

## INVITED SESSION SUMMARY

Title of Session: **Design of Nigiwai: Places Embracing Values**

**Name, Title and Affiliation of Chair:**  
**Akinori Abe, Prof, Chiba University**  
**Yukio Ohsawa, Prof., The University of Tokyo**  
**Sae Kondo, Prof, Mie University, and The University of Tokyo**

**Details of Session (including aim and scope):**

So far, we have been organizing sessions on Chance Discovery, that is research to study how to discover rare or novel events which may potentially cause significant situation but may also cause fatal accidents. We have discussed limitations of conventional methods for machine learning and data mining, and introduced concepts and methods for human-based discovery. In order to deal with events in the real world, we integrated artificial, natural, and social intelligence. In addition, we learned it is important to discuss effective the evaluation, selection, and creation of such events. Furthermore, we discussed the “curation” of chance events, which implies to actively present hints of chance to users. All in all, we acquired the research direction toward sensing, presenting, using, and creating values – both positive and negative – in the real world.

This session will discuss problems relevant to how to design Nigiwai, which means the state of a place that accepts diverse people sustainably. This does not mean a sheer “bustling” or “lively” place where many people or a lot of money gather, but a place where opportunities and risks coexist; that is, an environment where the discovery and creation of values can be expected through the crossover of ideas and mutual stimulation, but if not observed and managed well, individuals may suffer from infectious diseases, crime, and anxiety (this balance between expectations and fears may be a design factor). Thus, we deal with Nigiwai as an environment for the discovery and management of chances.

In this session, we aim to exchange participants’ studies, wisdoms, and opinions relevant to this topic and discussing issues and methods for designing, managing, and optimizing Nigiwai places.’

**Main Contributing Researchers / Research Centres (tentative, if known at this stage):**

[Topics on Chance Discovery so far]

See: <http://kes2024.kesinternational.org/cms/userfiles/is18.pdf>

[Design with Big Data from/for Places] Designing valuable places and creating meaningful physical environments for people to inhabit, experience, and enjoy.

- Place-Making Strategies with Big data: Methods and approaches to create meaningful and engaging environments that foster social interaction, community cohesion, and a sense of belonging
- Participatory Design: Approaches to involve stakeholders, including residents, businesses, and community groups, in the design process
- Environmental Psychology: Relationship between the built environment and human behavior, emotions, and well-being, and explore design interventions
- Smart Cities and Technologies: Integration of digital technologies, data analytics, and Internet of Things (IoT) solutions to enhance the functionality, efficiency, and sustainability of urban spaces and infrastructure.

- **Placemaking for Health and Well-being:** The role of design in promoting physical activity, mental health, and social well-being through the creation of accessible, inclusive, and health-promoting environments
- **Sustainable Design Practices:** Research strategies for integrating principles of sustainability, resilience, and ecological stewardship into the design of buildings, landscapes, and urban infrastructure
- **Long and short-term interventions:** Interventions, such as revitalizing historic sites, street festivals, community gardens etc., to activate spaces, foster community engagement, and catalyze long-term urban transformation

[Scope of data science] Analysis of data on activities in places and their synergetic effects, with a focus on ensuring data quality and addressing ethical considerations.

- **Data Integration:** Integration of data which may emanate from several different sources and are represented in several different formats, resolving entities within and across data for deriving utility from data.
- **Data Quality Assurance:** The focus is on ensuring the utility, accuracy, reliability, and completeness of the data collected from places.
- **Statistical Analysis:** Application of statistical techniques to analyze the activities of individuals and their communication and mobility with or without vehicles in the target places.
- **Machine Learning and Predictive Modeling:** Utilization or development of machine learning algorithms to predict the behavior of a crowd or its individuals, related to the design of a community, marketplace, or public places.
- **Data Visualization and Interpretation:** Data visualization techniques to foster insights into the values in the place. The author may challenge the analysis by creating interactive visualizations,
- **Ethical and Privacy Considerations:** Ethical implications and privacy issues related to the analysis of the above or other categories.
- **Value creation:** Proprietary algorithms, models, or processes to extract actionable insights from the data and methods to provide these insights as part of service offerings.
- **Data Monetization:** Methods and technologies to monetize the data collected from crowds or their activities by selling them to businesses, researchers, or government agencies interested in analyzing the behavior of crowds.
- **Product/Service Development:** Insights gained from analysis of live individuals and/or communities and/or crowds to inform the development of new values.
- **Customer Engagement:** Methods for making personalized experiences or recommendations based on the analysis of human individual/community/crowd/social behaviors based on data-driven insight,
- **Partnerships and Collaborations:** Methods for exploring partnerships or collaborations with other organizations, such as other individuals, companies, or government agencies.
- **Regulatory Compliance and Risk Management:** Methods and methodologies for ensuring regulatory compliance and mitigating social risks.

**Website URL of Call for Papers (if any):**  
(TBA)

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