

Exploring Urban Soundscapes: Interactive Data Visualization with 'Urban Sound Diary'

Friday Nov 22, 2024 — 9:00 - 12:00

CHCHI 2024 Workshop by the SUSTech School of Design | Sound Studies Group



Workshop Description:

This workshop seeks to engage participants in exploring and manipulating urban sound data utilizing the Urban Sound Diary application. Through the workshop, participants will (1) be introduced to the 'Urban Sound Diary' application and its functionalities; (2) acquire the relevant theoretical knowledge of audio analysis; (3) be encouraged to explore the urban soundscape through interactive data visualization in a creative manner; (4) gain insight into, and engage in discussions regarding the implications of the data in urban studies, sound studies, human-centered technology, interaction design, and social computing; (5) provide feedback on the application's usability and features for future enhancements.

Participants:

3 to 10 participants

Equipment Needed:

A charged personal smartphone with a stable mobile internet connection.

Location:

Nanshan Intelligence Park, Building C1

Target Audience:

Researchers, urban planners, media artists, and practitioners interested in urban studies, data visualization, sound studies, mobile technologies, and interactive technologies.

Schedule:

09:00 - 09:15	Introduction of the project and background
09:15 - 10:00	Demonstration and walk through of the 'Urban Sound Diary'
10:00 - 10:30	Outdoor sound recording
10:30 - 10:45	<i>Coffee break</i>
10:45 - 11:15	Sound analysis, creative exploration using 'Urban Sound Diary'
11:15 - 12:00	Discussion of results, free sharing



Workshop Speaker:

Xuehua Fu

(MSc Computer Science, KTH, Sweden; Researcher at SUSTech School of Design, Sound Studies Group)

Xuehua is a computer science researcher specialized in human-centered computing. Her current research interests include sound and music computing, multisensory perception, and human-computer interaction. Xuehua joined the Sound Studies Group in July 2024. She has been leading the development of the research project "The Big Voice" about data-driven studies of urban sounds in Shenzhen, in which the app 'Urban Sound Diary' was created.

Workshop Assistance:

Zhaorui Liu, Jiayi Wen, Hao Zheng, Bocheng Zhong (SUSTech School of Design, Sound Studies Group)

Project PI:

Marcel Sagesser

Marcel Sagesser (PhD '21 Brown University) is an assistant professor at the SUSTech School of Design and is a sound and technology researcher, focusing on physical sonic matter, algorithms, and interactions between humans and technology. He is the co-director of the Sound Studies Group.

Project Team Members:

Marcel Sagesser, Xuehua Fu, Zhaorui Liu, Jiayi Wen, Hao Zheng (SUSTech), Jian Xiao (Zhejiang University), Mengyu Luo (ShanghaiTech University)

Acknowledgment:

The content of this workshop is part of the research project **The Big Voice: Practice-Based Research on the Development and Participatory User Study of a Novel Voice Remix App**. The project is partially funded by the **Key Laboratory of Intelligent Processing Technology for Digital Music (Zhejiang Conservatory of Music), Ministry of Culture and Tourism**.

城市声境：城市声音日志的交互数据可视化

2024年11月22日 星期五 上午9:00 - 12:00

ChCHI 2024 工作坊

南科大创新创意设计学院 | 声音研究小组



工作坊描述：

本工作坊旨在通过使用“城市声音日记”应用程序，带领参与者探索和操作城市声音数据。在工作坊过程中，参与者将：

- 了解“城市声音日记”应用程序及其功能；
- 掌握音频分析的相关理论知识；
- 通过互动数据可视化，以创造性的方式探索城市声景；
- 深入了解并参与讨论数据在城市研究、声音研究、以人为本的技术、交互设计和社会计算中的意义；
- 对应用程序的可用性和功能提出反馈，以便未来改进。

人数：

3 - 10人

所需设备条件：

手机电量充足，网络连接稳定。

地点：

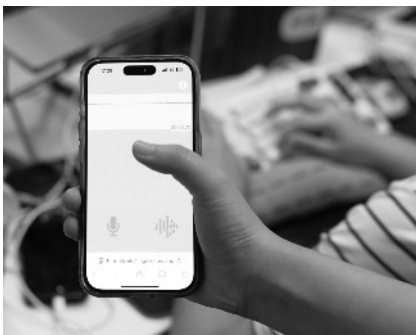
南山智园C1栋

目标受众：

研究人员、城市规划师、媒体艺术家以及对城市研究、数据可视化、声音研究、移动技术和交互技术感兴趣的从业者。

日程：

09:00 - 09:15	项目介绍与背景说明
09:15 - 10:00	“城市声音日记”演示与操作指南
10:00 - 10:30	户外声音录制
10:30 - 10:45	茶歇
10:45 - 11:15	声音分析与创意探索使用“城市声音日记”
11:15 - 12:00	结果讨论与自由分享



工坊主持:

付雪画 (瑞典皇家理工学院计算机科学硕士; 南方科技大学设计学院声音研究小组研究员)

付雪画专注于以人为本计算的人机交互领域。她目前的研究兴趣包括声音与音乐计算、多感官感知以及人机交互。付雪画于2024年7月加入声音研究小组, 领导“宏大之声”研究项目的开发。该项目旨在基于数据驱动的方式研究深圳的城市声音, 并在此过程中创建了“城市声音日记”应用程序。

工坊助理:

刘兆蕤, 文嘉懿, 郑好, 钟伯诚 (创新创意设计学院声音研究小组)

项目负责人:

马塞尔·萨格塞尔

布朗大学博士 (2021), 南方科技大学创新创意设计学院助理教授。专注于声音与技术研究, 主要研究领域包括物理声学物质、算法以及人类与技术之间的互动。他是声音研究小组的联合负责人。

项目团队成员:

马塞尔·萨格塞尔, 付雪画, 刘兆蕤, 文嘉懿, 郑好 (南方科技大学); 肖剑 (浙江大学); 罗梦雨 (上海科技大学)

致谢:

本工作坊的内容是研究项目《宏大之声: 新型语音混音应用开发及参与式用户研究的实践研究》的组成部分。该项目部分由数字音乐智能处理技术重点实验室 (浙江音乐学院)、文化和旅游部资助。