Vivek Hari Sridhar

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Education / Employment

2025–	Asst Prof	University of Washington Department of Biology
2021–25	Postdoc	Max Planck Institute of Animal Behavior / University of Konstanz Advisor: Margaret C. Crofoot & Ariana Strandburg-Peshkin
2015–21	PhD.	Max Planck Institute of Animal Behavior / University of Konstanz Advisor: Iain D. Couzin *Summa Cum Laude*
2013–15	MSc.	University of Groningen / Uppsala University Advisor: Franjo J. Weissing *Dual master's degree*
2008–12	B.E.	Manipal Institute of Technology Department of Biotechnology

Publications (*equal contribution)

12. Rathore, A., Naik, H., Das, D., DuPorge, I., Isvaran, K., Guttal, V., Crofoot, M. C., & **Sridhar, V. H.** (*in prep*). Collective tipping reorganizes site-choice traditions and spatial structure on leks.

11. Papadopoulou, M., Ball, M., Bartashevich, P., Burns, A. L. J., Chiara, V., Clark, M. A., Costelloe, B. R., Fele, M., French, F., Hauert, S., Mary-Heinrich, K., Herbert-Read, J. E., Hoitt, J., Ioannou, C. C., Landgraf, T., Matchette, S. R., Polverino, G., Sankey, D. W. E., Scott, D., **Sridhar, V. H.**, Strömbom, D., Trianni, V., Vo-Doan, T., King, A. J. (2025). Active interactions between animals and technology: biohybrid systems for animal behaviour research. *Animal Behaviour*.

10. Naik, H., Yang, J., Das, D., Crofoot, M. C., Rathore, A., & **Sridhar, V. H.** (2024). BuckTales: A multi-UAV dataset for multi-object tracking and re-identification of wild antelopes. *Neural Information Processing Systems*.

9. Sampaio, E., **Sridhar, V. H.**, Fransisco, F., Nagy, M., Sacchi, A., Strandburg-Peshkin, A., Nührenberg, P., Rosa, R., Couzin, I. D.* & Gingins, S.* (2024). Multidimensional leadership and composition-driven success in octopus-fish hunting groups. *Nature Ecology & Evolution*.

8. Demartsev, V., Averly, B., Johnson-Ulrich, L., **Sridhar, V. H.**, Leonardos, L., Vining, A., Thomas, M., Manser, M. B. & Strandburg-Peshkin, A. (2024). Mapping vocal interactions in space and time differentiates signal broadcast vs signal exchange in meerkat groups. *Philosophical Transactions of the Royal Society B*.

7. Williams, J. H.*, **Sridhar, V. H.***, Hurme, E.*, Gall, G. E. C.*, Borrego, N., Finerty, G. E., Couzin, I. D., Galizia, G. C., Dominy, N. J., Rowland, H. M., Hauber, M. E., Higham, J. P., Strandburg-Peshkin, A., & Melin, A. D. (2023). Sensory collectives in natural systems. *eLife*.

6. **Sridhar, V. H.**, Davidson, J. D., Twomey, C. R., Sosna, M. M. G., Nagy, M.* & Couzin, I. D.* (2023). Inferring social influence in animal groups across multiple timescales. *Philosophical Transactions of the Royal Society B*, 378(1874), 20220062.

5. Averly, B., **Sridhar, V. H.**, Demartsev, V., Gall, G., Manser, M.* & Strandburg-Peshkin, A.* (2022). Disentangling influence over group speed and direction reveals multiple patterns of influence in moving meerkat groups. *Scientific Reports*, 12(1), 13844.

4. **Sridhar, V. H.**, Li, L., Gorbonos, D., Nagy, M., Schell, B. R., Sorochkin, T., Gov, N. S. & Couzin, I. D. (2021). The geometry of decision-making in individuals and collectives. *PNAS*, 118(50), e2102157118.

3. Davidson, J. D., Sosna, M. M. G., Twomey, C. R., **Sridhar, V. H.**, Leblanc S. P. & Couzin, I. D. (2020). Collective detection based on visual information in animal groups. *Royal Society Interface*, 18(180), 20210142.

2. **Sridhar, V. H.**, Roche, D. G. & Gingins, S. (2019). Tracktor: image-based automated tracking of animal movement and behaviour. *Methods in Ecology & Evolution*, 10(6), 815-820.

1. Jolles, J. W., Boogert, N. J., **Sridhar, V. H.**, Couzin, I. D. & Manica, A. (2017). Consistent individual differences drive collective behaviour and group functioning of schooling fish. *Current Biology*, 27(18), 2862-2868.

Awards / Funding

2023 Centre for the Advanced Study of Collective Behaviour Large Grant €227,000
Funder: Centre for the Advanced Study of Collective Behaviour
Topic: Insect navigation
Purpose: A grant to study honeybee navigation using polarised light and the influence of ambiguous compass cues on social groups.

2021 Nominated for the Otto-Hahn Medal
Medal from the Max Planck Society across all disciplines recognizing outstanding scientific achievements in connection with the dissertation.

2021 CRG - CASCB Joint Grant €800,000
Funders: EAS Department, Max Planck Institute of Animal Behavior and
Centre for the Advanced Study of Collective Behaviour
Topic: Mating ecology of a lek-breeding antelope
Purpose: A grant to fund an independent team of postdocs to pursue research of their choosing. We study the social and spatial drivers of mate-choice on leks.

2018 Best student paper of the year €200
Funder: International Max Planck Research School for Organismal Biology

2013 Tuition fee waiver (75%) €12,000
Funder: Erasmus Mundus Master Programme in Evolutionary Biology

Presentations / Trainings

2025 *Invited seminar,* Smithsonian Tropical Research Institute (STRI)
Title: "The evolutionary ecology of decision-making"

Invited seminar, School of Aquatic and Fishery Sciences, University of Washington
Title: "Collective computations across scales of biological organization"

Invited talk, Gordon Research Conference on Movement Ecology of Animals
Title: "The geometry of decision-making"

Lab leadership training, EMBO
Four day in-person training course

Invited talk and panellist, Yale University
Listening to Climate Change Symposium

Special seminar, Indian Institute of Science
Title: "Collective computation across scales of biological organization"

2024 *Special seminar,* University of Padova
Title: "Collective computation across scales of biological organization"

Special seminar, University of Washington
Title: "Collective computation across scales of biological organization"

2023 *Invited talk,* Association for the Study of Animal Behaviour
Interdisciplinary workshop on Biohybrid systems in animal behaviour in Swansea, Wales

Invited talk, SIAM Conference on Applications of Dynamical Systems
Mini symposium: Dynamics of Decisions and Behavior in Social Systems in Portland, USA

Special seminar, University of Göttingen
Title: "Evolutionary ecology of decision-making"

Special seminar, University of California, Davis
Title: "Evolutionary ecology of decision-making"

Special seminar, University of Washington
Title: "Evolutionary ecology of decision-making"

2022 *Invited talk,* Descriptive and normative models of collective behaviour
Workshop on models of collective behaviour in Leeds, England

2019 *Contributed talk,* Bernstein Conference
Title: "The geometry of decision-making"

Contributed talk, Association for the Study of Animal Behaviour
ASAB Summer Meeting in Konstanz, Germany

Contributed talk, Animal Behavior Society
ABS meeting in Chicago, USA

2018 *Special seminar,* Princeton University

Title: Collective computation in animal groups

Special seminar, ETH Zurich
Title: Collective computation in animal groups

Special seminar, Wildlife Institute of India
Title: Collective computation in animal groups

Poster, Distributed, collective computation in biological and artificial systems
Conference in Janelia Research Campus, USA

Mentorship

PhD students

Jimjohn D. Milan, University of Washington
Role: Primary advisor
Current position: PhD ongoing

August Paula, International Max Planck Research School / University of Konstanz
Role: Mentor and Thesis Committee member
Current position: PhD ongoing

Marie-Pier Poulin, University of Washington
Role: Thesis Committee member
Current position: PhD ongoing

Nora Lee, University of Washington
Role: Thesis Committee member
Current position: PhD ongoing

Nicholas Guimond, University of Washington
Role: Thesis Committee member
Current position: PhD ongoing

Bachelor & Master students

Ruthvik S. Pallagatti, Max Planck Institute of Animal Behavior / University of Konstanz
Role: Primary project advisor
Project title: "Territory establishment and spatial patterning in blackbuck leks"

Sakshi Rao, University of Amsterdam
Role: Primary project advisor
Project title: "Quantifying social interactions in an antelope lek"

Yirong Xiong, Centre for the Advanced Study of Collective Behaviour
Role: Primary project advisor
Project title: "Mapping visual input to head direction in ring-attractor networks"

Junran Yang, University of Konstanz
Role: Project co-advisor
Thesis title: "Evaluating and benchmarking state-of-the-art object detection and multi-object tracking algorithms"
Current position: AI engineer, Everest Systems

Bianca R. Schell, University of Konstanz

Role: Primary thesis advisor
Thesis title: "Employing virtual reality to reveal individual locusts' decision-making"

Teaching

2023 *Art and Nature Seminar,* **Institute Art, Gender, Nature, Basel**
Instructor for an intensive seminar series with master students about my work on the evolutionary ecology of decision-making. I led interactive discussions and designed games to discuss research methodology and scientific practices with art students.

2021/ *Animal Ecology and Behaviour,* **Max Planck institute of Animal Behavior**
2022 Instructor for a topic specific literature review course for first year PhD students. I discussed seminal work in the field of collective animal behaviour.

2016/ *Animal Behaviour intensive course,* **University of Konstanz**
2017 Lecturer in a master course discussing basic techniques of animal movement analysis.

2014 *Ecology 1,* **Ludwig Maximilians University**
Tutor / Teaching assistant for a bachelor course explaining basic concepts in Ecology.

Outreach

2025 Claude Calling, **California Academy of Sciences**
A musical piece produced from the life and sounds of Claude, the albino alligator at the California Academy of Sciences.

2022- *Field Trip*, **Akademie Schloss Solitude**
2025 An art residency that is part of a transdisciplinary residency collaboration between the Akademie and the EAS department at the Max Planck Institute of Animal Behavior. I organized three public art-science events over three years in two German cities.

2021 *Virtual worlds, virtual swarms*, **University of Konstanz**
Open Day for high school students to learn about research in universities. As part of this session, I discussed the role of cutting-edge technologies—specifically virtual reality—in the study of animal behaviour.

2021 *Illustrating animal behaviour*, **MaxCine**
A visual exchange with members of the public highlighting the role of diversity and personal experiences in shaping how we think about science.

2018 *Lange nacht der wissenschaft*, **University of Konstanz**
Open night of science for the public to visit the university. I was part of a team setting up simulations of fish schools and depth sensors to create interactive exhibits for the public.

2016 *Science day,* **Klosterschule Marianne**

A local school where I played games that explained concepts of ecology and behaviour to school children.

References

Iain D. Couzin icouzin@ab.mpg.de
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Professor, University of Konstanz

Meg C. Crofoot mcrofoot@ab.mpg.de
Director, Max Planck Institute of Animal Behavior
Professor, University of Konstanz

Franjo J. Weissing f.j.weissing@rug.nl
Professor, University of Groningen