# ****Ryoma Otsuka 大塚 亮真****

[Website](https://sites.google.com/view/ryomaotsuka/home?authuser=0) | [GitHub](https://github.com/ryoma-otsuka) | [Google Scholar](https://scholar.google.co.jp/citations?hl=en&user=TzrgGqEAAAAJ) | [researchmap](https://researchmap.jp/ryoma_otsuka) |

## 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 博士（地域研究）（2021年3月23日）

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（2016年3月24日）

## Research Skills

* Arduino (or C/C++): to develop custom-made bio-logging devices with AI on-board
* Python: machine learning (scikit-learn), deep learning (PyTorch), Bayesian statistical analysis, time-series data analysis, data visualization
* R: Bayesian statistical analysis (RStan), data visualization
* Fieldwork (Bwindi in Uganda, Aomori, Niigata and Nagasaki in Japan)

## In Prep. Manuscripts

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

## Submitted Manuscripts

(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. ***2023 24th IEEE International Conference on Mobile Data Management (MDM)***, 36–38. <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***, *22*(2), 329–338. <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***, *59*(10), 2567–2580. <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. (2022). 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***, *43*(3), 169–180. <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*](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

生物学B（11月4日）中京大学

2021 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

## Society Membership

British Ecological Society

## Review Experience

Movement Ecology, Primates, Journal of Ecotourism

## Outreach

TBA