* 1. **Binoy**

Assistant Professor

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Lab website: <http://social-cognition.weebly.com/>

# Scholarships and Fellowships

* + - Fellow - Intercontinental Academia (ICA), University-Based Institutes for Advanced Study, Birmingham University UK and Nanyang Technological University, Singapore
		- Joint Secretary, Ethological Society of India
		- Research Affiliate, Centre for the Study of Neuro-Economics, George Mason University, USA
		- External Affiliate, Krasnow Institute of Advanced Study, George Mason University, USA
		- Lead, Biology Education Team, *Connected Learning Initiative (CLIx)* A joint venture of Massachusetts Institute of Technology, USA and Tata Institute of Social Science (TISS), Mumbai.
		- Representative, UNESCO UniTwin Complex Systems Digital Campus (CS-DC)
		- Young Scientist (*Fast-Track*), Department of Science and Technology, Government of India; 2013-2016
		- Cognitive Science Research Initiative Postdoctoral Fellowship, Department of Science and Technology, Government of India; 2010-2012

# Professional Positions

* + - Assistant Professor, School of Natural Sciences and Engineering, National Institute of Advanced Studies, Bangalore; June 2014- ongoing
		- SERB Young Scientist, National Institute of Advanced Studies, Bangalore; 2013

– 2014

* + - Cognitive Science Research Initiative Postdoctoral Fellow, National Institute of Advanced Studies, Bangalore; 2010-2012
		- Lecturer, Department of Zoology, MES KVM College, Valanchery, Kerala; 2009-2010

#  Educational Qualifications

|  |  |  |  |
| --- | --- | --- | --- |
| *Degree* | *Subject* | *Year* | *University* |
| Doctorate | Zoology | 2002-2009 | University of Calicut Kozhikode |
| Master’s degree | Zoology | 1999-2001 | University of Calicut Kozhikode |
| Bachelor’s degree | Zoology | 1996-1999 | University of Calicut Kozhikode |

**Research Grants**

## ***Principal Investigator***

* + - *Biology Education Module - The Connected Learning Initiative (CLIx).* March 2016 – February 2018; *Funded by*: Tata Institute of Social Sciences (TISS), Mumbai, Massachusetts Institute of Technology (MIT), Cambridge, USA and the Tata Trusts. *Grant*: INR 16,19,000
		- *Sahyadri’s underground fishes: developing conservation action plans for the subterranean fishes of Western Ghats. (*With Rajani M. B., National Institute of Advanced Studies, Bangalore and Anvar Ali, Kerala University of Fisheries and Ocean Sciences, Kochi). *Funded by*: Rufford Small Grant, UK. November 2015- December 2017; *Grant*: INR 5,00,000
		- “*Understanding the role of ‘student networks’ in creating awareness about environment, water, sanitation and hygiene in rural and socio-economically marginalized areas”* (with Anitha Kurup and Sindhu Radhakrishna; National Institute of Advanced Studies, Bangalore). *Funded by*: Eco-Water and Sanitation Hygiene (Eco-WaSH) Programme. National Council for Science and Technology Communication (NCSTC), Government of India, New Delhi. July 2014 – August 2016; *Grant*: INR 13,25,280
		- *“Intra-and inter-population variation in behavioural plasticity in a fish, the climbing perch (Anabas testudineus): Role of behavioural syndromes and brain organisation*”. *Funded by*: Department of Science and Technology,

Government of India, New Delhi. Young Scientist (*Fast Track*) Project. July 2013 – November 2016; *Grant*: INR 23,80,000

* + - *“Conspecific recognition, numerical competence and capacity for transitive inference in a freshwater fish, the climbing perch (Anabas testudineus)” Funded by*: Department of Science and Technology, Government of India, New Delhi. Cognitive Science Research Initiative Postdoctoral Fellowship. August 2010 – August 2012; *Grant*: INR 11,76,000

## ***Co-Principal Investigator***

* + - *Documentation of the indigenous psychiatric and psychological practices.* Principal Investigator: Sangeetha Menon, National Institute of Advanced Studies, Bangalore; Funded by Tata Trust. April 2018 – April 2022; Grant: INR 1,26,00,000
		- *Managing public perceptions and public acceptances of public risks associated with new and emerging technologies through science and technology communications.* Principal Investigator: Baldev Raj, National Institute of Advanced Studies, Bangalore; Funded *by* National Council for Science and Technology Communication (NCSTC), Government of India, New Delhi. August 2017 – August 2018; *Grant*: INR 15, 27,400
		- "*Determinants of nuclear risk perception in India: an integrated analysis*" Principal Investigator: Gopi Rethinaraj, National Institute of Advanced Studies, Bangalore; Funded *by*: Department of Atomic Energy (DAE) Board of Research in Nuclear Sciences (BRNS) Government of India. June 2017 – May 2020; *Grant*: INR 34,97,000
		- *Interdisciplinary forays into human-environment interactions.* Principal Investigator: Sindhu Radhakrishna, National Institute of Advanced Studies, Bangalore; *Funded by*: Science Engineering Research Board (SERB) Government of India, New Delhi. May 2017 – May 2020; *Grant*: INR 33,00,000
		- “*Meditation, sleep organization and well-being from an Indian perspective: evaluation of micro sleep architecture dynamics, sleep consciousness and psychological well-being in practitioners of Vipasana meditation”*. Principal Investigator: Bindhu Kutty, National Institute of Mental Health and Neuro Science, NIMHANS; *Funded by:* Science and Technology of Yoga and Meditation (SATYAM), Department of Science and Technology, Government of India, New Delhi. July 2016- July 2019
		- “*Intraspecific variation in the slender loris Loris lydekkerianus”.* Principal Investigator: Sindhu Radhakrishna, National Institute of Advanced Studies, Bangalore; *Funded by:* SERB Women Excellence Award Research Grant. August 2013 – May 2017; *Grant*: INR 18,00,000
		- *“Can we bridge educational institutions through citizen science project?*” Principal Investigator: Anitha Kurup, National Institute of Advanced Studies, Bangalore. *Funded by:* Education Programme, National Institute of Advanced Studies, Bangalore, India. January 2010 – August 2010; *Grant*: INR 50,000

## ***Consultant***

* + - *Mapping dengue mosquito population in Kerala.* Principal Investigator: Ajit Babu, Center for Advancement of Global Health (CAGH), Kochi; *Funded by:* Natural Resource Data Management System, Department of Science and Technology, Government of India, New Delhi. May 2015 - May 2017
		- *Technological and Social Solutions to Major Water Challenges Facing India*. Principal Investigator: Shantha Mohan, National Institute of Advanced Studies, Bangalore; *Funded by:* Water Initiative, Department of Science and Technology, Government of India, New Delhi. July2012 – December 2012

## ***Post-doctoral Research***

National Institute of Advanced Studies, Bangalore

*Conspecific recognition, numerical competence and capacity for transitive inference in a freshwater fish, the climbing perch (Anabas testudineus)*; August 2010 – August 2012

## ***PhD***

University of Calicut, March 2003 – June 2009

Doctoral thesis - Determinants of decision making in climbing perch (*Anabas testudineus* Bloch), a freshwater fish

## ***Research Fellow***

*Environmental correlates of spatial and social learning in fish: The role the neural circuitry of hippocampal pallium and amygdalar pallium*

Department of Zoology, Christ College, Irinjalakuda, Kerala; *Funded by* University Grants Commission, Government of India, New Delhi; 2007-2009

*Studies on seed production and enhancement of larval survival of indigenous freshwater food fishes of Kerala*

Department of Zoology, Christ College, Irinjalakuda, Kerala; *Funded by* Department of Science and Technology, Government of India, New Delhi; 2004-2007

*Behavioural ecology of some selected freshwater food fishes of Kerala*

Department of Zoology, Christ College, Irinjalakuda, Kerala; *Funded by* University Grants Commission, Government of India, New Delhi; 2001-2004

## ***Current Research***

* + - Behavioural plasticity, coping strategies and social decision making in various epigean and subterranean fish species.
		- Understanding human dimensions of human-monkey conflicts in India – (*With* Sindhu Radhakrishna *National Institute of Advanced Studies, Bangalore).*
		- Cultural variation in human social cognition.
		- Biology education: Understanding factors inducing cognitive load and coping strategies utilized by the school children in India.
		- Science communication and managing perception of novel technologies in a multicultural and multi-stakeholder society

# Teaching Experience

## ***Academic Courses***

* + - *Research Design and Logic.* Part of the Research methodology course for PhD students. National Institute of Advanced Studies, Bangalore; August – November 2018
		- One credit course of *Science Communication – Principles, Practices and Future Challenges* for doctoral degree and postgraduate students (with M Sai Baba). National Institute of Advanced Studies, Bangalore; August – November 2018
		- Three-credit course of *An Introduction to Mind, its Functions and Purpose* for doctoral degree and postgraduate students (with Sangeetha Menon, Anindya Sinha, LM Patnaik, Nithin Nagaraj and Sisir Roy). National Institute of Advanced Studies, Bangalore; August – November 2017
		- Three-credit course of *Introduction to Consciousness* for doctoral degree and postgraduate students (with Sangeetha Menon, Anindya Sinha, LM Patnaik and Sisir Roy). National Institute of Advanced Studies, Bangalore; August – December 2015
		- Three-credit course of *Behaviour, Cognition and Consciousness* for doctoral degree and postgraduate students (with Sangeetha Menon, Anindya Sinha and B V Sreekantan). National Institute of Advanced Studies, Bangalore; September

– December 2014

* + - Three-credit course of *Understanding the Biology of Behaviour* for doctoral degree and post-graduate students. Central University of Kerala, Kasargode. 1- 5 September 2014
		- Three-credit course of “*Essentials of Comparative Cognition*” for doctoral degree students (with Anindya Sinha); National Institute of Advanced Studies, Bangalore; January – April 2014
		- Two-lecture module on “*Laboratory and Field Methodologies*” as part of a three-credit course on Research Methodologies for doctoral degree students; National Institute of Advanced Studies, Bangalore; January – April 2014
		- A three-credit course of “*Human-Environment Interactions*”, consisting of lectures, paper presentations and discussion sessions for doctoral degree students (with Sindhu Radhakrishna); National Institute of Advanced Studies, Bangalore; October – December 2013
		- Two-lecture module on “*Laboratory and Field Methodologies*” as part of a three-credit course on Research Methodologies for doctoral degree students; National Institute of Advanced Studies, Bangalore; January – April 2013
		- Theoretical and practical classes for undergraduate students of zoology; MES KVM College, Valanchery, Kerala; September 2009 – October 2010
		- Guidance of research projects and dissertations, theoretical and practical classes in animal behaviour, ecology, evolution and biostatistics for postgraduate students of the Departments of Zoology and Environmental Science; Christ College, Irinjalakuda, Kerala; May 2001 – March 2009

# *Modules for school children*

* + - Developed a module titled *Ecosystem* for the school children (8th and 9th standard) of four states (Chhattisgarh, Telangana, Rajasthan and Mizoram) of India as part of the project titled Connected Learning Initiative (CLIx).

# Publications

## ***Edited volumes***

Menon S, Nagaraj N and Binoy V V(2017) *Self, Culture and Consciousness: Interdisciplinary Convergences on Knowing and Being*. Springer - Nature

Bagla P and Binoy V V(2017) *Bridging Communication Gap in Science and Technology: Lessons from India*. Springer, Singapore

## ***Refereed Journals***

Babu AN, Niehaus E, Shah S, Unnithan C, Ramkumar PS, Shah J, Binoy VV, Soman B, Arunan MC, Jose CP (*in press*) Smart Phone Geospatial Apps for Dengue control, prevention, prediction and education: MOSapp, DISapp and the Mosquito Perception Index (MPI). *Journal of Environment Monitoring and Assessment, Special Issue: Geospatial Tech in Environment Health Applications*, Springer

Anand S, Binoy V V, and Radhakrishna S (2018) The monkey is not always a God: Attitudinal differences toward crop-raiding macaques and why it matters for conflict mitigation. *Ambio,* 1-10.

Binoy V V (2015) Food patch choice in climbing perch (*Anabas testudineus*), a freshwater fish. *Indian Journal of Fisheries* 62: 149-151

Binoy V V, Kasturirangan R and Sinha A (2015) Sensory cues employed for the acquisition of familiarity-dependent recognition of a shoal of conspecifics by climbing perch (*Anabas testudineus* Bloch). *Journal of Biosciences* 40: 225-232

Binoy V V (2015) A comparative analysis of the boldness in four teleosts inhabiting an irrigation canal. *Indian Journal of Fisheries* 62: 128-130

Kurup A, Chandra A and Binoy V V (2015). ‘Little minds dreaming big science’: are we really promoting ‘children gifted in STEM’ in India? *Current Science* 108: 779-781

Radhakrishna S, Binoy V V and Kurup A (2014). The culture of environmental education: Insights from a citizen science experiment in India. *Current Science* 107: 176-178

Binoy V V and Radhakrishna S (2013). Environmental decision making: The role of culture-induced divergence in cognition. *Current Science* 105: 757-759

Karmakar S and Binoy V V (2012). Tools as non-elaborated aesthetic form. *Science and Culture* 78: 347-350

Binoy V V, Roshan K S and Rakesh V B (2012). Occurrence of *Kryptoglanis shajii,* an enigmatic subterranean-spring catfish (Siluriformes, *Incertae sedis*), in channels of paddy field. *Current Science* 102: 161

Binoy V V (2010). Catfish *Clarias* is vanishing from the waters of Kerala. *Current Science* 90: 714

Binoy V V and Thomas K J (2008). Influence of hunger on the food stocking behavior of climbing perch. *Journal of Fish Biology* 73: 1053-1057

Binoy V V and Thomas K J (2006). Climbing perch (*Anabas testudineus)* can recognize members of a familiar shoal. *Current Science* 90: 288-289

Binoy V V and Thomas K J (2005). Comparative analysis of organochloride and organophosphate pesticides on the learning ability and sustained swimming capacity of climbing perch (*Anabas testudineus)*, a freshwater fish. *Journal of the Indian Society of Toxicology* 2: 23

Binoy V V, Menon S and Thomas K J (2005). The influence of methyl parathion on the behaviour of the climbing perch (*Anabas testudineus*). *Pollution Research* 24: 253- 259

Thomas K J, Binoy V V and Baby G (2005). Male Siamese fighting fish prefers larger females with distended belly. *Journal of Ecobiology* 17: 537-544

Binoy V V and Thomas K J (2004). The climbing perch (*Anabas testudineus* Bloch), a freshwater fish, prefers larger unfamiliar shoals to smaller familiar shoals. *Current Science* 86: 207-211

Binoy V V, Job N and Thomas K J (2004). The influence of dicofol on the behaviour of the climbing perch (*Anabas testudineus). Indian Journal of Fisheries* 51: 345-351

## ***Book Chapters***

Binoy V V, Vashishta I, Rathore A and Menon S (2017) Autobiographical memory - where self, wellbeing and culture congregate. In: *Self, Culture and Consciousness: Interdisciplinary Convergences on Knowing and Being*. Menon S., Nagaraj N. and Binoy V. V. (eds.) Springer – Nature

Menon S., Nagaraj N. and Binoy V. V. (2017) Bridging self, culture and consciousness. In: *Self, Culture and Consciousness: Interdisciplinary Convergences on Knowing and Being*. Menon S., Nagaraj N. and Binoy V. V. (eds.) Springer - Nature

Binoy VV (2017) When Science Meets the Public—Bridging the Gap. In: *Bridging the Communication Gap in Science and Technology: Lessons from India*. Bagla, P. and Binoy V. V. (eds.) Springer

Binoy V V, Radhakrishna S and Kurup A (2017) Bridging educational institutions for a citizen science project: a case study from Malappuram district, Kerala, India. In: *Bridging the Communication Gap in Science and Technology: Lessons from India*. Bagla, P. and Binoy V. V. (eds.) Springer

## **Technical Reports**

Binoy V V, Iyer C, Patnaik LM, Raj B, (2016) Science, Technology and Indian Society: An Anthology of Perspectives. National Institute of Advanced Studies, Bangalore

Binoy V V (2016) Understanding the role of ‘student networks’ in creating awareness about environment, water, sanitation and hygiene in rural and socio-economically marginalized areas. Final Technical Report, Eco-Water and Sanitation Hygiene (Eco WaSH) Programme. National Council for Science and Technology Communication (NCSTC), Government of India, New Delhi.

Binoy V V (2016) Intra-and inter-population variation in behavioral plasticity in a fish, the climbing perch *Anabas testudineus*: Role of behavioral syndromes and brain organization. Final Technical Report, Science Engineering Research Board, Department of Science and Technology, Government of India, New Delhi.

Binoy V V (2012) Conspecific Recognition, Numerical Competence and Capacity for Transitive Inference in a Freshwater Fish, the Climbing Perch (*Anabas testudineus*). Final Technical Report, Cognitive Science Research Initiative, Science Engineering Research Board, Department of Science and Technology, Government of India, New Delhi, India

## ***Conference Posters***

Vasan T, Arjun CP, Raghavan R, Philips S, Thomas L, Dahanukar N, Rajani MB, Binoy VV (2017) Bridging the ‘Wallacean shortfall’ for subterranean fishes of Kerala, India. International Biogeography Society special meeting. Bengaluru, 26-28 September 2017

Pankaj, Sandhya M, Binoy V V, Menon S, Hegde AS, Srinivasa R (2016) The autobiographical memory in the context of stroke and head injury. 23rd Congress of the European Sleep Research Society (ESRS). Bologna, Italy 13 - 16 September 2016.

Pankaj, Sandhya M, Binoy V V, Menon S, Hegde AS, Srinivasa R (2016) The autobiographical memory in the context of stroke and head injury. 23rd Congress of the European Sleep Research Society (ESRS). Bologna, Italy, 13 - 16 September 2016.

Pankaj, Sandhya M, Menon S, Hegde AS, Srinivasa R and Binoy V V (2015) How PCA and MCA stroke affects autobiographic memory. International Conference on ‘Cognition Consciousness and Cultures Implications for the 21st centaury’. National Institute of Advanced Studies, Bangalore, 9-11 December 2015.

Pankaj, Sandhya M, Menon S, Hegde AS, Srinivasa R and Binoy V V (2015) The autobiographical memory and self in the context of stroke and head injury. International Conference “Neurodegenerative Diseases: Pathogenesis to Therapy”. Centre for Neuroscience, Indian Institute of Science, Bangalore, 16-18 November 2015.

Kumaraswamy T R and Binoy V V (2015) ‘Student network’ - An axiological future key for conservation. Student Conference on Conservation Sciences- 2015, Indian Institute of Science, Bangalore, 8-11 September 2015.

Watve M, Binoy V V and Sinha A (2014). Changing personalities? Are behavioural syndromes modified during metamorphosis in the Indian common toad? First Annual Conference on Cognitive Science, New Delhi, India, March 2014

Rao A, Binoy V V and Sinha A (2014). Cube vision: Can blindfolded Rubik’s cubing provide insights into the formation of mental imagery and its application to problem solving? First Annual Conference on Cognitive Science, New Delhi, India, March 2014

Binoy V V and Sinha A (2013). The impact of an alien invasive fish, the tilapia, on the cognitive abilities and lateralized utilization of brain hemispheres in a freshwater fish, the climbing perch. Young Investigators’ Meeting 2013, Jodhpur, India, February 2013

Binoy V V, Kasturirangan R and Sinha A (2012). From sentience to consciousness: What can fish tell us? Looking Within: An International Conference on Multidisciplinary Approaches to Consciousness, National Institute of Advanced Studies, Bangalore, India, January 2012

## ***Conference Abstracts and Presentations***

Kumara Swamy TR and Binoy VV (2018) ‘Student-Scientist’ – Connecting undergraduate students with research and society. National seminar on Rejuvenation of Undergraduate Education in India, Center for Educational and Social Studies(CESS) Bangalore, 10-11 August 2018.

Binoy VV (2018) Learning interconnectedness and interdependence. Connected Learning at Scale: An International Symposium. Tata Institute of Social Sciences, Mumbai, 8-9 August 2018.

Binoy VV (2017) Behaviour and cognition: Ignored but indispensable tool for fish conservation. Mahseer-2017, International Workshop on Mahseer Conservation. Bournmouth University UK, Mahseer Trust, UK and Kerala University of Fisheries and Ocean Sciences (KUFOS), Kochi 5-7 April 2017

Binoy VV, Akhila CM and Radhakrishna S. (2016) ICT in biology education: the Indian scenario. 26th Biennial Conference of the Asian Association for Biology Education. Goa, India, September 20 – 24, 2016

Babu A N, Unnithan C, Niehaus E, Shah S, Balwan S, Binoy VV, Ramkumar PS (2016) DisApp: A novel approach to model building and community engagement for epidemic prevention. FOSS4G, Bonn, Germany, August 2016.

Binoy V V (2016). Fish Migration: Human Induced Rapid Environmental Changes (HIREC) and its impact on cognition and behaviour. Seminar on Linking Rivers, Barrages and Fish Migration". ATREE and Kerala University of Fisheries and Ocean Sciences (KUFOS), Kochi. 21st May 2016.

Binoy V V (2015). Animal consciousness: Some fishy facts. International Conference on ‘Cognition Consciousness and Cultures Implications for the 21st centaury’. National Institute of Advanced Studies, Bangalore 9-11 December 2015

Radhakrishna S and Binoy V V (2015). Least concern cause for much concern? The impact of human-macaque conflict on bonnet macaque conservation status. Association of Tropical Biology Asia-Pacific chapter meeting on the theme of “The Future of Biodiversity in Tropical Asia: addressing local and global challenges”, Phnom Penh, Cambodia. April 2015.

Naresh Keerthi and Binoy V. V. (2015) "Angling in the Sanskrit sea’ – insights on ichthyology from the Sanskrit literary canon. Seminar on “Flora and Fauna in Ancient Indian Literature” Department of Zoology, Dr. A. V. Baliga College of Arts and Science, Kumta, Karnataka. 13-14 March 2015

Watve M, Rao A, Binoy V V and Sinha A (2014). Inter-population variation in exploratory behaviour during metamorphosis in the Asian common toad. 51st Annual Conference of the Animal Behavior Society. Princeton, USA, August 2014

Rao A, Watve M and Binoy V V (2014). Exploration of linkages between morphology and personality in the Common Asian Toad. 51st Annual Conference of the Animal Behavior Society. Princeton, USA, August 2014

Watve M, Rao A, Binoy V V, Sinha A (2014). Population versus individual behavioral syndromes: How metamorphosis changes correlated behaviors in the common Indian toad. 15th Conference of the International society for Behavioral Ecology (ISBE-2014), New York University, USA, July 31- August 5 2014

Watve M, Rao A, Binoy V V and Sinha A (2014). Inter-population variation in exploratory behaviour during metamorphosis in the Asian common toad. 51st Annual Conference of the Animal Behavior Society. Princeton, USA, August 2014

Rao A, Watve M and Binoy V V (2014). Exploration of linkages between morphology and personality in the Common Asian Toad. 51st Annual Conference of the Animal Behavior Society. Princeton, USA, August 2014

Watve M, Rao A, Binoy V V, Sinha A (2014). Population versus individual behavioral syndromes: How metamorphosis changes correlated behaviors in the common Indian toad. 15th Conference of the International society for Behavioral Ecology (ISBE-2014), New York University, USA, July 31- August 5 2014

Binoy V V and Sinha A (2014). ‘Left eye – right brain’: Exploring the impact of social isolation on personality traits and lateralized utilization of the brain in an air- breathing freshwater fish, the climbing perch. First Annual Conference on Cognitive Science, New Delhi, India, March 2014

Binoy V V, Jayasree V and Shantha Mohan M (2014). What kind of water do ‘they’ prefer’? Drinking water choice in areas with multiple sources. International Symposium on Integrated Water Resources Management (IWRM - 2014), Kozhikode, India, February 2014

Nathan H S K, Jayashree V and Binoy V V (2014). Is roof water harvesting an answer to urban water crisis? A case study of Bangalore. International Symposium on Integrated Water Resources Management (IWRM - 2014), Kozhikode, India, February 2014

Watve M and Binoy V V (2013). Can metamorphosis alter behavioral syndromes in the Indian common toad. Young Investigators Talk and Interact (YETI), Nagaland University, Lumami, India, December 2013

Binoy V V (2012). Impact of an exotic invasive species tilapia (*Oreochromis mossambicus*) on the shoaling decisions of climbing perch (*Anabas testudineus*). Student Conference on Conservation Science, Bangalore, August 2012

Shabeer K K, Binoy V V, Sreekumar S and Thomas K J (2008). Investigations on the influence of sediment and water quality on the plankton community of a wetland ecosystem. Lake-2008: Conservation and Management of River and Lake Ecosystems, Centre for Ecological Sciences, Indian Institute of Science, Bangalore, December 2008

Binoy V V, Shahin A and Thomas K J (2007). Bio-film formation in *Euglena gracilis:* The influence of time of the day and wavelength of light. XIX National Symposium on Chronobiology, Madurai Kamaraj University, Madurai, December 2007. Best Paper Award

Binoy V V and Thomas K J (2007). The influence of hunger on food stocking behaviour of climbing perch, a freshwater fish. Abstracts of the 31st Conference of the Ethological Society of India, Bangalore, April 2007, p. 110

Avinash T A, Binoy V V and Thomas K J (2007). Analysis of the route learning ability of climbing perch. Abstracts of the 31st Conference of the Ethological Society of India, Bangalore, April 2007, p. 108

Shiron J, Binoy V V and Thomas K J (2007). Predator avoidance behaviour of naïve juveniles of *Puntius sarana*, a freshwater fish. Abstracts of the 31st Conference of the Ethological Society of India, Bangalore, April 2007, p. 109

Binoy V V and Thomas K J (2005). Comparative analysis of organochloride and organophosphate pesticides on the learning ability and sustained swimming capacity of climbing perch (*Anabas testudineus),* a freshwater fish. Abstracts of TOXOCON 1, Inaugural Conference of Indian Society of Toxicology, Cochin, November 2005, p. 38

Binoy V V and Thomas, K.J. (2005). Individual recognition in a fish, the climbing perch (*Anabas testudineus)* and the cues involved in the formation of familiarity. Abstracts of the 29th Conference of the Ethological Society of India, Bangalore, February 2005, p. 51

Binoy V V, Sandhya V V and Thomas K J (2005). Altered environment alters stimulus– response paradigm: Effect of pH and salinity on the ontogeny of behaviour in *Heteropneustes fossilis*, a freshwater fish. Abstracts of the 29th Conference of the Ethological Society of India, Bangalore, February 2005, p. 52

Vincent M, Asha K, Binoy V V and Thomas K J (2005). Preference for higher wavelength color in the larvae of *Heteropneustes fossilis*, a freshwater fish. Abstracts of the 29th Conference of the Ethological Society of India, Bangalore, February 2005,

p. 50

Binoy V V and Thomas K J (2003). Avenues and opportunities in ethology and behavioral sciences. *Lectures on Recent Trends in Ethology and Behavioural Sciences* (Ed. Thomas K J), Department of Zoology, Christ College, Irinjalakuda, India, pp. 13- 17

Binoy V V and Thomas K J (2003). Factors reducing wandering behaviour in climbing perch (*Anabas testudineus*). *Proceedings of the Twenty-eighth Conference of the Ethological Society of India* (Eds. Annamalai R, Narayanan M and Vanitharani J), Department of Zoology, Sarah Tucker College and Tamil Nadu Forest Department, Kalakad-Mundanthurai Tiger Reserve, Tirunelveli, India, p. 48

# *H. Popular Articles (in Malayalam)*

*Parinamam Marunna kazhchpaduakal. Sasthrakeralam,* May, 2018

*Nadan Mushi Namavaseshamkunnu.* Deshabimani Daily, March 21, 2011

*Namukku Guppy Venda Kothukum*. Deshabimani Daily, June 30, 2011

# Students Guided

##  ***MPhil***

**Devika Manilal**

*Can morphological and personality traits predict learning ability in a subterranean fish Monopterous sp.,* MPhil Dissertation submitted Indian Institute of Information Technology and Management Kerala*,* Thiruvananthapuram, India; April 2018

##  ***Master’s Degree***

**Rohan Ravi Kunder**

“*Exploration of the linkage between personality and cultural intelligence in urban adolescents*” MSc Dissertation submitted to the JSS University Mysore, Karnataka; August 2017

**Sweta Swani Das**

*“Behavioral syndrome and lateralized utilization of the brain hemispheres in climbing perch a freshwater fish”.* MSc Dissertation submitted to the Kalinga Institute of Industrial Technology, Bhubaneswar, Odisha; July 2017

##  **Ishan Vishistha**

*“Knowledge of ‘my memories’: Understanding the correlates of meta- autobiographical memory*

M Tech Dissertation submitted to the Centre for Converging Technologies, Rajasthan University, Jaipur; October 2016

**Ambika Rathore**

*Does gender matter? Facets of psychological resilience and wellbeing*

M Tech Dissertation submitted to the Centre for Converging Technologies, Rajasthan University, Jaipur; October 2016

**Anusree N S**

*Analysis of the attitude towards different water resources and draught mitigation strategies in school and college students of Kerala*

MSc Dissertation submitted to the Department of Environmental Sciences, Central University of Kerala, Kasargode; April 2015

**Prashitha U**

*Exploration of the attitude of farmers towards crop raiding by bonnet macaque (Macaca radiata) in Kasargode District*

MSc Dissertation submitted to the Department of Environmental Sciences, Central University of Kerala, Kasargode; April 2015

**Sajina K V**

*Understanding human-wild boar (Sus scrofa cristatus) conflict in Kasargode District, Kerala: A perceptionist approach*

MSc Dissertation submitted to the Department of Environmental Sciences, Central University of Kerala, Kasargode; April 2015

**Aneesha B**

*Mapping human- animal conflict in Northern Kerala*

MSc Dissertation submitted to the Department of Environmental Sciences, Central University of Kerala, Kasargode; April 2015

**Bhagyashree J Ingle**

*Exploration of group dynamics, patterns of decision making and personality traits in a shoal of climbing perch (Anabas testudineus);* July 2012 – July 2013

MFSc Dissertation submitted to the Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar; July 2013

## **B Tech**

***Harsh Vasoya***

Personality traits and lateralised utilisation of the brain hemispheres in the juveniles of Deccan Mahseer *(Tor khudree).* B Tech Dissertation submitted to the Institute of Advanced Research, Gandhinagar. April 2018

## ***NIAS-Mani-Bhaumik Research Fellows***

**Ishan Vishistha**

*Can personality traits influence the meta-autobiographical memory of the school children?* January 2017

**Stephan Salazar**

*Personality trait of a shoal;* January 2016

**Roshan KS**

*Development of meta-autobiographical memory in Indian school children. With Sangeetha Menon* (National Institute of Advanced Studies, Bangalore); January 2016

**Pankaj**

*Can mild stroke and head injury remold autobiographic memory and self? With Sangeetha Menon* (National Institute of Advanced Studies) and *Dr. Sandhya M.* (Ramaiah Institute of Neuroscience, Bangalore), November 2015

**Mukta Watve**

*Behavioral syndromes in the Asian common toad and their changes during metamorphosis;* January 2015

**Abhinav Kadambi**

*Lateralized mutilation of brain and one time exposure memory (OTM) of conspecific in an air breathing freshwater fish climbing perch;* December 2014

# Conferences and Workshops Organized

Workshop on *Integrating Animal Cognition with Conservation Science*. Student Conference on Conservation Sciences- 2016, Indian Institute of Science, Bangalore, 29 September 2018.

One-day workshop *Dialogue with the Scientist-Communicators.* With Swissnex India National Institute of Advanced Studies (NIAS), Bangalore, 28th September 2018.

Roundtable meeting and public interaction meeting on *Flood in Kerala and Kodagu*. National Institute of Advanced Studies (NIAS), Bangalore, 18th September 2018.

One-day workshop on *Conservation Psychology.* University of Transdisciplinary Health Sciences and Technology, Bengaluru, 4 June 2018.

Roundtable meeting on *Artificial Intelligence and Society*. National Institute of Advanced Studies (NIAS), Bangalore, 9 April 2018.

Roundtable meeting on *Exposure to Radiation, How Low it should be? Risk of Radiation and Communicating the Reality*. National Institute of Advanced Studies (NIAS), Bangalore, 17 May 2018.

Workshop on *Freshwater Fish Conservation: Concepts, Techniques and Strategies*. (*With N. Dhanukar IISER Pune; R. Raghavan, KUFOS Kochi; U. Katwate, BNHS Mumbai; S. Philip, Nirmalagiri College, Kannur*) Student Conference on Conservation Sciences- 2016, Indian Institute of Science, Bangalore, 21 - 24 September 2017.

*‘ScienceComm-201*7’ With Swissnex India and Science et Cité as part of '70 Years of Swiss-Indian Friendship'*.* National Institute of Advanced Studies (NIAS), Bangalore; 30 June 2017

Three-day National Workshop on ‘*Science Films’* in association with Vigyan Prasar, Dept. of Science and Technology Government of India. National Institute of Advanced Studies (NIAS), Bangalore; 28-30 March 2017

Public awareness programme on *Conservation of the Subterranean Fishes*. CEC Payyaparamba, Mattanur, Kannur district Kerala; 19 March 2017

Student Scientist Interaction on *Interdisciplinary Research.* National Institute of Advanced Studies (NIAS), Bangalore*;* 10 March 2017

One day workshop on Communicating *Science Out of the Lab.* EURAXESS Links India Tata Institute of Fundamental Research (TIFR) Outreach and National Institute of Advanced Studies (NIAS), Bangalore*;* 22nd October 2016

Workshop on *Understanding personality traits in animal species and its applications in wildlife conservation*. (With *Sindhu Radhakrishna)* Student Conference on Conservation Science-2016, Indian Institute of Science, Bangalore; 21 - 24 September 2016

Workshop on *Freshwater Fish Conservation: Concepts, Techniques and Strategies*. (*With N. Dhanukar IISER Pune; R. Raghavan, KUFOS Kochi; U. Katwate, BNHS Mumbai; S. Philip, Nirmalagiri College, Kannur*) Student Conference on Conservation Sciences- 2016, Indian Institute of Science, Bangalore, 21 - 24 September 2016.

Workshop on *'Student Network': A platform for Student-Scientist partnership.*

National Institute of Advanced Studies, Bangalore. 1 December 2015

International conference on ‘*Cognition Consciousness and Cultures: Implications for the 21st centaury’*. (*With S. Menon, A. Sinha, N. Nagaraj, S. Roy and B V Sreekantan*) National Institute of Advanced Studies, Bangalore. 9-11 December 2015

Workshop on *Freshwater Fish Conservation: Concepts, Techniques and Strategies*. (*With R. Raghavan, KUFOS Kochi; N. Dhanukar IISER Pune; Neeti, Coorg Wildlife Society Madikeri, U. Katwate, BNHS Mumbai; S. Philip, Nirmalagiri College, Kannur*) Student Conference on Conservation Sciences- 2015, Indian Institute of Science, Bangalore, 9th September, 2015.

Workshop on *Martial Arts: Harmony of Body and Mind (With Sangeetha Menon)*

National Institute of Advanced Studies, Bangalore)*;*13 March 2015

Workshop on *Conservation Psychology: Attitude and Environmental Decision- Making*. (With *Sindhu Radhakrishna)* Student Conference on Conservation Science- 2014, Indian Institute of Science, Bangalore; 25 - 28 September 2014

Seminar on *When Science Meets the Public: Bridging the Gap.* (With *Pallava Bagla;* NDTV New Delhi) National Institute of Advanced Studies, Bangalore; *20* – 21 June 2014.

Workshop on *Citizens Science Project and Science Communication.* National Institute of Advanced Studies, Bangalore and MES KEVEEYAM College, Valanchery, Kerala; January 25, 2010

National workshop on *Recent Trends in Ethology and Behavioral Sciences*. Animal Behaviour and Wetland Research Laboratory, Christ College, Irinjalakuda, Kerala; August 5-8, 2003

Seminar on *Environmental Laws*. Interdisciplinary Scientific Research Development Organisation, Irinjalakuda, Kerala; February 14, 2004

Workshop on *Conservation of Medicinal Plant Diversity: and Revitalization of Basic Phytomedical Systems.* Interdisciplinary Scientific Research Development Organisation, Irinjalakuda and Community Agro-Bodiversity Centre and M S Swaminathan Research Foundation, Kalpetta, Wynad, Kerala; June 10-11, 2006

## **NIAS Training Programmes for Scientists and Policy Makers**

NIAS- DST Training Programme – “Science Policy and General Management”. With Dr. Gopi Rethinaraj, National Institute of Advanced Studies (NIAS), Bangalore; 6-17 February 2017

## **Student Scientist Workshops**

My team conducted student-scientist interactions in order to familiarize school and college students with the tools and techniques of science and social science - in various localities of Kerala, Mizoram and Karnataka States

Bethlehem High School Aizawl, Mizoram, With Tata Institute of Social Sciences, Mumbai, 24th January 2017

Government Model School, Aizawl, Mizoram, With Tata Institute of Social Sciences, Mumbai, 25th January 2017

Govt. High School, Marasuru, Karnataka, 25 September 2016

St. Mira's Inclusive Convent, Sujjlur, Mandya, Karnataka, 19 September 2016 St Judes School, Vellarikundu, Kasargode, Kerala, 30 August 2016 Nirmalagiri College Koothuparamba Kannur Kerala, 29 August 2016

Government High School, Shivanahalli, Bannerghatta, Karnataka, 12 April 2016

Members of the Walk with a Scholar Programme of Nirmalagiri College Kannur, Kerala, (at NIAS Bangalore), 18 March 2016

Anekal Public School, Anekal, Karnataka, 17 March 2016

Govt. High School, Irimbiliyam, Malappuram, Kerala, 2nd March 2016 St. Thomas College, Thrissur, Kerala, 24 February 2016

St. Joseph College, Devagiri, Kozhikode, Kerala, 17 February 2016 Government College, Nellihudikeri, Karnataka, 6 February 2016

Anglo Vernacular Composite High School, Madikeri, Karnataka, 5 February 2016 Govt. Middle Primary School Nanjarayapatna, Karnataka, 5 February 2016

MES KVM College, Valanchery, Kerala, 22 January 2016

Government High School, Halagere, Koppal, Karnataka, 19 January 2016 Government High School, Ginigera, Koppal, Karnataka, 20 January 2016 Government High School, Hiresindogi, Koppal, Karnataka, 21 January 2016 Govt. High School, Irimbiliyam, Malappuram, Kerala, 22 January 2016

Anekal Public School, Anekal, Karnataka, 14 November 2015

BVS School Pottur, Thrissur, Kerala, 12 November 2015

Govt. High School, Irimbiliyam, Malappuram, Kerala, 24 July 2015 MES KVM College, Valanchery, Kerala, 20 July2015

***Training Programmes for Biology Teachers***

As part of the project titled ‘Connected Learning Initiative Programme (CLIx)’ me and my team conducted training programme titled *Biology education and Clix Ecosystem Module* for the selected high school biology teachers from Chhattisgarh, Telangana, Rajasthan and Mizoram and states. We trained around 550 teachers

Government Model School, Karimnagar, Telangana, 23-25 November 2017

District Institute of Education and Training (DIET), Rangareddy, Telangana 20-22 October 2017

Jawahar Navodaya Vidhyalaya Raipur, Chhattisgarh 16 November 2017 Government Model School, Karimnagar, Telangana 6-8 November 2017

Government Model School, Karimnagar, Telangana 30th October to 1st November 2017

Government College of Education Hanamkonda, Warangal, Telangana 9-11 October 2017

District Institute of Education and Training (DIET), Warangal, Telangana, 5-7 October 2017

National Institute of Technology, Aizawl, Mizoram; 11 August 2017 SP Group of Institutions, Sirohi Rajasthan; 21 July 2017

Global Institute of Technology, Jaipur Rajasthan; 20 July 2017

District Institute of Education and Training (DIET), Raipur, Chhattisgarh, 16 July 2017

**Talks**

*Social Behaviour and Cognition in Fishes*. Science Academies’ Lecture Workshop on ‘Cognitive and Behavioral Sciences’. Indian Academy College, Bangalore; 4 October 2018

Social Cognition, Science and Policies. NIAS-DST Training Programme on 'Policy for Science and Science for Policies' (For Directors/Divisional Heads/Chief Scientists/Senior Scientists). National Institute of Advanced Studies (NIAS), Bangalore; 3 October 2018.

*Life Science Education- the Way Forward*. Maharani's Science College for Women, Bangalore, 20 July 2018.

*Adapting to Invasion: Understanding the Impact of Non-native Fishes on the Behaviour of Indigenous Species.* NIAS Wednesday Discussion Meeting National Institute of Advanced Studies, Bangalore, 25 April 2018.

*Kin vs. familiar: Can acquired familiarity influence social decision making in fish?* International Seminar on Altruism, Wellbeing and Purpose Vantage Views on Planetary Life and Its Meaning from Biology, Indian Philosophy and Arts, METI International USA and NIAS, Bangalore, 1-2 February 2018.

*From Mazes to Robofish: Some ‘Fishy’ Facts About the Intelligence and Experience*. Workshop on Minds and Machines: Debates on the Nature of Intelligence and Experience, National Institute of Advanced Studies (NIAS), Bangalore; 27 December 2017

*Bridging communication gap in science and technology: lessons from India.* Science Communication Dialogue for New India". Observer Research Foundation and Centre for Policy Studies, Indian Institute of Technology (IIT) Bombay. 12 December 2017

*Animal cognition and Human-Induced Environmental Changes*. 41st Annual Conference of the Ethological Society of India and National Conference on Behavioural Ecology: Responses to Changing Climate. Gujarat Institute of Desert Ecology (GUIDE), Bhuj, Gujarat. 24-25 November 2017.

*Behaviour and Cognition-Inevitability in Conservation.* National Seminar on Riverine Fisheries Conservation, Karnataka Fisheries Department, Madikkeri, Kodagu. 7-8 November 2017.

*Bridging communication gap in science and technology: lessons from India.* Springer-Nature and Council for Scientific and Industrial Research (CSIR), New Delhi. 9 October 2017

*Fish behaviour and the conservation of endangered species*. Workshop on *Freshwater Fish Conservation: Concepts, Techniques and Strategies*. Student Conference on Conservation Sciences- 2016, Indian Institute of Science, Bangalore, 21- 24 September 2017.

*Necessity of Science Communication.* Siddhaganga College of Arts, Science and

*Commerce*, Tumkur; 22nd August 2017

*Joining Silk Threads to Catch the Lion-The pain and pleasures of doing science communication in India ‘*ScienceComm-2017’ National Institute of Advanced Studies (NIAS), Bangalore; 30 June 2017

*Forbidden knowledge: Understanding martial arts.* NIAS Wednesday Discussion Meeting, National Institute of Advanced Studies, Bangalore, 3 May 2017

*Behaviour and cognition: Ignored but indispensable tool for Mahseer conservation*. Mahseer-2017, International Workshop on Mahseer Conservation. Kochi , 5-7 April 2017

*Why should we protect the Subterranean Fishes*? Public awareness programme on *Conservation of the Subterranean Fishes*. CEC Payyaparamba, Mattanur, Kannur district Kerala; 19th March 2017

*Science Communication: Bridging the Gap Between Science and Society*. NIAS-DST Training Programme on Policy for Science and Science for Policies, National Institute of Advanced Studies, Bengaluru 7 -11 November 2016

*Student Scientist*s. One day workshop on Communicating *Science Out of the Lab.* EURAXESS Links, India Tata Institute of Fundamental Research (TIFR) Outreach and National Institute of Advanced Studies (NIAS), Bangalore*;* 22nd October 2016

*Utilisation of the behavioural flexibility and behavioural consistency in the conservation of the animal species in the wild.* Workshop on Understanding Personality Traits in Animal Species and its Applications in Wildlife Conservation, Student Conference on Conservation Science-2016, Indian Institute of Science, Bangalore; 21 - 24 September 2016

*Behaviour and cognition as windows to conservation.* Workshop on Freshwater Fish Conservation: Concepts, Techniques and Strategies. Student Conference on Conservation Sciences- 2016, Indian Institute of Science, Bangalore, 21 - 24 September 2016.

*Animal personalities: Insight from ichthyology.* Wednesday discussion meeting. National Institute of Advanced Studies Bangalore, 30 March 2016.

*Interdisciplinary Research and Biology*. For the Members of ‘*Walk with a Scholar Programme’* of Nirmalagiri College Kannur. National Institute of Advanced Studies Bangalore, 18 March 2016

*Water Resource Conservation and Student Network.* St. Thomas College, Thrissur 24 February 2016

*Freshwater Resource Conservation: Role of Environmental Education*. St. Joseph College, Devagiri, Kozhikode. 17 February 2016

*Freshwater Resource Management: A Social Cognition Approach.* Government College, Nellihudikeri, Coorg, 6 February 2016

*Science Education*: *Role of the School-College-Research Institution Network*. MES KVM College, Valanchery, 22 January 2016

*Fish Behaviour and Cognition.* Kerala University of Fisheries and Ocean Studies (KUFOS,) 21 January 2016

*Biology Education in India, Making it Fun*. Tata Institute of Social Science (TISS), Mumbai, 28 January 2016

*Yoga: Research and Education.* International Conference on Yoga and Education Kaivalydhama Institute of Yoga, Lonavala, 29 December 2015

*Introduction to the Cognitive Science.* ISHAN VIKAS – UDHAN PROGRAMME, NIAS, 18 December 2015

*Student Network- A platform for the Student-Scientist Partnership.* Workshop on Student Network, National Institute of Advanced Studies Bangalore, 1 December 2015

*Conservation and Ethology: Can the Twain Meet?* Workshop on Freshwater Fish Conservation: Concepts, Techniques and Strategies. Student Conference on Conservation Sciences- 2015, Indian Institute of Science, Bangalore, 9th September 2015.

*Student Networks’*, MES, KVM College Valanchery, Malappuram, Kerala, 12th June, 2015

*Free Choice Learning and Information Technology Based Biology Education*. Connected Learning Initiative (CLIx), Tata Institute of Social Science (TISS), Mumbai, 25-28 April 2015

*Human-Wildlife Conflict: The Mitigation Strategies.* Panchayath Secretaries Forum, Kasargode, Kerala, 23 February 2015

*Introduction to Cognitive Science*; Course for ISHAN VIKAS-UDHAN Programme. National Institute of Advanced Studies, Bangalore; 25 December 2014

*Bringing Environmental Pro Behaviours Amongst School Children: How Knowledge from Conservation Psychology and Citizen Science Movements Can Help*. Environmental Conference. Swasraya Bharat-2014, College of Agriculture, Padannakad, 16 October 2014

*Human Mind: The Source of Environmental Problems as well as the Hope for Solutions*. National Symposium on "Human-wildlife Conflict or Coexistence-What We Want? Central University of Kerala, Padannakad, Nileshwar, 15 October 2014

*Behavioral Syndrome and Lateralized Utilization of Brain Hemisphere in an Air Breathing Fish, Climbing Perch*. National Institute of Mental Health and Neuro Sciences (NIMHANS), 30 August 2014

*Our Natural Resources*. Green Olympiad, The Energy and Resources Institute (TERI), Bangalore, 9 July 2014

“*When Spider Webs Unite, They Can Tie Up a Lion*” *Efficacy of Citizens science projects in data collection and science communication*. African Delegation, visiting the Centre for International Cooperation in Science, Chennai. National Institute of Advanced Studies, Bangalore, India; April 15, 2014

*Big Science and Little Hands: Understanding the Knowledge and Attitude Towards Mammals in School Children Using Student Network*. Homi Bhaba Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, 18 October 2013

*Determinants of Shoaling Decision in Climbing Perch, a Freshwater Fish*. Center for Ecological Science, Indian Institute of Science, Bangalore, 11th September 2013

*Can Behavioral Science Help Save Biodiversity*? ATREE, Bangalore, 19th June 2013

*“I Know All About the Tiger, but What is A Civet?”: Understanding attitudes towards wildlife by school children in Malappuram, Kerala*; NIAS Wednesday Discussion Meeting, 17 April 2013

*Can Humans Love Unconditionally: The Perspectives of an Abandoned Pet*. People for Animal Welfare Services (PAWS), Thrissur, 2 March 2013

*Animal Rights*. People for Animal Welfare Services (PAWS), Thrissur, 5 November 2012

*Fish Behaviour and Cognition: New Horizons*. Department of Marine Biology, Microbiology & Biochemistry, School of Marine Sciences, Cochin University of Science & Technology, Kochi, 27 September 2012

*Familiarity-Bred Shoaling Decisions in Climbing perch, a Freshwater Fish*. NIAS Wednesday Discussion Meeting, 12 September 2012

*Is Homo sapiens Matchless*? Cognition Summer school. National Institute of Advanced Studies Bangalore, July 10 2012

*“Not Like Us–Like Us–Not Like Us” Cognition in Non-Human Species*. Cognition Summer school. National Institute of Advanced Studies Bangalore, July 9 2012

*Citizen Science and Student Network*. Workshop on 'Citizens Science Project.' National Institute of Advanced Studies Bangalore and MES KEVEEYAM College, Valanchery, January 25, 2010

*Why Should I Learn Science*? SIGN (An Educational Society for The Upliftment of Tribal Communities), Konnakadu, Wynad, Kerala, April 6, 2009

*Choosing and Using Statistics*. Workshop on Research and Research Methodology, Sree Narayana College, Nattika, Kerala, March 12, 2008

*Pesticide and Cognition. Rachel Carlson Lecture*. Kerala Shastra Sahithya Parishad, Thrissur, Kerala, October 13, 2008

*Quantifying Fish Behaviour in the Laboratory*. Homibabha Center for Science Education, Mumbai. 2007

*Seeds and Society*. Department of Social Work, St Joseph’s College, Irinjalakuda, Kerala, March 14, 2007

*Why Conservation of Local Biodiversity is Important for Ecosystem Homeostasis*. Workshop on Biodiversity: Conservation of Medicinal Plants and Revitalization of Basic Phytomedical Systems. ISRDO, Irinjalakuda and Community Agro-biodiversity Centre, M S Swaminathan Research Foundation, Kalpetta, Wynad, June 10-11, 2006

*Agriculture and Environment*. Department of Social Work, St Joseph’s College,

Irinjalakuda, Kerala, February 28, 2006

*Quantifying Behaviour of Zooplanktons.* International Training Course in Tropical Freshwater Zooplankton. Limnological Association of Kerala, Irinjalakuda, April 1- 15, 2004

*Studying Animal Behaviour in the Laboratory*. Seminar on Animal Behaviour and Behaviour Control. Blue Cross Society of Thrissur (BCST) and College of Veterinary and Animal Science, Kerala Agriculture University, Mannuthy, Kerala. December 2, 2003

*Designing and Developing Low-cost Instruments to Study Animal Behaviour in the Laboratory*. National Workshop on Recent Trends in Ethology and Behavioral Sciences. Animal Behaviour and Wetland Research Laboratory, Christ College, Irinjalakuda, Kerala, August 5-8, 2003

*Introduction to Model Systems Popular in Animal Behaviour Research in the Laboratory*. National Workshop on Recent Trends in Ethology and Behavioral Sciences. Animal Behaviour and Wetland Research Laboratory, Christ College, Irinjalakuda, Kerala, August 5-8, 2003

# Talks for school children

*Why Learning Biology is Difficult.* Bethlehem High School Aizawl, Mizoram, 24th January 2017

*Converting Classroom into a Biology Laboratory*. Government Model School, Aizawl, Mizoram, 25th January 2017

*Introduction to the Tools and Techniques to Study Water Quality and Water Utilization Pattern.* St Jude’s School, Vellarikundu, Kasargode, Kerala, 30 August 2016

*Freshwater Conservation and Student Network*. Anglo Vernacular Composite High School, Madikeri, 5 February 2016

*Yes! Science is fun*. Govt. Middle Primary School Nanjarayapatna, 5 February 2016

*Bridging Colleges with School for Effective Science Education*. Student Scientist Workshop for Malappuaram node of the *Student-Network*. Govt. High School, Irimbiliyam, Malappuram, 22 January 2016

*Student Scientists and Water, Sanitation, Hygiene (WaSH).* Anekkal Public School, Anekal, Karnataka. 14th November 2015.

*Imagination, Creativity and Science.* BVM High School Thrissur, Kerala. 6th November 2015.

*Why We Need More Student Scientist?* Govt. High School, Irimbiliyam, Malappuram, 24 July 2015

*Animal welfare and Pet Animals.* Sandeepani High School Thrissur Kerala, 2 March 2013

*Plastic and Environment*. Government Model Boys’ Vocational Higher Secondary

School, Irinjalakuda, Kerala, October 11, 2005

# In Television

*Sand Mining and River Health*. *Indiavision*. April 25, 2010. *Nilayude Kalasncharangaliloode*. *Indiavision*. April 15, 2010. *Solar Eclipse and Animal Behavior'*. *Asianet*. January 15, 2010. *River Nila*. *Indiavision*. December 19, 2009.

*Science Notes*. *All India Radio*, October 23, 2005

# Membership in Professional Organizations

IUCN Freshwater Specialist Group – South Asia Freshwater Fish Conservation Network – South Asia Ethological Society of India

# Extra-Curricular Activities

Trainer of Yoga and Martial arts