Call for Participation

Disruptive Movement Analysis (DMA 2023)

Movement Data (e.g., via GPS tracking) are now widely collected and readily available to researchers interested in studying spatial-temporal patterns of individual movement. Similarly, the suite of analytical tools for processing, managing, and analyzing movement data are well-developed in modern computational software systems (e.g., Python and R) and spatial libraries and packages. Movement data are incredibly rich and powerful in terms of the insights they can provide about spatial-temporal patterns of movement, and how these relate to individual and collective behaviour along with other associated factors. However, to tease apart these complex associations, there is a need to re-think old approaches and develop new data models, processing techniques, and analytical models for modern movement data.

Objective: The objective of this workshop is to provide a platform for new and exciting ideas in the field of movement analysis in an effort to '*disrupt'* current practice and *move* the field in novel directions.

We invite submissions of position/vision papers or short empirical research papers (same format to the GIScience Conference Short Paper stream) that describe new research ideas that fit the general theme of *disruptive movement analysis*, including, but not limited to, the following topics:

- Bias, representativeness, and uncertainty
- Privacy and ethics
- Open science and reproducible research
- Data fusion / data integration
- Big data / big models
- Deep learning
- GeoAI
- Inter- or multi-disciplinary problems (e.g., human-wildlife interaction)
- Simulation and prediction
- Visualization

We are interested in work dealing with any type of moving object (e.g., people, animals, vehicles, virus, goods etc.), with application in any domain (e.g., health, transportation, wildlife ecology, sports, marine, outdoor recreation, fitness, epidemiology). Short papers must be written in English and should not exceed six pages (including title, figures, and references). Papers should use a font size of 11 pt and a minimum margin size of 2.4 cm.

Workshop Format: The first part of this full-day workshop will consist of short vision and research talks selected from this Call. Talks will be organized into blocks and a discussant will be assigned to lead discussion and debate within each block of talks. We will host a small data challenge in the afternoon followed by a wrap-up plenary session to reflect on some of the challenges identified and topics for a future research agenda.

Special Issue: A special issue, with the same scope as the workshop, will be organized.

Submissions to the special issue may be made by either the workshop participants or others interested in the theme. Participation in the workshop does not guarantee acceptance in the special issues and all

submissions will be submitted to a review process that follows journal standards. We have identified an initial deadline of November 3, 2023 for submission of initial full drafts of papers to the special issue, allowing participants to incorporate feedback and new insights gained at the workshop, and potentially even forming new teams of authors. Journal to be announced soon.

Student Paper Competition: We will be holding a student paper competition as part of the workshop. Students are automatically considered upon submission. Judging will be based on the quality of the written submission and the oral presentation during the workshop. The top 2 student papers will be invited to be extended for the special issue.

Important Dates:

Call for workshop submissions sent out: 6 February 2023

Deadline for workshop submissions (6 pg): 8 May 2023

Data Challenge Topic Released: 23 June 2023

Workshop Notification of Acceptance: 23 June 2023

Workshop: 12 September 2023

Full paper submission for special issue: 3 November 2023