

# Yuuki Nishiyama, Ph.D.

Associate Professor

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## Research Interests

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Ubiquitous computing; mobile and wearable sensing; IoT; context-aware systems; just-in-time adaptive intervention (JITAI); mHealth; human behavior analysis.

## Education

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- Apr. 2014 - Sep. 2017* **Ph.D. in Media and Governance**  
Graduate School of Media and Governance, Keio University (*Ubiquitous Computing*)
- Apr. 2012 - Mar. 2014* **Master of Media and Governance**  
Graduate School of Media and Governance, Keio University (*Ubiquitous Computing*)
- Apr. 2008 - Mar. 2012* **Bachelor of Arts in Environment and Information Studies**  
Faculty of Environment and Information Studies, Keio University

## Work Experience

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- Oct. 2025 - Present* **Visiting Researcher**  
Information School, University of Washington, *Seattle, WA, USA*
- Apr. 2025 - Present* **Associate Professor**  
Center for Spatial Information Science, The University of Tokyo, *Kashiwa, Chiba, Japan*
- Apr. 2022 - Mar. 2025* **Lecturer (Assistant Professor)**  
Center for Spatial Information Science, The University of Tokyo, *Kashiwa, Chiba, Japan*
- Sep. 2019 - Mar. 2022* **Research Associate**  
Institute of Industrial Science, The University of Tokyo, *Tokyo, Japan*
- Apr. 2018 - Aug. 2019* **Postdoctoral Researcher**  
Faculty of Information Technology and Electrical Engineering, University of Oulu, *Oulu, Finland*
- Oct. 2017 - Mar. 2018* **Project Assistant Professor**  
Graduate School of Media and Governance, Keio University, *Kanagawa, Japan*
- Apr. 2017 - Mar. 2018* **Part-time Lecturer**  
Faculty of Environment and Information Studies, Keio University, *Kanagawa, Japan*
- Apr. 2017 - Sep. 2017* **Part-time Assistant**  
College of Science and Engineering, Aoyama Gakuin University, *Tokyo, Japan*
- Sep. 2015 - Mar. 2016* **Visiting Research Scholar**  
Ubicomp Lab, Human Computer Interaction Institute (HCII), School of Computer Science, Carnegie Mellon University, *PA, USA*
- Apr. 2014 - Mar. 2017* **Research Assistant (RA)**  
Global Environmental System Leaders Program (GESL), Keio University, *Kanagawa, Japan*

## Publications

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† Denotes papers for which I provided primary mentorship in writing and research direction.

### Journal Articles (21)

- [J1] Peng, Helinyi, Taya, Akihito, Nishiyama, Yuuki, Sezaki, and Kaoru. 2026. AEDHunter: Investigating AED Retrieval in the Real World via Gamified Mobile Interaction and Sensing. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 10, 1. [DOI]
- [J2] **Yuuki Nishiyama**, Subaru Atsumi, Kota Tsubouchi, and Kaoru Sezaki. 2025. A-UVI: GNSS-Assisted EO-based UV Index Estimation Method for Individual-level Precise UV Exposure Assessment. *Proc. ACM Interact. Mob. Wearable Ubiquitous Technol.* 9, 2. [DOI]
- [J3] Zengyi Han, En Wang, Mohan Yu, Jie Wang, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2025. HeadMon+: Domain Adaptive Head Dynamic-based Riding Maneuver Prediction. *IEEE Transactions on Mobile Computing*, 1-14. [DOI]
- [J4] Eri Hosonuma, Taku Yamazaki, Takumi Miyoshi, Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2025. Image Generative Semantic Communication with Multi-Modal Similarity Estimation for Resource-Limited Networks. *IEICE Transactions on Communications* E108.B, 3, 260-273. [DOI]
- [J5] Yutong Feng, Akihito Taya, **Yuuki Nishiyama**, Jun Liu, and Kaoru Sezaki. 2025. Adaptive Detection of Spread Spectrum Signals With General Array Configuration. *IEEE Transactions on Signal Processing* 73, 4826-4839. [DOI]
- [J6] Ayaka Onodera, Riku Ishioka, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2024. Multi-label Classification Model for Infant Activity Recognition Using Single Inertial Sensor. *IEEE Pervasive Computing*, 1-10. [DOI]
- [J7] Shota Ono, Taku Yamazaki, Takumi Miyoshi, Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2023. AMoND: Area-Controlled Mobile Ad-hoc Networking with Digital Twin. *IEEE Access* 11, 85224 - 85236. [DOI]
- [J8] Yutong Feng, Akihito Taya, **Yuuki Nishiyama**, Kaoru Sezaki, and Jun Liu. 2023. Compressive Detection of Stochastic Sparse Signals With Unknown Sparsity Degree. *IEEE Signal Processing Letters* 30, 1482-1486. [DOI]
- [J9] Helinyi Peng, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2022. Assessing environmental benefits from shared micromobility systems using machine learning algorithms and Monte Carlo simulation. *Sustainable Cities and Society*, 104207. [DOI]
- [J10] 佐々木航, 柿野優衣, 中縁嗣, 野田悠加, 羽柴彩月, 山田佑亮, **西山勇毅**, 大越匡, 中澤仁, 森将輝, 水鳥寿思, 塩田琴美, 永野智久, 東海林祐子, and 加藤貴昭. 2022. SFC GO: 学生同士の繋がりを支援するオンライン体育授業サポートシステム. *情報処理学会論文誌 デジタルプラクティス (TDP)* 3, 1, 19-33.
- [J11] **西山勇毅**, 柿野優衣, 中縁嗣, 野田悠加, 羽柴彩月, 山田佑亮, 佐々木航, 大越匡, 中澤仁, 森将輝, 水鳥寿思, 塩田琴美, 永野智久, 東海林祐子, and 加藤貴昭. 2021. 感染症流行時におけるスマートフォンを用いた大学生の身体活動量分析. *情報処理学会論文誌 [特集: ユビキタスコンピューティングシステム (X)]* 62, 10, 1630-1643. [DOI]
- [J12] **西山勇毅**, 川原圭博, and 瀬崎薫. 2021. MOCHA: Bluetooth ビーコンを用いた学内位置情報サービスの開発・運用. *画像電子学会誌* 50, 3, 459-461.
- [J13] Wataru Sasaki, **Yuuki Nishiyama**, Tadashi Okoshi, and Jin Nakazawa. 2021. Investigating the occurrence of selfie-based emotional contagion over social network. *Social Network Analysis and Mining* 11, 8. [DOI]
- [J14] Sang Won Bae, Tammy Chung, Rahul Islam, Brian Suffoletto, Jiameng Du, Serim Jang, **Yuuki Nishiyama**, Raghu Mulukutla, and Anind Dey. 2021. Mobile phone sensor-based detection of subjective cannabis intoxication in young adults: A feasibility study in real-world settings. *Drug and Alcohol Dependence*, 108972. [DOI]
- [J15] Elina Kuosmanen, Florian Wolling, Julio Vega, Valerii Kan, **Yuuki Nishiyama**, Simon Harper, Kristof Van Laerhoven, Simo Hosio, and Denzil Ferreira. 2020. Smartphone-Based Monitoring

- of Parkinson Disease: Quasi-Experimental Study to Quantify Hand Tremor Severity and Medication Effectiveness. *JMIR Mhealth Uhealth* 8, 11, e21543. [\[DOI\]](#)
- [J16] Tammy Chung, Sang Won Bae, Eun-Young Mun, Brian Suffoletto, **Yuuki Nishiyama**, Serim Jang, and Anind K Dey. 2020. Mobile Assessment of Acute Effects of Marijuana on Cognitive Functioning in Young Adults: Observational Study. *JMIR Mhealth Uhealth* 8, 3, e16240. [\[DOI\]](#)
- [J17] 栄元優作, **西山勇毅**, 大越匡, and 中澤仁. 2019. HealthyStadium: 他者評価とゲーミフィケーションを用いた食習慣改善ソーシャルメディア. *情報処理学会論文誌* 60, 10, 1881-1895.
- [J18] Jin Nakazawa, Wataru Sasaki, Mikio Obuchi, Kazuki Egashira, **Yuuki Nishiyama**, Tadashi Okoshi, Takuro Yonezawa, and Hideyuki Tokuda. 2018. A Platform for Mutual Watch-Over among the Elderly Using PAN and Gamification. *The IEICE transactions on information and systems* J101-D, 2, 306-319.
- [J19] 小淵幹夫, **西山勇毅**, 大越匡, 米澤拓郎, and 中澤仁. 2017. MyFactor : ユーザの内面状態に寄与する因子情報の個人特性に適応的な分析. *情報処理学会論文誌* 58, 10, 1674-1687.
- [J20] **Yuuki Nishiyama**, Tadashi Okoshi, Takuro Yonezawa, Jin Nakazawa, Kazunori Takashio, and Hideyuki Tokuda. 2016. Toward Health Exercise Behavior Change for Teams Using Lifelog Sharing Models. *IEEE Journal of Biomedical and Health Informatics* 20, 3, 775-786. [\[DOI\]](#)
- [J21] **西山勇毅**, 大越匡, 米澤拓郎, 中澤仁, 高汐一紀, and 徳田英幸. 2015. ライフログデータを用いたチームの行動変容促進. *情報処理学会論文誌* 56, 1, 349-361.

### *International Conference Papers (26)*

- [I1] Dong Xuefu, Wenwei Li, Minhao Cui, Zilong Wang, Lupeng Zhang, Akihito Taya, **Yuuki Nishiyama**, Kaoru Sezaki, Lili Qiu, and Jie Xiong. 2026. From a Point to Hundreds: Embracing LiDAR on Commodity Smartphones for Fine-grained Pulmonary Function Sensing. In *Proceedings of the 24th ACM Conference on Embedded Networked Sensor Systems (SenSys ' 26)* (Saint-Malo, France).
- [I2] Yanzhi Li, Qize Feng, Xuefu Dong, Akihito Taya, Kaoru Sezaki, and **Yuuki Nishiyama**<sup>†</sup>. 2026. Estimation of the Center of Pressure Using Head Position During Balance Maintenance. In *2026 8th International Conference on Activity and Behavior Computing (ABC)* (Muroran \{\}& Hakodate, Hokkaido, Japan).
- [I3] Kanata Takahashi, **Yuuki Nishiyama**, and Yuya Shibuya. 2025. Daily Emotional States Improve Predictions of Human Mobility Diversity. In *2025 IEEE International Conference on Big Data (BigData)*. [\[DOI\]](#)
- [I4] Zengyi Han, **Yuuki Nishiyama**, and Kaoru Sezaki. 2025. RideStyle: Riding Style Representation from Head-Body Dynamics via Adversarial Learning. In *EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services* (Shanghai, China).
- [I5] Liqiang Xu, **Yuuki Nishiyama**<sup>†</sup>, Kota Tsubouchi, and Kaoru Sezaki. 2024. Deep Learning-Based Compressed Sensing for Mobile Device-Derived Sensor Data. In *Proceedings of the 33rd ACM International Conference on Information and Knowledge Management* (Boise, ID, USA). [\[DOI\]](#)
- [I6] Zengyi Han, Xuefu Dong, Liqiang Xu, Zhen Zhu, En Wang, **Yuuki Nishiyama**, and Kaoru Sezaki. 2024. RideGuard: Micro-Mobility Steering Maneuver Prediction with Smartphones. In *2024 IEEE 44th International Conference on Distributed Computing Systems (ICDCS)* (Jersey City, New Jersey, USA). [\[DOI\]](#)
- [I7] Xuefu Dong, Yifei Chen, **Yuuki Nishiyama**, Kaoru Sezaki, Yuntao Wang, Kenneth Christoferson, and Alex Mariakakis. 2024. ReHEarSSE: Recognizing Hidden-in-the-Ear Silently Spelled Expressions. In *Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* (Hawaii, US). [\[DOI\]](#)
- [I8] Junya Maruyama, Yudai Honma, **Yuuki Nishiyama**, and Yoshihiro Kawahara. 2024. An Optimization Method for Indoor Trajectory Estimation from Spatially Sparse and Noisy Beacon Data. In *OHOW 2023 – The 2nd International Symposium on One Health / Infrastructure Management and sustainable built environment* (Basel, Switzerland).
- [I9] Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2023. Convergence Visualizer of Decen-

- tralized Federated Distillation with Reduced Communication Costs. In *Proceedings of IEEE Global Communications (GLOBECOM) 2023* (Kuala Lumpur, Malaysia).
- [I10] Zengyi Han, Xuefu Dong, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2023. HeadSense: Visual Search Monitoring and Distracted Behavior Detection for Bicycle Riders. In *2023 IEEE 24th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)* (Boston, Massachusetts). [\[DOI\]](#)
- [I11] Haoyu Zhuang, Liqiang Xu, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2023. Detecting Hand Hygienic Behaviors In-the-Wild Using a Microphone and Motion Sensor on a Smartwatch. In *Distributed, Ambient and Pervasive Interactions* (Cham). [\[DOI\]](#)
- [I12] Zengyi Han, Liqiang Xu, Xuefu Dong, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2023. HeadMon: Head Dynamics Enabled Riding Maneuver Prediction. In *2023 IEEE International Conference on Pervasive Computing and Communications (PerCom)* (Atlanta, USA). [\[DOI\]](#)
- [I13] Zengyi Han, Xuefu Dong, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2022. Preliminary Study for Classifying Baby Stroller-related Parenting using Smartphones. In *Activity and Behavior Computing* (UK).
- [I14] Shota Ono, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2022. Detecting Face-Mask Wearing Status Using Motion Sensors in Commercially Available Smartwatches. In *2022 IEEE International Conference on E-health Networking, Application & Services (HealthCom)* (Genoa, Italy). [\[DOI\]](#)
- [I15] Liqiang Xu, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2022. Enhancing Self-Protection: What Influences Human’s Epidemic Prevention Behavior during the COVID-19 Pandemic. In *Distributed, Ambient and Pervasive Interactions. Smart Living, Learning, Well-Being and Health, Art and Creativity: 10th International Conference, DAPI 2022, Held as Part of the 24th HCI International Conference, HCII 2022, Virtual Event, June 26 – July 1, 2022, Proceedings, Part II* (Berlin, Heidelberg). [\[DOI\]](#)
- [I16] Xuefu Dong, Zengyi Han, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2022. DoubleCheck: Single-Handed Cycling Detection with a Smartphone. In *2022 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*. [\[DOI\]](#)
- [I17] Suxing Lyu, Tianyang Han, **Yuuki Nishiyama**, Kaoru Sezaki, and Takahiko Kusakabe. 2022. A Plug-in Memory Network for Trip Purpose Classification. In *Proceedings of the 30th International Conference on Advances in Geographic Information Systems* (Seattle, Washington). [\[DOI\]](#)
- [I18] Helinyi Peng, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2021. Estimation of Greenhouse Gas Emission Reduction from Shared Micromobility System. In *2021 IEEE Green Energy and Smart Systems Conference (IGESSC)* (Long Beach, CA, USA). [\[DOI\]](#)
- [I19] Hidenaga Ushijima, Shunsuke Aoki, Peng Helinyi, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2021. An Unsupervised Learning-based Approach for User Mobility Analysis of E-Scooter Sharing Systems. In *2021 IEEE International Intelligent Transportation Systems Conference (ITSC)*. [\[DOI\]](#)
- [I20] Hong Duc Nguyen, Shunsuke Aoki, **Yuuki Nishiyama**, and Kaoru Sezaki. 2021. A Run-time Dynamic Computation Offloading Strategy in Vehicular Edge Computing. In *2021 IEEE 94th Vehicular Technology Conference (VTC2021-Fall)* (Online). [\[DOI\]](#)
- [I21] Zengyi Han, Hong Duc Nguyen, Shunsuke Aoki, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2021. MiMoSense: An Open Crowdsensing Platform for Micro-Mobility. In *2021 IEEE International Conference on Intelligent Transportation (ITSC)*. [\[DOI\]](#)
- [I22] Hidenaga Ushijima, Shota Ono, **Yuuki Nishiyama**, and Kaoru Sezaki. 2021. Towards Infectious Disease Risk Assessment in Taxis using Environmental Sensors. In *Distributed, Ambient and Pervasive Interactions* (Cham). [\[DOI\]](#)
- [I23] **Yuuki Nishiyama**, Denzil Ferreira, Yusaku Eigen, Wataru Sasaki, Tadashi Okoshi, Jin Nakazawa, Anind K Dey, and Kaoru Sezaki. 2020. iOS Crowd-Sensing Won’t Hurt a Bit!: AWARE Framework and Sustainable Study Guideline for iOS Platform. In *Distributed, Ambient and Pervasive Interactions* (Cham). [\[DOI\]](#)
- [I24] Elina Kuosmanen, Valerii Kan, Julio Vega, Aku Visuri, **Yuuki Nishiyama**, Anind K Dey,

Simon Harper, and Denzil Ferreira. 2019. Challenges of Parkinson’ s Disease: User Experiences with STOP. In *Proceedings of the 21st International Conference on Human-Computer Interaction with Mobile Devices and Services* (Taipei, Taiwan). [\[DOI\]](#)

- [I25] Elina Kuosmanen, Valerii Kan, Aku Visuri, Julio Vega, **Yuuki Nishiyama**, Anind K Dey, Simon Harper, and Denzil Ferreira. 2018. Mobile-Based Monitoring of Parkinson’ s Disease. In *Proceedings of the 17th International Conference on Mobile and Ubiquitous Multimedia* (Cairo, Egypt). [\[DOI\]](#)
- [I26] **Yuuki Nishiyama**, Tadashi Okoshi, Takuro Yonezawa, Jin Nakazawa, Kazunori Takashio, and Hideyuki Tokuda. 2014. Towards health exercise behavior change for teams using life-logging. In *2014 IEEE 16th International Conference on e-Health Networking, Applications and Services (Healthcom)* (Natal, Brazil). [\[DOI\]](#) **[Best Paper Award]**

### **Posters, Demos, and Workshop Papers (49)**

- [A1] Yanzhi Li, Qize Feng, Xuefu Dong, Akihito Taya, Kaoru Sezaki, and **Yuuki Nishiyama**<sup>†</sup>. 2026. Toward Earable Device – Based Postural Sway Estimation Using Convolutional Neural Networks. In *2026 ACM/IEEE International Conference on Embedded Artificial Intelligence and Sensing Systems (SenSys)* (Saint-Malo, France).
- [A2] Kaito Fujishige, Kota Tsubouchi, **Yuuki Nishiyama**, and Masamichi Shimosaka. 2026. ShapeN-Motion: Fine-Grained Hand Object Manipulation Recognition with Ultrasonic and IMU. In *2026 IEEE International Conference on Pervasive Computing and Communications (PerCom)*.
- [A3] Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2026. A Mechanical Wi-Fi Antenna Device for Automatic Orientation Tuning with Bayesian Optimization. In *2026 IEEE 23rd Annual Consumer Communications & Networking Conference (CCNC)* (Las Vegas, NV, USA). [\[DOI\]](#) **[Best Demo Award Runner-Up]**
- [A4] Jia Tang, Xiuwen Gu, Akihito Taya, Kaoru Sezaki, and **Yuuki Nishiyama**<sup>†</sup>. 2025. Toward Detecting Postpartum Depression Using Passive Mobile Sensing: Exploratory Analysis. In *Companion of the 2025 on ACM International Joint Conference on Pervasive and Ubiquitous Computing* (New York, NY, USA). [\[DOI\]](#)
- [A5] Xuefu Dong, Liqiang Xu, Lixing He, Zengyi Han, Kenneth Christofferson, Yifei Chen, Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2025. Recognizing Hidden-in-the-Ear Private Key for Reliable Silent Speech Interface Using Multi-Task Learning. In *Companion of the 2025 on ACM International Joint Conference on Pervasive and Ubiquitous Computing* (New York, NY, USA). [\[DOI\]](#) **[Best Poster Award]**
- [A6] Helinyi Peng, Akihito Taya, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2025. AEDHunter: Investigating and Enhancing AED Retrieval through a Mobile Application. In *Proceedings of the Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* (New York, NY, USA). [\[DOI\]](#)
- [A7] Zeyu Wu, **Yuuki Nishiyama**, and Yuya Shibuya. 2024. The Bidirectional Relationship between Emotional Change and Physical Movement Activities: An Analysis Using Propensity Score Matching Methods. In *2024 IEEE International Conference on Big Data (BigData)*. [\[DOI\]](#)
- [A8] Manaka Ito, Kota Tsubouchi, Nobuhiko Nishio, Masamichi Shimosaka, Akihito Taya, Kaoru Sezaki, and **Yuuki Nishiyama**<sup>†</sup>. 2024. Investigating Acceptable Voice-based Notification Timings through Earable Devices: A Preliminary Field Study. In *Companion of the 2024 on ACM International Joint Conference on Pervasive and Ubiquitous Computing* (Melbourne VIC, Australia). [\[DOI\]](#) **[Best Poster Award]**
- [A9] Zhenbo Wang, Akihito Taya, Takaaki Kato, Kaoru Sezaki, and **Yuuki Nishiyama**<sup>†</sup>. 2024. Toward Detecting Student-Athletes’ Condition Using Passive Mobile and Wearable Sensing. In *Companion of the 2024 on ACM International Joint Conference on Pervasive and Ubiquitous Computing* (Melbourne VIC, Australia). [\[DOI\]](#) **[Best Poster Award]**
- [A10] Xiuwen Gu, Akihito Taya, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2024. Toward Detecting Maternity Neurosis by Using Passive Mobile Sensing: Preliminary Investigation. In *2024 IEEE International Conference on E-health Networking, Application & Services (HealthCom)*. [\[DOI\]](#)

- [A11] Helinyi Peng, Akihito Taya, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2024. Poster: Location Awareness in AED Retrieval: An Simulation-Based Investigation. In *Proceedings of the 22nd Annual International Conference on Mobile Systems, Applications and Services* (Tokyo, Japan,). [\[DOI\]](#)
- [A12] Subaru Atsumi, Riku Ishioka, Kota Tsubouchi, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2024. Poster: Towards Estimating UV Index with a Smartphone Utilizing GNSS Signals as a Point Cloud. In *Proceedings of the 22nd Annual International Conference on Mobile Systems, Applications and Services* (Tokyo, Japan). [\[DOI\]](#)
- [A13] Eri Hosonuma, Taku Yamazaki, Takumi Miyoshi, Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2024. Exploiting Spatial and Descriptive Information for Generative Compression. In *2024 IEEE 21st Consumer Communications & Networking Conference (CCNC)*. [\[DOI\]](#)
- [A14] Shota Ono, Taku Yamazaki, Takumi Miyoshi, Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2024. Experimental Evaluation Toward Mobility-Driven Model Integration Between Edges. In *2024 IEEE 21st Consumer Communications & Networking Conference (CCNC)*. [\[DOI\]](#)
- [A15] Junya Maruyama, Yudai Honma, **Yuuki Nishiyama**, and Yoshihiro Kawahara. 2023. A Trajectory Estimation Method from Spatially Sparse and Noisy Beacon Data Based on Spring Dynamics. In *Proceedings of the 10th ACM International Conference on Systems for Energy-Efficient Buildings, Cities, and Transportation* (Istanbul, Turkey). [\[DOI\]](#)
- [A16] Ayaka Onodera, Riku Ishioka, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2023. Assessing Infant and Toddler Behaviors through Wearable Inertial Sensors: A Preliminary Investigation. In *Companion Publication of the 25th International Conference on Multimodal Interaction* (Paris, France). [\[DOI\]](#)
- [A17] **Yuuki Nishiyama** and Kaoru Sezaki. 2023. Smartwatch-Based Sensing Framework for Continuous Data Collection: Design and Implementation. In *Adjunct Proceedings of the 2023 ACM International Joint Conference on Pervasive and Ubiquitous Computing & the 2023 ACM International Symposium on Wearable Computing* (Cancun, Quintana Roo, Mexico). [\[DOI\]](#)
- [A18] Shota Ono, Taku Yamazaki, Takumi Miyoshi, **Yuuki Nishiyama**, and Kaoru Sezaki. 2023. Cooperative Local Distributed Machine Learning Considering Communication Latency and Power Consumption. In *2023 IEEE 20th Annual Consumer Communications & Networking Conference (IEEE CCNC 2023)*. [\[DOI\]](#)
- [A19] Eri Hosonuma, **Yuuki Nishiyama**, Kaoru Sezaki, Takumi Miyoshi, and Taku Yamazaki. 2023. Enabling Block Transmission on Backoff-based Opportunistic Routing. In *2023 IEEE 20th Annual Consumer Communications & Networking Conference (IEEE CCNC 2023)*. [\[DOI\]](#)
- [A20] Eri Hosonuma, Nobuyuki Tanaka, Takuma Yamazaki, Akihito Taya, **Yuuki Nishiyama**, Kaoru Sezaki, Takumi Miyoshi, and Taku Yamazaki. 2023. Opportunistic Division and Allocation of Machine Learning Task for WSN. In *2023 Fourteenth International Conference on Ubiquitous and Future Networks (ICUFN)*. [\[DOI\]](#)
- [A21] Ryoto Suzuki, **Yuuki Nishiyama**, Hiroaki Murakami, Yoshihiro Kawahara, and Kaoru Sezaki. 2022. Poster abstract: Room Scale Localization Improvement Utilizing Stay Time Characteristics of Each Room. In *Proceedings of the 20th Conference on Embedded Networked Sensor Systems, Boston, USA* (New York, NY, USA). [\[DOI\]](#)
- [A22] Riku Ishioka, **Yuuki Nishiyama**<sup>†</sup>, Kota Tsubouchi, and Kaoru Sezaki. 2022. Poster abstract: UV index estimation leveraging GNSS sensors on smartphones. In *Proceedings of the 20th Conference on Embedded Networked Sensor Systems, Boston, USA* (New York, NY, USA). [\[DOI\]](#)
- [A23] Issey Sukeda, Hiroaki Murakami, **Yuuki Nishiyama**, Hiroaki Murakami, and Yoshihiro Kawahara. 2022. Poster abstract: Recursive Queueing Estimation Using Smartphone-based Acoustic Ranging. In *Proceedings of the 20th Conference on Embedded Networked Sensor Systems, Boston, USA* (New York, NY, USA). [\[DOI\]](#)
- [A24] Liqiang Xu, **Yuuki Nishiyama**<sup>†</sup>, Masamichi Shimosaka, Kota Tsubouchi, and Kaoru Sezaki. 2022. Poster abstract: Convolutional Compressed Sensing for Smartphone Acceleration Data

Compression. In *Proceedings of the 20th Conference on Embedded Networked Sensor Systems, Boston, USA* (New York, NY, USA). [\[DOI\]](#)

- [A25] **Yuuki Nishiyama**, Hiroaki Murakami, Ryoto Suzuki, Kazusato Oko, Issey Sakeda, Kaoru Sezaki, and Yoshihiro Kawahara. 2022. MOCHA: Mobile Check-in Application for University Campuses Beyond COVID-19. In *The Twenty-third International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing* (Seoul, Republic of Korea). [\[DOI\]](#)
- [A26] Zengyi Han, **Yuuki Nishiyama**<sup>†</sup>, and Kaoru Sezaki. 2022. A Micro-mobility Sensing System to Portray Riding Styles. In *Adjunct Proceedings of the 2022 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2022 ACM International Symposium on Wearable Computers* (USA and UK).
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- [D48] 下条和暉, **西山勇毅**, and 瀬崎薫. 2021. 常時装着型イヤラブルデバイスにおける割り込み可能タイミングの検討. *CSIS DAYS 2021*.
- [D49] 小池優太郎, **西山勇毅**, and 瀬崎薫. 2021. 集約型都市におけるライドシェアサービス導入効果のシミュレーション. *CSIS DAYS 2021*.
- [D50] 鈴木凌斗, 村上弘晃, **西山勇毅**, 川原圭博, and 瀬崎薫. 2021. 部屋毎の滞在時間特性を考慮した頑健な滞在場所推定手法. 研究報告ユビキタスコンピューティングシステム (*UBI*).
- [D51] 陳美怡, 幡井皓介, **西山勇毅**, and 瀬崎薫. 2021. 感染症予防行動を促進させるインセンティブモデルに関する一検討. 研究報告ユビキタスコンピューティングシステム (*UBI*).
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- [D53] 山下陸, **西山勇毅**, 小松寛弥, and 川原圭博. 2020. BLE ビーコンを用いた屋内位置推定システムの設計と実装. 研究報告ユビキタスコンピューティングシステム (*UBI*).
- [D54] 牛島秀暢, **西山勇毅**, 小野翔多, and 瀬崎薫. 2020. 環境センサを用いたタクシー車室内における感染症リスク評価に関する一検討. 研究報告モバイルコンピューティングと新社会システム研究会 (*MBL*).
- [D55] 牛島秀暢, 青木俊介, **西山勇毅**, and 瀬崎薫. 2020. Non-Negative Tensor Factorization を用いたドックレス型マイクロモビリティの利用形態分類手法の検討. 研究報告高度交通システムとスマートコミュニティ (*ITS*).
- [D56] 日隈壮一郎, **西山勇毅**, and 瀬崎薫. 2020. GPS 信号受信状態を用いた紫外線量推定手法の検討. 研究報告ユビキタスコンピューティングシステム (*UBI*). [**SIG-UBI Excellent Paper Award**]
- [D57] 神村潤, **西山勇毅**, and 瀬崎薫. 2020. スマートフォンセンサを用いた気分情報を基にした都市空間評価手法に向けて. 電子情報通信学会 電子情報通信学会総合大会.
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- [D63] 磯川直大, **西山勇毅**, 大越匡, 中澤仁, 高汐一紀, and 徳田英幸. 2017. TalkingNemoPad: Aquarium Fish Talks Its Mind for Breeding Support through Your iPad. 研究報告ユビキタスコンピューティングシステム (*UBI*).

- [D64] 片山晋, 磯川直大, 小渕幹夫, **西山勇毅**, 大越匡, 米澤拓郎, 中澤仁, 高汐一紀, and 徳田英幸. 2017. SpoTrip : 観光客リピータ化促進のための隠れスポット情報提供システムの評価. 電子情報通信学会技術研究報告 = *IEICE technical report* : 信学技報.
- [D65] 栄元優作, 江頭和輝, 河野慎, **西山勇毅**, 大越匡, 米澤拓郎, 高汐一紀, and 中澤仁. 2017. Health-Fight: 多数決を用いた食習慣改善ソーシャルメディア. 研究報告ユビキタスコンピューティングシステム (UBI) .
- [D66] 江頭和輝, 古川侑紀, **西山勇毅**, 大越匡, 米澤拓郎, 中澤仁, 高汐一紀, and 徳田英幸. 2016. NiSleep: ゲーミフィケーションを適用可能な睡眠評価. 研究報告ユビキタスコンピューティングシステム (UBI) .
- [D67] 小出粹玄, **西山勇毅**, 大越匡, 米澤拓郎, 高汐一紀, 中澤仁, and 徳田英幸. 2016. MyTime : タイムマネジメントの促進を目的としたアプリケーション使用時間自動記録システムの提案. 電子情報通信学会技術研究報告 = *IEICE technical report* : 信学技報.
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- [D69] **西山勇毅**, 米澤拓郎, 中澤仁, and 徳田英幸. 2015. Senbay : 活動促進のためのスマートフォンを利用したセンサデータ統合型動画記録・共有・分析プラットフォーム. 知的環境とセンサネットワーク研究会 (ASN), 電子情報通信学会技術研究報告 = *IEICE technical report* : 信学技報.
- [D70] 佐々木航, **西山勇毅**, 大越匡, 米澤拓郎, 中澤仁, 高汐一紀, and 徳田英幸. 2015. SmileSpot: 他人の笑顔画像の共有によるユーザの笑顔形成への影響評価. 情報処理学会研究報告. UBI, [ユビキタスコンピューティングシステム].
- [D71] 磯川直大, **西山勇毅**, 大越匡, 米澤拓郎, 中澤仁, 高汐一紀, and 徳田英幸. 2015. Aqua Mapping: 水槽を介した観賞魚とのインタラクションシステム. 研究報告ユビキタスコンピューティングシステム (UBI) .
- [D72] 米澤拓郎, **西山勇毅**, 小川正幹, 中澤仁, and 徳田英幸. 2014. 動画二次元コードを用いたウェアラブルセンシングのための情報記録・配信手法. 第 19 回人間情報学会.
- [D73] 古川侑紀, **西山勇毅**, 大越匡, 中澤仁, 高汐一紀, and 徳田英幸. 2014. 加速度センサのみを用いた移動手段判定アルゴリズムの評価. 情報処理学会研究報告. MBL, [モバイルコンピューティングとユビキタス通信研究会研究報告].
- [D74] **西山勇毅**, 米澤拓郎, 中澤仁, and 徳田英幸. 2013. チームの動機づけにおける個人の貢献度の可視化に関する一検討. 情報処理学会研究報告. UBI, [ユビキタスコンピューティングシステム].
- [D75] **西山勇毅**, 瀧本拓哉, 米澤拓郎, 中澤仁, 高汐一紀, and 徳田英幸. 2011. 野球選手の投球動作変化を用いた疲労度取得手法の提案 : 投球障害予防支援システム構築に向けて. 電子情報通信学会技術研究報告. USN, ユビキタス・センサネットワーク : *IEICE technical report*.

### Other Publications (3)

- [1] Eri Hosonuma, Taku Yamazaki, Takumi Miyoshi, Akihito Taya, **Yuuki Nishiyama**, and Kaoru Sezaki. 2024. Image Generative Semantic Communication with Multi-Modal Similarity Estimation for Resource-Limited Networks..
- [2] **Yuuki Nishiyama**, Kosuke Hatai, Kota Tsubouchi, and Kaoru Sezaki. 2022. Estimating Sunlight Using GNSS Signal Strength from Smartphone..
- [3] **Yuuki Nishiyama**. 2017. Enhancing Team-Level Behavior Change Using Information Sharing..

### Awards & Honors

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2026	<b>IPSJ/IEEE-CS Young Computer Researcher Award</b> , IPSJ / IEEE Computer Society <i>Outstanding research on mobile and wearable sensing for human safety</i>
2026	<b>Best Demo Award Runner-Up</b> , IEEE 23rd Annual Consumer Communications & Networking Conference (CCNC 2026) <i>"A Mechanical Wi-Fi Antenna Device for Automatic Orientation Tuning with Bayesian Optimization"</i> (as a co-author) Las Vegas, NV, USA

- 2025 **Best Poster Award**, ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2025)  
*"Recognizing Hidden-in-the-Ear Private Key for Reliable Silent Speech Interface Using Multi-Task Learning"*  
 Espoo, Finland
- 2025 **Trusted Reviewer Award**, 7th International Conference on Activity and Behavior Computing (ABC 2025)  
 Abu Dhabi, UAE
- 2025 **UBI Young Researcher Award**, IPSJ 88th Workshop of SIG Ubiquitous Computing System (UBI)  
*"ウェアラブル UWB の時系列 CIR を用いた呼吸推定" (as a co-author)*
- 2025 **FIT Paper Award**, 24th Information Science and Technology Forum (FIT2025), Information Processing Society of Japan (IPSJ)  
*"Expression Recognition Based on Ear Canal Shape Detection Using Earbud and Ultrasound" (as a co-author)*
- 2024 **Best Poster Award**, ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2024)  
*"Investigating Acceptable Voice-based Notification Timings through Earable Devices: A Preliminary Field Study"*  
 Melbourne, Australia
- 2024 **Best Poster Award**, ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp 2024)  
*"Toward Detecting Student-Athletes' Condition Using Passive Mobile and Wearable Sensing"*  
 Melbourne, Australia
- 2024 **Outstanding Paper Award**, IPSJ 81st Workshop of SIG Ubiquitous Computing System (UBI)  
*"GNSS 衛星ごとの信号情報に対する点群ニューラルネットワークを用いた UV インデックス推定" (as a co-author)*
- 2023 **UBI Young Researcher Award**, IPSJ 80th Workshop of SIG Ubiquitous Computing System (UBI)  
*"ハンズフリーのデバイス操作のための汎用イヤラブルデバイスの IMU センサーを用いた表情認識手法" (as a co-author)*
- 2023 **Outstanding Reviewer Award**, 25th ACM International Conference on Multimodal Interaction (ICMI 2023)  
 Paris, France
- 2022 **Outstanding Paper Award**, IPSJ 76th Workshop of SIG Ubiquitous Computing System (UBI)  
*"スマートフォンの GNSS センサを用いた UV インデックス推定" (as a co-author)*
- 2022 **Student Encouragement Award**, IPSJ 84th National Convention, Sensors for Health Conditions Session  
*"腕時計型ウェアラブルデバイスを用いた会話時間計測手法の構築に向けて" (as a co-author)*
- 2022 **Student Encouragement Award**, IPSJ 84th National Convention, Public Transportation Session  
*"タクシー車両を用いたマイクロモビリティ再配置手法の検討" (as a co-author)*
- 2021 **Outstanding Paper Award**, IPSJ 72nd Workshop of SIG Ubiquitous Computing System (UBI)  
*"イヤラブルデバイスを用いた身体感覚記録・利活用システムの構築に向けて"*
- 2021 **English Session Encouragement Award**, IEICE ICM at General and Society Conferences  
*"An Online Task Offloading Strategy in Vehicular Edge Computing" (as a co-author)*
- 2020 **Outstanding Paper Award**, IPSJ 66th Workshop of SIG Ubiquitous Computing System (UBI)  
*"GPS 信号受信状態を用いた紫外線量推定手法の検討" (as a co-author)*

- 2020 **WiP Encouragement Award**, IPSJ 97th Workshop of SIG Mobile Computing and Smart Society System (MBL)  
 ”環境センサを用いたタクシー車室内における感染症リスク評価に関する一検討” (*as a co-author*)
- 2020 **Excellent Presentation Award**, IPSJ 81st Workshop of SIG Intelligent Transportation Systems and Smart Communities (ITS)  
 ”Non-Negative Tensor Factorization を用いたドックレス型マイクロモビリティの利用形態分類手法の検討” (*as a co-author*)
- 2018 **Honorable Mention Award**, ACM 20th International Conference on Human-Computer Interaction with Mobile Devices and Services (MobileHCI 2018)  
 ”Senbay: A Platform for Instantly Capturing, Integrating, and Restreaming of Synchronized Multiple Sensor-Data Stream”  
 Barcelona, Spain
- 2015 **Outstanding Paper Award**, IPSJ 49th Workshop of SIG Ubiquitous Computing System (UBI)  
 ”Aqua Mapping: 水槽を介した観賞魚とのインタラクションシステム” (*as a co-author*)
- 2015 **Young Researcher Encouragement Award**, IEICE Technical Committee on Ambient Intelligence and Sensor Networks (SIG ASN)  
 ”Senbay : 活動促進のためのスマートフォンを利用したセンサデータ統合型動画記録・共有・分析プラットフォーム”
- 2015 **Best Poster Award**, IEEE 8th International Conference on Mobile Computing and Ubiquitous Networking (ICMU 2015)  
 ”A robot control system for video streaming services by using dynamic encoded QR codes” (*as a co-author*)
- 2015 **SFC Student Award**, Faculty of Environment and Information Studies / Faculty of Policy Management, Keio University
- 2014 **Best Paper Award**, IEEE 16th International Conference on e-Health Networking, Applications and Services (HealthCom 2014)  
 ”Towards health exercise behavior change for teams using life-logging”  
 Natal, Brazil

## Grants & Funding

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### *Principal Investigator*

- 2025 - 2028 **PRESTO**  
 Japan Science and Technology Agency (JST)  
 Personalized AI Development and Evaluation Platform Using Structure-Mapped Synthetic Time-Series Behavioral Data
- 2025 **Research Grant (A)**  
 Tateisi Science and Technology Foundation  
 Development of a Postural Sway Measurement Method Using an Ear-Worn Device with Inertial Sensors
- 2024 - 2026 **Fund for the Promotion of Joint International Research (Fostering Joint International Research) (KAKENHI)**  
 Japan Society for the Promotion of Science (JSPS)  
 International Expansion and Enhancement of Transparency in a Postpartum Depression Detection Platform Using Passive Mobile Sensing
- 2023 - 2025 **Grant-in-Aid for Early-Career Scientists (KAKENHI)**  
 Japan Society for the Promotion of Science (JSPS)  
 A Platform for Detecting Postpartum Depression through Passive Mobile Sensing
- 2022 - 2023 **Industry-Academia Joint Research**  
 First-Ascent Inc.  
 Activity recognition technologies for infants using wearable devices

<i>2021 - Current</i>	<b>Industry-Academia Joint Research</b> Yahoo! JAPAN R&D Sensor data processing and its utilization obtained from smartphones
<i>2020 - 2021</i>	<b>Grant-in-Aid for Early-Career Scientists (KAKENHI)</b> Japan Society for the Promotion of Science (JSPS) Platform for detecting and utilizing kinesthetics to promote motor learning using voice-based ESMs
<b>Co-Investigator</b>	
<i>2025 - 2028</i>	<b>Grant-in-Aid for Scientific Research (C) (KAKENHI)</b> Japan Society for the Promotion of Science (JSPS) Development of an Evidence-Based Childcare Support Platform through the Detection and Utilization of Latent Childcare Information
<i>2021 - 2023</i>	<b>Beyond 5G R&amp;D Promotion Project</b> National Institute of Information and Communications Technology (NICT) Smart urban transportation infrastructure technology through behavior change and dynamic control of transportation infrastructure
<i>2021 - 2023</i>	<b>Research and Development of ICT for Countermeasures against Viruses and Other Infectious Diseases</b> National Institute of Information and Communications Technology (NICT) Diversity-driven transformation technologies to realize a hyper-diverse society in the post-corona era
<i>2021 - 2023</i>	<b>Grant-in-Aid for Scientific Research (A) (KAKENHI)</b> Japan Society for the Promotion of Science (JSPS) Animal Wearable 2.0: Establishment of high-speed communication and high-reliability mechanisms for wildlife IoT
<i>2020 - 2024</i>	<b>Grant-in-Aid for Scientific Research (A) (KAKENHI)</b> Japan Society for the Promotion of Science (JSPS) Distributed Collaborative Learning Analytics for Developing Communities

## Teaching

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### Lecturer

<i>Autumn 2025</i>	Urban Computing Theory, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Autumn 2024</i>	Urban Computing Theory, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Autumn 2023</i>	Urban Computing Theory, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Spring 2022</i>	Introduction to Socio-Cultural Environmental Studies, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Autumn 2022</i>	University-wide Open Research Seminar (Introduction to Web Service and Application Design), <i>The University of Tokyo</i>
<i>Autumn 2022</i>	Urban Computing Theory, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Autumn 2021</i>	University-wide Open Research Seminar (Introduction to Web Service and Application Design), <i>The University of Tokyo</i>
<i>Autumn 2021</i>	Urban Computing Theory, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Spring 2021</i>	Network Architecture, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Autumn 2020</i>	Spatial Information Design, <i>Graduate School of Frontier Sciences, The University of Tokyo</i>
<i>Autumn 2018</i>	Mobile Computing, <i>Faculty of Information Technology and Electrical Engineering, University of Oulu</i>

## ***Invited Lectures***

- Autumn 2017* Data Acquisition (GIGA) - Human Activity Sensing using Mobile Phone (Invited Lecture), *Faculty of Environment and Information Studies, Keio University*
- Autumn 2014* Data Acquisition (GIGA) - Human Activity Sensing using Mobile Phone (Invited Lecture), *Faculty of Environment and Information Studies, Keio University*

## ***Teaching Assistant***

- Autumn 2017* Fundamentals of Information Technology 1&2, *Faculty of Environment and Information Studies, Keio University*
- Spring 2017* Fundamentals of Information Technology 1&2, *Faculty of Environment and Information Studies, Keio University*
- Spring 2017* System Construction Practical Training (TA), *College of Science and Engineering, Aoyama Gakuin University*
- Autumn 2014* Fundamentals of Object-Oriented Programming (TA), *Faculty of Environment and Information Studies, Keio University*
- Autumn 2014* Large-Scale Environmental Systems (TA), *Graduate School of Media and Governance, Keio University*
- Spring 2014* Environmental Information System Architecture (TA), *Graduate School of Media and Governance, Keio University*
- Autumn 2013* Introduction of Novel Fabrication (TA), *Faculty of Environment and Information Studies, Keio University*
- Autumn 2013* Object-Oriented Programming (TA), *Faculty of Environment and Information Studies, Keio University*
- Autumn 2013* Ubiquitous Information Service (TA), *Faculty of Environment and Information Studies, Keio University*
- Spring 2012* Ubiquitous System Architecture (TA), *Faculty of Environment and Information Studies, Keio University*

## **Invited Talks**

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- 2026-02* *Passive Mobile Sensing for Sustainable Estimation of Human Mental and Physical Health.* 142nd Lunch Meeting with MEXT and National University Research Institutes (CSRS, UTokyo), Tokyo, Japan.
- 2025-12* *Mobile/Wearable Sensing Infrastructure for Estimating Behaviors and Conditions of Infants and Postpartum Women.* 7th Data-Driven Society Creation Symposium, Online.
- 2025-10* *Workshop on Ubiquitous Computing and Spatial Data.* Workshop on Ubiquitous Computing, University of Helsinki, Helsinki, Finland.
- 2025-10* *Measuring Human Well-Being in Cities Using Smartphone Data.* Urban AI Symposium, Brooklyn, New York, USA.
- 2025-09* *Passive Mobile/Wearable Sensing for Human Mental and Physical Health.* The 25th Japan Seattle AI Innovation Meetup, Seattle, USA.
- 2024-06* *In-the-wild IoT: Lessons from real-world implementations.* Mobile AI Systems (ACM MobiSys 2024 Adjunct Workshop), Tokyo, Japan.
- 2022-11* *Encouraging human behavior change by using passive mobile sensing and lifelog sharing.* SSE Invited Speaker Series, Stevens Institute of Technology, NJ, USA.
- 2022-10* *Projections for DPS Workshop Programs in 30 Years.* 30th Workshop on Multimedia Communications and Distributed Processing (DPSWS 2022), Yonago, Japan.
- 2021-04* *MOCHA: Development and operation of a system for monitoring campus congestion, confirming contact, and recording stays using Bluetooth beacons.* Location Business Japan, Tokyo, Japan.

- 2019-11 *SenbayKit: Introduction of an infrastructure for immediate archiving and re-streaming of multiple data streams using sensor data-integrated video.* Workshop of SIG Smart Sensing System (SSS), SICE, Kumamoto, Japan.
- 2019-10 *Human and Urban Sensing and Analysis Platform Using Mobile and Wearable Devices for Realization of Well-being Smart City.* Joint Workshop of Regional IoT and Information Capability Consortium / Health Information Consortium, Tokyo, Japan.
- 2019-08 IPSJ 63rd Workshop of SIG Ubiquitous Computing System (UBI), Toyohashi, Japan.

## Academic Service

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### *Conference Organization*

- 2025 Publicity Chair, ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp) 2025
- 2025 Sponsorship Chair, ACM International Conference on Mobile Systems, Applications, and Services (MobiSys) 2025
- 2024 Local Chair, ACM International Conference on Mobile Systems, Applications, and Services (MobiSys) 2024
- 2023 Publicity Chair, International Conference on the Internet of Things (IoT) 2023
- 2021 Publicity Chair, ACM International Conference on Mobile Systems, Applications, and Services (MobiSys) 2021
- 2021 Web Chair, International Conference on Mobile Computing and Ubiquitous Networking (ICMU) 2021
- 2020 Publicity Chair, ACM Conference on Embedded Networked Sensor Systems (SenSys) 2020
- 2018 Web Chair, IEEE International Conference on Real-Time Computing Systems and Applications (RTCSA) 2018

### *Program Committee*

- 2021-2026 Activity and Behavior Computing (ABC)
- 2024-2026 IEEE International Conference on E-health Networking, Application & Services (HealthCom)
- 2024, 2025 ACM International Conference on Multimodal Interaction (ICMI)
- 2024 International Conference on the Internet of Things (IoT)
- 2024-2026 IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)
- 2019 ACM International Conference on Mobile Human-Computer Interaction (MobileHCI)
- 2018 EAI International Conference on Mobile Computing, Applications and Services (MobiCASE)

### *Associate Editor*

- 2022-2024 SICE Annual Conference

### *Workshop Organizer*

- 2018 Ubiquitous Mobile Sensing Workshop (ACM UbiComp 2018)
- 2017 Workshop on Ubiquitous Mobile Instrumentation (UbiMI) (ACM UbiComp 2017)
- 2016 Workshop on Ubiquitous Mobile Instrumentation (UbiMI) (ACM UbiComp 2016)

### ***Editorial Board***

- 2020, 2022-2024 Editorial Board Member, Journal of Information Processing (JIP) - Special Issue on UBI  
2020, 2021, 2022 Associate Editor, Transactions of SICE

### ***Journal Reviewer***

- 2018-2026 ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT)  
2025, 2026 ACM Transactions on Internet of Things (TIOT)  
2024 ACM Transactions on Computer-Human Interaction (TOCHI)  
2021, 2022 International Journal of Human-Computer Studies (IJHCS, Elsevier)  
2021, 2022 SICE Journal of Control, Measurement, and System Integration (JCMSI)  
2021 MDPI Sensors

### ***Conference Reviewer***

- 2026 ACM Conference on Human Factors in Computing Systems (CHI)  
2025 ACM International Conference on Multimedia (MM)  
2023-2025 ACM International Conference on Multimodal Interaction (ICMI)  
2024-2026 Affective Computing and Intelligent Interaction (ACII)  
2024-2026 IEEE International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM)  
2024-2026 IEEE International Conference on E-health Networking, Application & Services (HealthCom)  
2023-2025 International Conference on the Internet of Things (IoT)  
2022-2026 Activity and Behavior Computing (ABC)  
2022 ACM International Conference on Mobile Human-Computer Interaction (MobileHCI)  
2022 IEEE International Conference on Systems, Man, and Cybernetics (SMC)  
2021-2025 ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp) (Poster & Demo)  
2022 ACM Conference on Human Factors in Computing Systems (CHI) (Work in Progress)  
2019 ACM Conference on Embedded Networked Sensor Systems (SenSys) (Poster & Demo)  
2018 ACM International Conference on Mobile and Ubiquitous Multimedia (MUM) (Rising Stars Forum)  
2018 ACM International Conference on Mobile Systems, Applications, and Services (MobiSys) (Rising Stars Forum)  
2018 AppLens Workshop (ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp))  
2018 EmotionAware Workshop (IEEE International Conference on Pervasive Computing and Communications (PerCom))  
2016, 2017 Workshop on Ubiquitous Mobile Instrumentation (UbiMI) (ACM UbiComp)