Academic Curriculum Vitae of Dr. Yash Sondhi

Current Address: Gainesville FL,USA
Current Affiliation: Postdoctoral fellow, Florida Museum of Natural History, Akito Kawahara Lab
Ph. no. : +1-347-561-8687 **Email**: yashsondhi@gmail.com
Website: https://yashsondhi.com/

EDUCATION

PhD, Florida International University, Miami — Aug 2017 - Dec 2022
5 yr. Integrated BS-MS in Biology, IISER-TVM — Aug 2012– April 2017
Current GPA: **3.95/4**
Overall graduation GPA: **8.3**/10 Major Biology GPA: **9**/10
General GRE Score: **332**/340 TOEFL-IBT Score: **112/**120

AWARDS AND SCHOLARSHIPS

2022 Lewis and Clark Grant (5000 USD) to study 3d tracks of moths to light

2021 National Geographic Early career Grant, (10,000 USD) to study light pollution impacts on moths in India.
Dissertation Year Fellowship Fellowship for 2022 (16600 USD)
Institute of Environment Research Fellowship for 2022 (8300 USD)
Tinker LACC Fieldwork support (2500 USD)
Dissertation Evidence Acquisition Fellowship (8000 USD)
Lewis and Clark Supplemental Funding (950 USD)

2020 Lewis and Clark Grant (3000 USD) to study light pollution impacts on moths in Florida.
FIU Departmental travel grant (300 USD) for a conference.

2019 FIU tropics Grant (3000 USD) for studying light pollution and its impact on moths**.**
Graduate school travel grant (470 USD) for a conference.

2018 Awarded the Broadening Participation Diversity Travel Grant (500 USD) for a conference.
FIU Departmental travel grant (300 USD) for a conference.

2017 Awarded the Mitacs Global Research Internship Award (~4000 USD).

2017 - 2020 Awarded Presidential Graduate Fellowship (30,000 USD per year for 3 years).

2012 - 2017 Awarded Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship, a competitive national science scholarship in India.

2014 Indian Academic Science Summer Fellowship

WEBSITES

Co- editor a website on Indian moths (www.mothsofIndia.org), a peer reviewed online database collating information on Indian moths and promoting citizen science.

PUBLICATIONS

Currea, J. P., **Sondhi, Y.**, Kawahara, A. Y., & Theobald, J. (2021). Measuring Compound Eye Optics with Microscope and MicroCT Images. In press *Comms. Bio* 2023

Sondhi, Y., Jo, N. J., Alpizar, B., Markee, A., Dansby, H. E., Currea, J. P., ... & Theobald, J. C. (2022) Portable locomotion activity monitor (pLAM): A cost-effective setup for robust activity tracking in small animals. *Methods in Ecology and Evolution*. https://doi.org/10.1111/2041-210X.13809

Sondhi, S., **Sondhi, Y**., Karmakar, T., & Kunte, K. (2021). Moth diversity (Lepidoptera) of Shendurney and Ponmudi in Agastyamalai Biosphere Reserve, Kerala, India: an update. *Tropical Lepidoptera Research*, 166-178.

Komal J, Shashank PR, Sondhi S, Madan S., **Sondhi Y**. et al. (2021) Moths (Insecta: Lepidoptera) of Delhi, India: An illustrated checklist based on museum specimens and surveys. *Biodivers Data J*. 2021;9:e73997.

Sondhi, Y., Ellis, E.A., Bybee, S.M. Theobald, J., & Kawhara, A. Y. (2021) Light environment drives evolution of color vision genes in butterflies and moths. *Comms. Biol.* 4**,** 177. https://doi.org/10.1038/s42003-021-01688-z Altmetric score: 36, 2277 accesses on 15 September 2021, citations:7

Sondhi, S., Karmakar, T., **Sondhi, Y**., & Kunte, K. (2021). Moths of Tale Wildlife Sanctuary, Arunachal Pradesh, India with seventeen additions to the moth fauna of India (Lepidoptera: Heterocera). *Tropical Lepidoptera Research*, 1-53.

Sondhi, S., Basu, D.N, **Sondhi, Y,** Kunte K. (2020) A new species of Metallolophia Warren, 1895 (Lepidoptera: Geometridae: Geometrinae), and notes on *M. opalina* (Warren, 1893), from eastern Himalaya, India. *Zootaxa* 4838(2), 289-297

Sondhi, Y., Sondhi, S.,Pathour, S.R., Kunte, K. (2018) Moth diversity (Lepidoptera: Heterocera) of Shendurney and Ponmudi in Agastyamalai Biosphere Reserve, Kerala, India, with notes on new records *Tropical Lepidoptera Research* 28(2)

Sondhi, Y. , Kitching, I. J., Basu, D.N. and Kunte, K. (2017) A new species of Theretra Hübner (Lepidoptera: Sphingidae) from the southern Western Ghats, India. Zootaxa, 4323(2),185-196

Sondhi, S., Valapil B., **Sondhi, Y**. and Sondhi, A. (2017) A report out on some butterflies (Lepidoptera) from Ladakh, Jammu and Kashmir and Lahaul, Himachal Pradesh, India. *Journal of Threatened Taxa 9*(3), 9971-9987.

Sondhi, Y. and Sondhi, S., (2016). A partial checklist of moths (Lepidoptera) of Dehradun, Mussoorie and Devalsari in Garhwal, Uttarakhand, India. *Journal of Threatened Taxa*, *8*(5), 8756-8776.

Sondhi, S., Karmakar, T., **Sondhi, Y**., Jhaveri, R. and Kunte, K., (2016). Re-discovery of Calinaga aborica Tytler, 1915 (Lepidoptera: Nymphalidae: Calinaginae) from Arunachal Pradesh, India. *Journal of Threatened Taxa*, *8*(3), 8618-8622.

Kareem, A., Radhakrishnan, D., **Sondhi, Y.**, Aiyaz, M., Roy, M. V., Sugimoto, K., & Prasad, K. (2016). De novo assembly of plant body plan: a step ahead of Deadpool. *Regeneration*, *3*(4), 182-197.

CONFERENCE PROCEEDINGS

*Currea, J.P., **Sondhi, Y.** Theobald,J, Using Microscope or MicroCT Images to Measure Compound Eye Optics. 2020 In Integrative and Comparative Biology (Vol 60, pp. E305-E305)

***Sondhi, Y.**, Theobald, J., & Kawhara, A. Y. (2019, March). Evolution of Light Sensing Opsins in Insects. In Integrative and Comparative Biology (Vol. 59, pp. E217-E217)

RESEARCH EXPERIENCE

Supervisor : Dr. Akito Y. Kawahara, University of Florida, Gainesville
Postdoctoral Research **January 2023-present**
Project: Sensory evolution in insects
Skills: Bioinformatics: RNA seq, genomics and transcriptomics, gene evolution
Skills: Behaviour: Python, Raspberry pi's, data analysis, rig building
Skills: Imaging: Image processing, Ct scanning and reconstruction, ommatidial counting
Behavioural experiments, modelling, phylogenetic reconstruction, micro-tomography

Supervisor : Dr. Jamie Theobald , FIU, Miami, co-superviser Dr. Akito Y. Kawahara, University of Florida, Gainesville
PhD research **August 2017-Dec 2022**
Project: Diel-niche evolution in butterflies and moths
Skills: Bioinformatics: RNA seq, genomics and transcriptomics, gene evolution
Skills: Behaviour: Python, Raspberry pi's, data analysis, rig building
Skills: Imaging: Image processing, Ct scanning and reconstruction, ommatidial counting
Behavioural experiments, modelling, phylogenetic reconstruction, micro-tomography

Supervisor : Dr. Juli Carrillo, University of British Columbia, Vancouver Canada
Mitacs Global Scholar Research internship **May-August 2017**
Project: "Exploiting stress-induced genome replication in *Arabidopsis thaliana* to improve pest tolerance and crop yield"
Skills: Plant and insects, FACS

Supervisor: Dr. Krushnamegh Kunte, Insect Biodiversity Lab- National Centre for Biological Sciences (NCBS)
Masters Thesis project **July 2016-May 2017**
Project: "*Foraging in Lepidoptera, strategies and tools*"
Skills: Behavioural experiments, modelling, phylogenetic reconstruction, micro-tomography

Independent Research Project **Jan 2013-May 2017**
National Centre for Biological Sciences (NCBS), IISER-TVM, Titli Trust, Dehradun
Project: *Assessment of the diversity of macro-moths in Agasthyamalai Biosphere Reserve, Southern Western Ghats, Kerala*
Skills: Lepidoptera field surveys; documentation, wet and dry collection, insect taxonomy, insect genitalia dissection.

Supervisor: Dr. Kalika Prasad, Assistant Professor, Indian Institute of Science Education and Research - Trivandrum (IISER-TVM)

Minor Research Project **Jan-March 2016**

Project: Modelling genetic and environmental factors involved in de-novo plant regeneration, using *Arabidopsis thaliana*.

Skills: Bioinformatic analysis of next generation sequencing data, mathematical modelling

Supervisor: Dr. Sanjay Sane, Neurobiology and Insect Flight Lab, National Centre for Biological Sciences (NCBS)

Summer Project-KVPY Fellowship **June-July 2015**

Project : *"Comparing Flicker Fusion rates in Lepidoptera –Exploring insect neurobiology and visual processing"*

Skills : Electrophysiology, extracellular electroretinogram recordings and analyses of data

Supervisor:Dr. Krushnamegh Kunte, Insect Biodiversity Lab- National Centre for Biological Sciences (NCBS)

Summer Project-KVPY Fellowship **May-July 2015**

Project : "*Exploring trends in Hawkmoth pollinator interaction in a tropical forest community via preliminary collection of morphometric data*"

Skills: Insect morphometric analyses, field work, insect trapping, floral trait measurement

Summer Project-Indian Academy of Science (IAS) Fellowship **May-July 2014**

Project : *"Comparative study on the hawkmoths (Lepidoptera: Sphingidae) in Southern Western Ghats and North Eastern Himalayas. A possible case of allopatric speciation."*

Skills: DNA Extraction, DNA sequence analysis, phylogenetic analysis

Supervisor :Dr. Ramana Athreya, IISER, Pune

Summer Project, KVPY Fellowship **May-Aug 2013**

Project: *Elevational diversity patterns of hawkmoths in Eaglenest Wildlife Sanctuary, Arunachal Pradesh*

Skills: Field work, insect trapping, wet and dry sample collection

Independent Project-Awarded KVPY fellowship for project **May-Aug 2012**

Project :*Potential of moths as bio indicators in assessing the impact of urbanisation on habitat quality in Dehradun, Uttarakhand.*

Skills: Project design, basic biostatistics, diversity analyses.

TEACHING

Teaching assistant at Florida International University **2018-2021**

General Biology 1 Lab	Fall 2018 and Spring 2019
Ecology Lab	Summer 2019
Going Viral: Corona virus bioinformatics Lab	Summer and Fall 2020
Genetics Lab	Fall 2021

TALKS AND PRESENTATIONS

•Presented a talk at the Society for Integrative and Comparative Biology (SICB) Conference, Jan 2021: Light environment drives the evolution of color vision genes in butterflies and moths
•Presented a talk at the Entomological Society of America Nov 2021. Note: awarded best student presentation in category (2nd Place): The role of light environment in the evolution of color vision genes in butterflies and moths
•Presented a poster at the Society for Integrative and Comparative Biology (SICB) Conference, 2020.:
•Presented a poster at Janelia Conference on Colour Vision : Circuits and behaviour April 2019: Hidden ultraviolet wing patterns and evolution of visual genes in diurnal and nocturnal Lepidoptera.
•Presented a talk at the Society for Integrative and Comparative Biology (SICB) Conference, 2019
•Presented a talk and poster at the International Conference on Butterfly Biology, 2017
• Presented a poster at Indian-Behaviour Ecology and Evolution conference, India-2016
• Invited for Lepidoptera meet to talk about moth taxonomy and behaviour,India 2016
• Attended and gave a talk on the role of moths as bio-indicators at YETI, (Ecology conference) 2012

OUTREACH AND EDUCATION

•Skype a scientist session, Homeschoolers of Memphis Eclectic-Team Python (animal/ecology club), 2020
•Butterfly and moth education and outreaching NE India: Acted as resource person for the 2019 Ziro butterfly and moth festival
•Active member of Titli Trust, supporting conservation and nature education efforts and digital media
• Attended and participated in conferences on Chemical Ecology, NCBS, Bengaluru-2016
• Attended UKIERI workshop on Pollination Ecology, Trivandrum, 2015
• Selected to attend Foundations of Ecology and Evolution School-IISER Pune, 2014
• Participated in numerous butterfly, bird and dragonfly surveys in Kerala and North East India-2016-2012
• Selected to attend Foundations of Ecology and Evolution School-IISER Pune, 2014
• Intern at Niiti Consulting, a social consultancy firm, 2013
•Attended Student Conference for Conservation Science(SCCS), Bangalore, 2013
•Published article on fauna of Devalsari, Uttarakhand in the Hornbill magazine, 2011

JOURNAL REVIEW ACTIVITIES

2021	Reviewer,Proceedings of the Royal Society B Number of Works Reviewed / Refereed:1
	Reviewer, Zoosprint Number of Works Reviewed / Refereed:1
2020	Reviewer, Journal of Threatened Taxa Number of Works Reviewed / Refereed:2
2018	Reviewer,Zootaxa Number of Works Reviewed / Refereed:1

STUDENT SUPERVISION

08/2020-present
Undergraduate Mentor, Florida International University: Mentored three undergraduate students (Nicolas Jo, Melody Hershman and Brittney Alpizar) working in the lab on data mining projects and behavioural experiments and animal rearing.