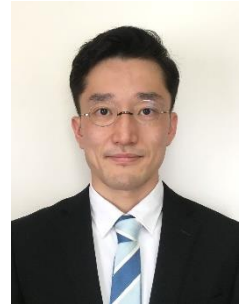


Ryoma Otsuka 大塚 亮真

[Website](#) | [GitHub](#) | [Google Scholar](#) | [researchmap](#) |



Research Interests

bio-logging, machine learning, deep learning, behaviour recognition/classification, time-series sensor data analysis, mountain gorillas, conservation, wildlife tourism

Work Experience

2022-Present	Graduate School of Information Science and Technology, Osaka University Specially Appointed Assistant Professor 大阪大学情報科学研究科 マルチメディア工学専攻 特任助教
2021-2022	Wildlife Research Center, Kyoto University (Postdoctoral Researcher) 京都大学 野生動物研究センター 研究員（非常勤） Center for African Area Studies, Kyoto University (Postdoctoral Researcher) 京都大学 アフリカ地域研究資料センター 研究員（非常勤）

Education

Ph.D. 2016-2021	Graduate School of Asian and African Area Studies (5-year system), Kyoto University, Japan Ph.D. (Area Studies) 京都大学大学院アジア・アフリカ地域研究研究科（5年一貫制） アフリカ地域研究専攻
B.Sc. 2012-2016	Faculty of Agriculture, Kyoto University, Japan B.Sc. (Agriculture) 京都大学農学部資源生物科学科

Research Skills

- Arduino (C/C++): to develop custom-made bio-logging devices with AI on-board
- Python: machine learning (scikit-learn), deep learning (PyTorch), statistical analysis (PyStan, CmdStanPy), data visualization
- R: statistical analysis (RStan), data visualization
- Collecting data through fieldwork (Uganda, Aomori, Niigata and Nagasaki)

In Prep. Manuscripts (Manuscript drafts available upon request.)

(In Prep.) Otsuka, R., et al. (TBA). Playback experiment on a biologging device with AI.

(In Prep.) Otsuka, R., et al. (TBA). Sample-wise prediction for animal behaviour recognition.

Submitted Manuscripts

(Submitted) Otsuka, R., et al. (TBA). TBA.

XXX. <https://doi.org/xx.xxxxx/xxx/xxxx> [bioRxiv]

(Under Review) Otsuka, R., et al. (TBA). TBA.

XXX. <https://doi.org/xx.xxxxx/xxx/xxxx> [bioRxiv]

Peer-Reviewed Publications

Otsuka, R., Yoshimura, N., Tanigaki, K., Koyama, S., Mizutani, Y., Yoda, K., & Maekawa, T. (2024).

Exploring deep learning techniques for wild animal behaviour classification using animal-borne accelerometers. *Methods in Ecology and Evolution*, 15(4), 716–731. <https://doi.org/10.1111/2041-210X.14294>

Tanigaki, K., Otsuka, R., Li, A., Hatano, Y., Wei, Y., Koyama, S., Yoda, K., & Maekawa, T. (2024).

Automatic recording of rare behaviors of wild animals using video bio-loggers with on-board light-weight outlier detector. *PNAS Nexus*, 3(1), gad447. <https://doi.org/10.1093/pnasnexus/pgad447>

Sekino, A., Otsuka, R., & Yasuoka, H. (2023). Haphazard Sharing of Plant Food among the Baka

Hunter-Gatherers in Southeast Cameroon. *African Study Monographs. Supplementary Issue.*, 62, 81–103. <https://doi.org/10.14989/286829>

Maekawa, T., Xia, Q., Otsuka, R., Yoshimura, N., & Tanigaki, K. (2023). Recent Trends in Sensor-based Activity Recognition. In *24th IEEE International Conference on Mobile Data Management (MDM)*, xx–xx. <https://doi.org/10.1109/MDM58254.2023.00018>

Otsuka, R., Yamakoshi, G., & Kalema-Zikusoka, G. (2023). Tourist expectations and satisfaction in mountain gorilla tourism in Bwindi Impenetrable National Park, Uganda. *Journal of Ecotourism*, 1–10. <https://doi.org/10.1080/14724049.2023.2166056>

Hongo, S., Dzefack, Z. C. B., Vernyuy, L. N., Minami, S., Mizuno, K., Otsuka, R., Hiroshima, Y., Djiéto-

Lordon, C., Nakashima, Y., & Yasuoka, H. (2022). Predicting bushmeat biomass from species composition captured by camera traps: Implications for locally based wildlife monitoring. *Journal of Applied Ecology*. <https://doi.org/10.1111/1365-2664.14257>

Kano, F., Furuichi, T., Hashimoto, C., Krupenye, C., Leinwand, J. G., Hopper, L. M., Martin, C.

F., Otsuka, R., & Tajima, T. (2021). What is unique about the human eye? Comparative image analysis on the external eye morphology of human and nonhuman great apes. *Evolution and Human Behavior*. <https://doi.org/10.1016/j.evolhumbehav.2021.12.004>

(in Japanese) 山梨裕美, 徳山奈帆子, 竹ノ下祐二, 大塚亮真, 森村成樹, 赤見理恵.

(2021) 大型類人猿と人の関わりの変遷: 過去・現在・そして未来に向けて. *霊長類研究* <https://doi.org/10.2354/psj.37.046>

Costa, R., Tomonaga, M., Otsuka, R., Huffman, M. A., Bercovitch, F., Kalema-Zikusoka, G., & Hayashi, M. (2021). The dispersal dilemma among female mountain gorillas: Risk infanticide and gain

- protection. *African Journal of Ecology*, 59(1), 273–276. <https://onlinelibrary.wiley.com/doi/10.1111/aje.12824>
- Hanya, G., Tackmann, J., Sawada, A., Lee, W., Pokharel, S. S., de Castro Maciel, V. G., Toge, A., Kuroki, K., Otsuka, R., Mabuchi, R., Liu, J., Hatakeyama, M., Yamasaki, E., von Mering, C., Shimizu-Inatsugi, R., Hayakawa, T., Shimizu, K. K., & Ushida, K. (2020). Fermentation Ability of Gut Microbiota of Wild Japanese Macaques in the Highland and Lowland Yakushima: In Vitro Fermentation Assay and Genetic Analyses. *Microbial Ecology*, 80(2), 459–474. <https://dx.doi.org/10.1007/s00248-020-01515-8>
- Otsuka, R., & Yamakoshi, G. (2020). Analyzing the popularity of YouTube videos that violate mountain gorilla tourism regulations. *PLoS ONE*, 15(5), e0232085. <https://dx.plos.org/10.1371/journal.pone.0232085>

Grants and Fellowships

- 2016-2021 Leading Graduate Program in Primatology and Wildlife Science, Kyoto University (\$9,090 annually, rate: 1 USD = 110 JPY)
京都大学霊長類学・ワイルドライフサイエンス・リーディング大学院
(特別履修) (年間 約 100 万円)
- 2018-2021 Doctoral Course Student (DC1) Research Fellowship, Japan Society of the Promotion of Science (JSPS) (Grant Number: 18J22882) (\$85,454, rate: 1 USD = 110 JPY)
日本学術振興会特別研究員 DC1 (課題番号: 18J22882) 「マウンテンゴリラの住民参加型保全とエコツーリズムの持続可能性に関する研究」 (940 万円)

Invited Talks

TBA

Selected Presentations

TBA

Teaching and Mentoring

Guest Lectures

- 2021 Area Studies and Tourism in Africa (June 7th) - Hannan University
阪南大学 アフリカの地域と観光 (6 月 7 日)
- 2021 Environmental Anthropology (July 27th) - Ryukoku University
龍谷大学 環境人類学 (7 月 27 日)
- 2021 Biology B (November 4th) - Chukyo University

2021 生物学 B（11 月 4 日）中京大学
Anthropology of Tourism (November 5th) - Rikkyo University
立教大学 観光人類学 8（生態）（11 月 5 日）

Mentorship

2022-present TBA
2023-present TBA
2023-present TBA

Society Membership

TBA

Review Experience

Journal of Ecotourism

Outreach

TBA