

Vivek Hari Sridhar

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Education

- 2021 PhD. Max Planck Institute of Animal Behavior / University of Konstanz
Advisor: Iain D. Couzin
Summa Cum Laude
- 2015 MSc. University of Groningen / Uppsala University
Advisor: Franjo J. Weissing
Dual master's degree
- 2012 B.E. Manipal Institute of Technology
Department of Biotechnology

Publications (*equal contribution)

10. Sampaio, E., **Sridhar, V. H.**, Francisco, F., Nagy, M., Sacchi, A., Strandburg-Peshkin, A., Nührenberg, P., Rosa, R., Couzin, I. D.* & Gingins, S.* (in review). Multidimensional leadership and composition-driven success in octopus-fish hunting groups.
9. Demartsev, V., Averly, B., Johnson-Ulrich, L., **Sridhar, V. H.**, Leonardos, L., Vining, A., Thomas, M., Manser, M. B. & Strandburg-Peshkin, A. (in review). Mapping vocal interactions in space and time differentiates signal broadcast vs signal exchange in meerkat groups.
8. Bath, D. E., Graving, J. M., Walter, T., Vizcaíno, J. P., **Sridhar, V. H.** & Couzin, I. D. (in revision). Collective sensing in mobile animal groups.
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. (in press). 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. & Gingsins, 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 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.	€227,000
2021	Nominated for the Otto-Hahn Medal Medal from the Max Planck Society across all disciplines recognizing outstanding scientific achievements in connection with dissertation.	
2021	CRG - CASCB Joint Grant Fundors: 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.	€700,000
2018	Best student paper of the year Funder: International Max Planck Research School for Organismal Biology	€200
2013	Tuition fee waiver (75%) Funder: Erasmus Mundus Master Programme in Evolutionary Biology	€12,000

Presentations

- 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
Minisymposium: 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, Seattle
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
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

August Paula, International Max Planck Research School / University of Konstanz
Role: Regular discussions within and outside the Thesis Advisory Committee (TAC)
Current position: PhD ongoing

Louise Ducroix, International Max Planck Research School / Institute of Evolutionary Science of Montpellier
Role: Regular discussions as part of the Thesis Advisory Committee (TAC)
Current position: PhD ongoing

Master students

Bianca R. Schell, University of Konstanz
Role: Weekly progress meetings as the primary thesis advisor
Thesis title: "Employing virtual reality to reveal individual locusts' decision-making"

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

Abhimanyu Madhusudanan, Max Planck Institute of Animal Behavior / University of Konstanz
Role: Supervised logistical planning, data collection and processing in the field

Kuldeep Chouhan, Max Planck Institute of Animal Behavior / University of Konstanz
Role: Supervised logistical planning and data processing in the field

Dipin Das, Max Planck Institute of Animal Behavior / University of Konstanz

Role: Supervised data processing and project planning in the field

Mansi Dave, Max Planck Institute of Animal Behavior / University of Konstanz

Role: Supervised data processing and project planning in the field

Praneetha Monipi, Max Planck Institute of Animal Behavior / University of Konstanz

Role: Supervised data processing and project planning in the field

Bachelor students

Sakshi Rao, Max Planck Institute of Animal Behavior / University of Konstanz

Role: Supervised data collection and processing in the field

Ruthvik S P, Max Planck Institute of Animal Behavior / University of Konstanz

Role: Supervised data processing and project planning in the field

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

2022- [*Field Trip*](#), **Akademie Schloss Solitude**

2024 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.

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.

Professional skills and contributions

Professional skills

- Certified wilderness first-aider by Outdoor Schule, Germany, and the Indian Lifesaving & Lifesaving Sports Federation
- Certified UAV remote pilot with A1/A3 OPEN sub-category license from EASA
- Certified PADI open water diver
- Completed the "Professional Naturalist" training by Pugdundee Safaris and WFS, India
- Completed AccuPixel's photogrammetry training using Agisoft Metashape

Interpersonal skills

- Lived in: India, Sweden, Germany, Netherlands
- Languages: Fluent English, Hindi, and Tamil; Basic German

Academic contributions

- Peer review
Ecology Letters, American Naturalist, Animal Behaviour, Behavioral Ecology, Royal Society Open Science and Scientific Reports
- Diversity, Equity, and Inclusion
Member of the team evaluating "Diversity conference and Travel Grants" for ASAB Summer Meeting, 2019
Contributed to abstract screening for the Student Conference on Conservation Science, Bangalore

References

Iain D. Couzin

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Professor, University of Konstanz

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Meg C. Crofoot

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