REGIONS AT DIFFERENT DEVELOPMENT PHASES, PEOPLE AT DIFFERENT AGES WITH VARIOUS TECHNOLOGY & CULTURE BACKGROUNDS

UV2014
Boston



INNOVATE FUTURE LIFESTYLE FOR SUSTAINABLE HAPPINESS

UV2013
Beijing



HUMANKIND IN HARMONY WITH NATURE THROUGH WISE USE OF TECHNOLOGY

Post-Pandemic Reflection on Health, Harmony, and Sustainability



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

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

IEEE UV2022

The 6th IEEE International Conference on Universal Village

IEEE UV2022 Organizing Committee
One Broadway, Cambridge, MA 02142

Email:

<uv2022.conf@universal-village.org>

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 top. Below the main text, it reads "OCTOBER 22-25 | VIRTUAL" in white capital letters.

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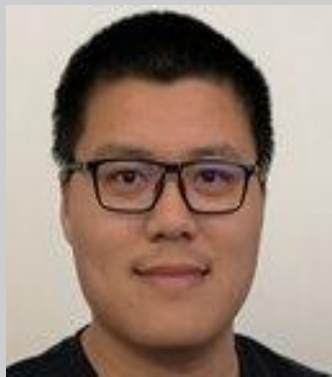


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IEEE UV2022 Topics

- ◆ **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



Part I: Technical Sessions (B)

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]** Education Systems in the Universal Village City of the Future
 - **[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*
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*



Part III: Interactive Programs

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

