

## **Dr. BALAGURU BALAKRISHNAN**

Assistant Professor

Department of Botany

Jamal Mohamed College (Autonomous)

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**Summary :** Ph.D. completed: **2003** | UGC NET - 2016 | Teaching : **12 years** | Research: **16 years** | Research Publications : **53** | Research Projects: **five** | Book (ed. Proceedings) : **One** | Professional Awards: **two**

**Area of Interest :** Applied Ecology, Angiosperm Taxonomy, Traditional Knowledge, Sacred landscapes, Restoration Ecology, Remote Sensing, GIS Modelling in Forestry, Agriculture and Marine. IPR and Crop diversity, Biological Data Analytics, Biostatistics – R software, Python Programming for Bioinformatics, Mathematical Biology

### **Academic Qualifications**

<b>Degree</b>	<b>Subject</b>	<b>Year</b>	<b>University</b>
B.Sc.	Botany	1995	St. Joseph's College Bharathidasan University, Tiruchirappalli
M.Sc	Botany	1997	St. Joseph's College Bharathidasan University, Tiruchirappalli
Ph.D	Botany	2003	St. Joseph's College Bharathidasan University, Tiruchirappalli

**Ph. D thesis:** Plant Diversity Assessment and its Conservation in Shervarayan hills of the Eastern Ghats of Tamil Nadu using Remote Sensing and Geographical Information System.

### **IPR Course**

**General Course on Intellectual Property** –Feb 1, 2013 – April 28, 2013, Distance learning program conducted by **World Intellectual Property Organization (WIPO), Geneva.**

## MOOCs Completed

**Integrated Pest Management** organized by Department of Entomology UAS-Raichur, Karnataka, Centre for Continuing Education Indian Institute of Technology Kanpur and Commonwealth of Learning, Canada from 21.4.2020 - 16.6.2020 (8 weeks).

## Orientation and Refresher Courses

- **2020** Induction/Orientation Programme (online) for "Faculty in Universities/Colleges/Institutes of Higher Education" organized by Teaching Learning Centre, Ramanujan College Teaching Learning Centre, **Ramanujan College University of Delhi** from 4<sup>th</sup> June to 4<sup>th</sup> July 2020.
- **2022 Refresher Course in Botany, Batch XV (online) organized by UGC- HRDC, University of Madras, Chennai** from 7.10.2022 to 20.10.2022

## Employment

- May 2018 –till date, Assistant Professor, Department of Botany, Jamal Mohamed College, Tiruchirappalli
- Nov.2013 – April 2018, Assistant Professor in Biodiversity Informatics (UGC Innovative), Department of Botany, Jamal Mohamed College, Tiruchirappalli
- Sep 2007- Oct. 2013, Scientific Officer/ Scientist, Loyola College, Chennai
- Feb 2005 - Sep 2007, Fellow-National Innovation Foundation (Autonomous body of DST, Government of India), Ahmedabad.
- June 2003 - Jan 2005, Lecturer in Botany, Jamal Mohamed College, Tiruchirappalli

## Professional Training/Courses

- **2023** Faculty Development Programme on Open AI Tools for Academicians organized by Department of Data Science, St.Joseph's College (Autonomous), Tiruchirappalli from 16<sup>th</sup> August to 22<sup>nd</sup> August 2023
- **2023** Applications of Machine learning in Urban Studies" organized by **Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun** 05-06-2023 to 09-06-2023
- **2023** Completed Lead Auditor Course Conducted by National Science Foundation, Coimbatore
- **2022** Overview of Geoprocessing using Python organized by **Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun** 17 January 2022 to 28<sup>th</sup> Jan 2022
- **2021** Innovation Ambassador Training Program (Advance Level) organized by Institution **Innovation Council (IIC), AICTE, Government of India** 30<sup>th</sup> June to 31<sup>st</sup> July 2021
- **2020.** Remote Sensing & GIS Technology and Applications for University Teachers & Government Officials organized by **Indian Institute of Remote Sensing (IIRS), ISRO, Dehradun** 13.6.2020 - 01.07.2020

- **2020.** Geoinformatics in Ecological Studies organized by **Indian Institute of Remote Sensing,(IIRS) ISRO, Dehradun** from 13.07.2020 to 24.07.2020 **2020**
- Online Science Academics- Science Leadership Program **Central University of Punjab** Bathinda 22.06.2020 - 28.06.2020
- **2020** Online Innovation, IPR, Entrepreneurship, and Start-ups among HEIs. **MHRD's Innovation Cell**, Government of India, New Delhi 27.05.2020 –31.05.2020
- **2020** Five Days Online Hands On Workshop On “Patent Searching, Drafting And Filing” (Online Mode) Panimalar Institute of Technology, Turnip Innovations and Exilyze Intellectual Services, IEEE Computer Society & Computer Society Of India 29.05.2020 - 02.06.2020
- **1997** Application of remote sensing and GIS for Bio-resources assessments and monitoring 8-19<sup>th</sup> December 1997, **Indian Institute of Remote Sensing (IIRS)**, Dehra Dun.
- **2008 DST sponsored** Advanced Training Programme on **Application of Remote Sensing and GIS Tools** for Coastal and Ocean Resource Mapping, Monitoring and Management () 10 – 30<sup>th</sup> September CAS Marine, Biology, Annamalai University.
- **2010 DBT sponsored Molecular Techniques in Plant Sciences** 1-21 February 2010 Department of Plant Biology and Biotechnology, Loyola College, Chennai.

#### **Professional Training/Courses (Short Term)**

- **2016 DST sponsored** National workshop on “Data Science Research” 3<sup>rd</sup> to 5<sup>th</sup>, 2016 organized by National Institute of Technology (NIT), Tiruchirappalli
- **2013** National Workshop on “Bioinformatics – A Practical approach to Genomics & Proteomics” 7<sup>th</sup> to 11<sup>th</sup> October 2013, Organized by Bioinformatics and ARIS Cell, Madras Veterinary College, Tamil Nadu Veterinary and Animal Sciences University, Chennai.
- **2013** An introduction to landscape ecology using QGIS/GRASS and R. 9<sup>th</sup> to 13<sup>th</sup> September 2013 Organized by Foundation for Ecological Research, Advocacy and Learning and French Institute Pondicherry.
- **2012** DST supported Workshop on Drug Development with good laboratory practices and good clinical practices 28<sup>th</sup> May – 2<sup>nd</sup> June 2012 Organized by Loyola College Chennai.
- **2011** TNSCST supported “Workshop on Methods in assessment of aquatic pollution and Bioremediation” 31<sup>st</sup> to 4<sup>th</sup> February 2011 Organized by Loyola College Chennai.
- **2010** National workshop on “Quantitative Techniques in Biodiversity Assessment, February 26<sup>th</sup> & 27<sup>th</sup> February, SRTM University, Nanded, MH.
- **2010** PCR workshop on 9<sup>th</sup> February 2010 Organized by Eppendorf Pvt. Ltd., Training Centre, Chennai.
- **2008** National workshop on Biodiversity Database organization and its Management, 12<sup>th</sup> March to 14<sup>th</sup> March 2008 organised by Department of Biotechnology and Bioinformatics, TPGRI, Tiruvananthapuram, Kerala.

- **2001** Workshop on “Statistical tools in research – Hands on experience with statistical software”, 1<sup>st</sup> to 6<sup>th</sup> November 2001, St. Joseph’s college, Tiruchirappalli, Tamil Nadu

### Professional Training/Courses - Software

- **1998** Introductory training on Remote sensing and GIS Softwares (Microstation, EASI/PACE, SPANS, MAPINFO from Tricad Design Consultant Pvt. Ltd. Hyderabad from 20<sup>th</sup> to 26<sup>th</sup> April 1998.
- **2000** Erdas Imagine 8.3.1 (RS & GIS software) from Erdas India Pvt. Ltd. Hyderabad from 8<sup>th</sup> to 13<sup>th</sup> January 2001
- **2000** ArcInfo/Arc View (GIS Software) from Tricad Design Consultant Pvt. Ltd. Hyderabad –Recognized by Department of Space from 15<sup>th</sup> January 31<sup>st</sup> January 2001
- **2005** ARC GIS 9.0 (GIS Software) ERSI-India, New Delhi from 25<sup>th</sup> to 29<sup>th</sup> July 2005
- **2006** Programming C and VB 6.0, Anik computers & Education, Ahmedabad
- **2006** RH 105 Red Hat Linux Desktop, redhat certificate 3<sup>rd</sup> to 15<sup>th</sup> February 2006.
- **2010** GRASS GIS (open source software) K-cube consultancy Services, Chennai 27<sup>th</sup> August to 1st September 2010

### Awards/Fellowships

- Outstanding performance in Masters in Botany (1997)
- Young Scientist Research Fellowship –DST (2009)
- Travel Fellowship – CICS-INSA (2011) for presenting paper in EMAPi Conference, Hungary.
- UGC- National Eligibility Test of Assistant Professor in the year 2016
- Junior Research Fellow (JRF) and Senior Research Fellow (SRF) MoEF, Government of India (1997 – 2001)

### Research Projects

- Predicting distribution of some invasive plant species in proposed Palani Hill National Park, Western Ghats of Tamil Nadu- A GIS based approach (DST, Government of India-GOI) PI – Completed Grant ₹ 16,84,000 (2009 April – 2012 March) - Completed
- Ecosystem Modelling approach to generate habitat suitability for some endemic and rare fish species in estuaries of the east coast of Tamil Nadu (MOES, GOI) co-PI –Completed Grant ₹ 20, 77,000. (2009 August – 2012 August) - Completed
- Documentation of Traditional Knowledge and grassroots innovations from remote villages in Pudukottai and Perambalur districts of Tamil Nadu. (National Innovation Foundation – DST, Government of India). Project Investigator Grant ₹ 1, 15,000 (2016-2017). -Completed
- Documentation of Traditional Knowledge and grassroots innovations from Coastal districts of Tamil Nadu and Pondicherry. (National Innovation Foundation – DST, Government of India). Project Investigator Grant ₹ 2,70,000 (2017-2019) - Completed

- Documentation of Traditional Knowledge and grassroots innovations from foot Hills of Pachaimalai and Kolli hills of Eastern Ghats of Tamil Nadu. (National Innovation Foundation (Autonomous). Co- Investigator Grant ₹ 4, 70,000 (2020-2021) – Completed

#### Seminar /Conference/Workshop Organised

- Organising Committee member Winter School Workshop on Biological Techniques 31st January - 4th February 2023
- Organising Committee member in Interdepartmental Satellite Symposium on Interdisciplinary studies in Biological Sciences 18<sup>th</sup> & 19<sup>th</sup> January 2023
- Organising Secretary to National Webinar on Molecular-Evolution, Taxonomy and Ecology organized by Department of Botany, Jamal Mohamed College, Tiruchirappalli on 16<sup>th</sup> & 17<sup>th</sup> February 2022
- Coordinator Biopython-Faculty Development Programme organized by Department of Botany, Jamal Mohamed College, Tiruchirappalli and Spoken Tutorial IIT Bombay on 29<sup>th</sup> and 30<sup>th</sup> May 2020
- Two days' workshop on Hands on Training in **Mapping Biodiversity with FOSS GIS software** organized on Centre for Biodiversity Informatics, Department of Botany, Jamal Mohamed College, Tiruchirappalli held on on 5<sup>th</sup> & 6<sup>th</sup> August 2016.
- Three days DST sponsored National workshop on **Data Science Research- Biological Data management** organized by Centre for Biodiversity Informatics, Department of Botany, Jamal Mohamed College, Tiruchirappalli. Funded by Department of Science and Technology, Government of India held from 23<sup>rd</sup> and 25<sup>th</sup> January 2017 (Coorganizer)
- “National Conference on **Biodiversity, Biotechnology and Bioresources for sustainable improvement of Rural Livelihood**” from 18<sup>th</sup> to 20<sup>th</sup> January, 2008 organized by Loyola Institute of Frontier Energy, Loyola College, Chennai.
- International Conference on Recent Trends in **Sensor-Development for the Assessment and Management of the Environment**” from 8<sup>th</sup> to 10<sup>th</sup> January 2009 organized by Loyola Institute of Frontier Energy, Loyola College, Chennai.
- “Awareness cum training workshop on **Rejuvenate Traditional farming technologies and Traditional Farmers Rice Varieties** “on 22<sup>nd</sup> September 2010, organized by VAANGHAI, funded by PPV & FRA, Ministry of Agriculture Government of India.

#### Seminar /Conference/Workshop –Resource Person

- Resource person for training program on **Mapping Biodiversity with FOSS GIS software** , Jamal Mohamed College (2016-2018) (60 nos. from different parts of India)
- Resource person for three days training workshop on **Data Science Research Biological Data Management** – DST funded programme at Jamal Mohamed College (off-line program 100 participants from different parts of India) 2016
- Resource person for awareness program on **Protection of Traditional Knowledge** to Students of Jamal Mohamed College (350 nos.) – 2016 & 2019.

- Training program Jamal Mohamed College students (56 nos.) on **Remote Sensing and GIS** (2018-2019).
- Training Programme for **QGIS** for Students of Holy cross college , Tiruchirappalli (15 nos.) -2019
- Seminar on **Intellectual Property Rights (IPR)** were organized at Seminar Hall, Department of Botany, Jamal Mohamed College. 13 -12-2018,
- Training Programme for **Biostatistics for using R** organized by Department of Mathematics, Jamal Mohamed College (30 nos.) -2019
- Training programs (16 batches min 10 students each) for **Remote Sensing, Geoinformatics, QGIS applications, R Statistical analysis** from 2018-2020.
- Hands on Traing program on R 11<sup>th</sup> and 12<sup>th</sup> July 2020 (online), organized by Department of Mathematics, Jamal Mohamed College, Tiruchirappalli
- An Interdepartmental Workshop on **GIS - Data Processing and Analysis using FOSS** 12-10-2020 to 16-10-2020 to V.V.Vaniperumal College for Women, Virudhunagar
- Interdisciplinary Training Programme on “Fundamental of R Software in Data Analysis” (Online Mode), on 27-10-2020,
- Online Hands-on Training Programme on **Remote Sensing and GIS Data Analysis** 20-07-2020 to 24-07-2020 Department of Physics, Jamal Mohamed College, Tiruchirappalli.
- Internship program on **Spatial Informatics** from 4<sup>th</sup> -11<sup>th</sup> January 2021 to V.V.Vaniperumal College for Women, Virudhunagar.
- **Innovation and Startup at Higher Educational Institutions** (HEIs) organized by Innovation Incubation Centre, Jamal Mohamed College on 12.7.2021.
- Online Impact Lecture Series- Introduction to **IPR- Plant Variety Protection and GI** organized by HICAS IIC Funded by IIC-MIC, Government of India on 30.09.2021
- Interdepartmental Hands on Training Program on “**Applications of Geospatial Technology in Resource Management**”, Organized by Department of Physics, Jamal Mohamed College from 25<sup>th</sup> to 26<sup>th</sup> November 2021.
- Plant Collection, Processing and Herbarium preparation - Dr. B. Balaguru, Asst. Professor of Botany, Jamal Mohamed College on 30-09-2021.
- Internship Program on **Spatial Informatics** from 4<sup>rd</sup> to 8<sup>th</sup> January 2022 to Holy Cross College for Women, Virudhungar.
- Resource person for Ulavar Mugam 2022 Topic : Importance of Geographical Indicators for Rice organized by by KVK Sikkal and VANGHAI Nagapattinam on 05.09.2022.
- Delivered lecture on *Millets – Unsung- Nutri Treasure* at Department of Nutrition and Dietetics, Jamal Mohamed College, Tiruchirapalli on 17<sup>th</sup> September 2022
- Delivered lecture in Interdepartmental awareness programme on “**Millets-Nutricereals for changing life styles**” organized under DBT Star College Scheme by Department of Botany, Jamal Mohamed College on 6.12.2022.
- Special Lecture on “**Protection of Plant varieties through Intellectual Property rights** “ organized by Department of Botany, Holy cross College, Tiruchirappalli on 7/1/2023

- Internship program on “**Geoinformatics applications in in mapping of Nutrition and Health information**” from 9 - 12 & 18-21 January 2023.

#### **Extension Activities- Resource Person**

- Established Community **Seed Bank** for **71 Traditional Paddy Varieties** at VAANGHAI, Nagapattinam District (2010)
- Acted as **JURY** for **Internal Smart India Hackathon 2020** organized by Department of Computer Science and Innovation Incubation Centre, Jamal Mohamed College on 13.01.2020.
- Herbarium Techniques to school teachers 29.08.2020 organized by Department of Botany, Jamal Mohamed College, Tiruchirappalli
- Online Awareness program on **traditional knowledge** for school teachers 19.12.2020
- Summer Training lecture on Wildlife in Western part of India CAM: CARE UK, Upper Cambourne, **Cambridge, UK** on 12-07-2020
- **Seed Ball Preparation and Nursery Technique**, Ayesha Girls Matriculation Higher Secondary school, Tiruchirappalli organized by Department of Botany, Jamal Mohamed College, Tiruchirappalli 23.11.2021
- Awareness program on **Pollution Control**, Ayesha Matriculation Higher Secondary school, Tiruchirappalli organized by Department of Botany, Jamal Mohamed College, Tiruchirappalli on 2.12.2021.
- Acted as **Quiz Master and Jury** for Quiz program on **Pollution Awareness** on 2.12.2021 organized by women Part V Clubs of Jamal Mohamed College, Tiruchirappalli.
- **Botanical Techniques**, Panjayat Union Middle School, Nagamangalam, organized by Department of Botany, Jamal Mohamed College, Tiruchirappalli 20.12.2021
- Resource person for Young Student Scientist Programme 2022 conducted by Tamil Nadu state council for science and technology at Department of Botany, Jamal Mohamed College, Tiruchirappalli during 19th May 2022
- Virtual training on Herbarium Techniques for School teachers on 29.08.2020
- Offline awareness programme on Traditional Knowledge Documentation for School teachers on 19.12.2020
- Plants Collection, Processing and Herbarium Preparation, (Online Mode) on 27-08-2020, organised by department of Botany, Jamal Mohamed College Tiruchirappalli.
- Methods of Field Sample Collection Using Mobile GPS, (Online Mode) on 23-06-2020 organised by department of Botany, Jamal Mohamed College Tiruchirappalli

#### **Radio Talk -Environmental News**

- **75<sup>th</sup> Independence day** special *Sinthanai arangam (Tamil)* at All India Radio Rainbow FM Tamil 102.1 Title : Climate Change and its consequences on 15.08.2022
- **Radiotalk** Resource person for *Kalaimalar*, every Friday All India Radio Rainbow FM Tamil 102.1 (From August 2022 – till date)

**Message Topics** : *World Mosquito day, Ozone day, 2023 International year of millet, World forest and water day, National Science day, Shola forest of Western Ghats, Crow, Mudskipper*



*-Fish with legs ,Walking palms, Third eye in living being, Bioluminacence, Termites, Cyperus rotundus, Impact fire crackers, Jumping Ants, Flying lizards, Spirulina, Global circulation, Biodiversity heritage, Polar regions, Microplastics, Birds migration, Sunderbans mangroves and Royal Bengal tigers, Dubang, African Babob tree, Carnivorous plants, Sea horse, Wood pecker, Chamelon ,Freshwater Dolpins, Octobus, Food behaviors of insects*

### Reviewer

- Applied Microbiology and Biotechnology, Springer Publications
- Current Science (Indian Academy of Science), India
- Journal of Green Computing (IGI Global), USA

### Membership in Professional Bodies

- LIFE Member Indian Society of Remote Sensing, Dehradun

### Awards/Fellowships

- Outstanding performance in Masters in Botany (1997)
- **Young Scientist Research Fellowship –DST (2009)**
- **Travel Fellowship – CICS-INSA (2011) for presenting paper in EMAPi Conference, Hungary.**
- Qualified UGC NET (Environmental Science) Assistant Professor 2018.

### Academic Responsibilities

- Deputy Coordinator, DBT Star College Scheme, Jamal Mohamed College, Tiruchirappalli
- Institute Nominated Faculty for implementing Startup Policy in Jamal Mohamed College, Tiruchirappalli by IIC, MOEs.
- Innovation Coordinator, Institution Innovation Council, Jamal Mohamed College, Tiruchirappalli by IIC, MOEs.
- Innovation Coordinator – Institution IIC 2.0 & 3.0, MOE, Government of India.
- Institution Innovation Ambassador, MOE, Government of India

### Inventories- Plant Taxonomy

- New Plant species : Three
- New Records to Tamil Nadu: Five

### IPR- Plant Varities Registration Under PPV & FRA

As Scientific Advisor to VAANGHAI behalf Farmers Two traditional Paddy Varieties registered under Plant Breeder ACT of PPV and FRA, ICAR, Government of India

- **Karug Kuruvai** Reg.No. 133/2016 (App.No 9310596711136 Date of Filing :13<sup>th</sup> December 2012 Date of Grant: 22<sup>nd</sup> April 2016 for Sangai Ulvar Mandram, Nagapattinam
- **Jeeraga Samba** Reg.No.134/2016 (App.No 9310596711137 Date of Filing :13<sup>th</sup> December 2012 Date of Grant: 22<sup>nd</sup> April 2016 for Sangai Ulvar Mandram, Nagapattinam



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### Research Publications (Citations -177; H index -6; i10 index 5)

#### International Journals

- Arulanandam L.J.P, S.Soosairaj, P.Raja and B.Balaguru, 2022Therophonum blumei (Araceae), a new species from Tamil Nadu, India Nordic Journal of Botany 1-7 doi: 10.1111/njb.03612
- Soosairaj, S. P. Raja, **B. Balaguru** , Johny T, 2021 .Solanum pulneyensis Soosairaj, sp. nov. (Solanaceae) from Palani Hills National Park of Tamil Nadu, India, Adansonia (3) : 43 (21) 235-240
- Soosairaj, S. P. Raja, S. John Britto, B. Balaguru,2018. A new species of *Dalbergia* (Fabaceae: Dalbergieae) from Tamil Nadu, India Phytotaxa .I.org/10.11646/phytotaxa.360.3.8
- Balaguru, B, S.Soosairaj, N.Nagamurugan, R.Ravindran and A. Khaleel Ahamed. 2016Native Vegetation pattern and the spread of three invasive species in Palani Hill National Park, Western Ghats of India, Acta Ecologica SinicaActa Ecologica Sinica 36, 367–376. [http:// dx.doi.org /10.1016/j.chnaes. 2016.05.005](http://dx.doi.org/10.1016/j.chnaes.2016.05.005).
- Soosairaj, S., S. John Britto, B. Balaguru, N. Nagamurugan, D.. Natarajan. 2007.Zonation of conservation priority sites for effective management of tropical forests in India: A value-based conservation approach. Applied ecology and environmental research 5(2): 37-48.
- Muthukumar, B., S.Soosairaj, B. Balaguru, N. Nagamurugan and D. Natarajan. 2007 Ethnomedico botanical survey in two sacred forests in Pudukottai district of Tamil Nadu, South India. Jl. Tro.Med 8(1):61-67.
- Balaguru, B., S. John Britto, N. Nagamurugan, D. Natarajan and S.Soosairaj.2006 Identification of Conservation Priority Zones for effective management of Tropical forests in Eastern Ghats of India. Biodiversity and Conservation vol 15 (4) : 1529-1543

#### National Journals

- Muruganatham P, Mohammed Hussain J, Jeevanatham G, Vinoth M, Balaguru B and Khaleel Ahamed A (2018). Effect of physiochemical factor induced Reactive Oxygen Species (ROS) on Marine Microalgal population in South East Coast of India- A spatial temporal approach. Haya: The Saudi Journal of Life Sciences, 3: 226 – 242.
- Vinoth M., P. Muruganatham, G. Jeevanatham, J. Mohammed Hussain, B. Balaguru, A. Khaleel
- Ahamed, 2017. Distribution of cyanobacteria in biological soil crusts, In sacred groves forest of Ariyalur and Pudukottai Districts, Tamil Nadu, India, RJLBPCS3(3):215-241
- Soosairaj, S., P.Raja, B. Balaguru and T.Dons, 2016. Two additions to the flora of the Palani Hills, Southern India. Journal of Threatened Taxa, 8(9):9216-9220.
- .Kumaraguru A., Brinda,T., Balaguru B., Soosairaj ,S and Johnbritto,S,2015. Vascular plant distribution in an endangered fragile ecosystem of Shervarayan hills, eastern ghats of India, International Journal of Recent Scientific Research, 6(10): 7006-7012

- Balaguru B, Nagamurugan N, Kumaraguru A, Soosairaj S and Brinda T, 2015. Estimation of Tropical deforestation and Prediction of Biotic pressure zone for effective Forest management in Eastern Ghats of India. International Research Journal of Biological Sciences, Vol. 4(12), 14-21
- Soosairaj, S., A, Kala, P. Raja and B. Balaguru. 2014. Reproductive Biology of Tropical Vulnerable Shrub *Capparis shervaroyensis* Sund.- Ragh. (Capparaceae). Life Science Leaflets, 52:71-78.
- Soosairaj, S., A, Kala, P. Raja and B. Balaguru, 2014. Reproductive biology and seed germination of tropicalevergreen tree *Canarium strictum* Roxb. Journal of Biodiversity and Environmental Sciences, 6(6), p. 24-32.
- Soosairaj, S., A. Maheswari and B. Balaguru. 2010. Micromorphological assessment in *Datura* Species of Tamil Nadu, India. J. Econ. Taxon. Bot. vol.34 (4) 873-879.
- Natarajan, D, B Balaguru, N Nagamurugan, S Soosairaj and E Natarajan. 2010. Ethnomedicobotanical survey in Malliganatham village of Pudukottai district in Tamil Nadu. Indian Journal of Traditional Knowledge (CSIR).9(4):768-774.
- John Britto, S, S. Soosairaj, B. Balaguru, and N .Nagamurugan. 2009. *Stenochlaena palustris* (Burm.f)Beddome (Blechnaceae); A new record for the Eastern Ghats of Tamil Nadu. JI. Econ. Taxon. Bot. 33(2): 318-321.
- John Britto, S, S. Soosairaj, B. Balaguru, and D. Natarajan. 2009. *Anisochilus dysophyllodes* Benth (Lamiaceae): A little known species from the Shervarayans, Tamil Nadu JI. Econ. Taxon. Bot. 33(1): 51-53.
- Ramachandran A, D. Natarajan , N. Nagamurugan, B. Balaguru , S. Soosairaj and S John Britto. 2008. Assessment of tree species diversity in semi-evergreen forests of Chitteri hills, Eastern ghats of Tamilnadu, South India. Indian Journal of Forestry 32(2): 175 – 180.
- Soosairaj, S., N. Nagamurugan, B .Balaguru and D.Natarajan.2006. Contribution of lianas and climbers to species richness in tropical forests of Pacchaimalai hills, Eastern Ghats, Tamil Nadu. Ecol.Env & Cons 12(4):599-603.
- John Britto, S. Soosairaj, D. Natarjan, N, Nagamurugan, B. Balaguru. 2006. Check list of Plant species in Elagiri Hills, Eastern Ghats of Tamil Nadu. Retell 7(1):77-87
- Soosairaj S, N. Nagamurugan, D. Natarajan, B. Balaguru, and S. John Britto, 2006. Sacred groves - refugia of medicinal plants and a model for conservation – A case study from tropical forests of Tamil Nadu, South India. Retell 6(2): 51-56.
- Soosairaj, S. ,S .John Britto, B .Balaguru, D. Natarajan, N. Nagamurugan. 2005. Habitat similarity and species distribution analysis in tropical forests of Eastern Ghats, Tamil Nadu. Tropical Ecology., 46(2): 183–191.
- Muthukumar, B., S. Dhanasekaran, S. Soosairaj, N. Nagamurugan and B.Balaguru.2005. Woody vegetation structure in a Sacred Grove of Pudukottai District of Tamil Nadu, South India. JI of Eco.Env.Pl. Vol. 10 (2):409-412.
- John Britto, S., D. Natarajan, B. Balaguru, D.I.Arockiasamy.2004. Distribution of some vascular epiphytes in the Chitteri hills (Eastern Ghats) of Tamil Nadu, South India. JI. Econ. Taxon. Bot.

28(3):734-737.

- Natarajan, D., S. John Britto, B. Balaguru, N. Nagamurugan, S. Soosairaj. 2004. Distribution of sacred Groves in Chitteri hills Eastern Ghats of India. *Jl of Eco.Env.Pl.* 8(2):375-379.
- John Britto, S., B. Balaguru., S. Soosairaj, 2003 Extended Distribution of *Desmodium tortuosum* (Sw.) Dc.(Papilionoideae) In Eastern Ghats Of Tamil Nadu. *Jl. Econ. Taxon. Bot.* 2003, 27(Suppl), 1232-4.
- John Britto, , S. Soosairaj B. Balaguru , D. Natarjan, N, Nagamurugan, S. Ravi paul. First report of *Syzygium alternifolium* (Wight) Walp. (Myrtaceae) In Southern Eastern ghats Of Tamil Nadu. *Jl. Econ. Taxon. Bot.* 2003, 27(Suppl), 1229-31.
- Soosairaj, S., S. John Britto, B Balaguru, N, Nagamurugan, D. Natarajan. 2004. Mapping forest types of Pacchaimalai Hills, Eastern ghats, India-using Remote Sensing and GIS. *Eco. Env. Cons.* 10(2): 131-135.
- Natarajan, D., S. John Britto, B. Balaguru, N, Nagamurugan, S. Soosairaj. 2004. Identification of Conservation Priority sites using remote sensing and GIS-A case study from Chitteri Hills, Eastern Ghats, Tamil Nadu. *Current Science Vol 86(9):*1316-1323.
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Eastern Ghats of Tamil Nadu. *Journal of Hill Research* 13(2): 130-135.

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### Book Chapters/Proceedings

- Moghanraj G., Balakrishnan, Balaguru and N., Nagamurugan, 2020. T1 - Protection of Indian Traditional Rice Varieties: Role of PPV and FRA In book: Intellectual Property Rights and the Protection of Traditional Knowledge pp.158-181
- Raja Prakasam, B. Balaguru., Soosairaj Sebastian, 2020. Diversity and Distribution of Tropical Dry Forests: A Case Study From Pudukkottai District of Tamil Nadu, India In. Rahul Bhadouria, Sachchidanand Tripathi Pratap Srivastava and Pardeep Singh (eds) ,Handbook of Research on the Conservation and Restoration of Tropical Dry Forests , IGI Global USA. Pp :115-123. DOI: 10.4018/978-1-7998-0014-9.ch006
- Balaguru, B., Nagamurugan, N., Soosairaj S., & Khaleel ahamed, A (2017). Species Distribution Models (SDM) – A Strategic Tool for Predicting Suitable Habitats for Conserving the Target Species: GIS and Special Distribution Modelling (SDM). In S. Faiz, & K. Mahmoudi (Eds.), Handbook of Research on Geographic Information Systems Applications and Advancements (pp. 427-440). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-0937-0.ch017
- Ravindhran R, Balaguru B and Vinoth A. 2014. Molecular Marker Based Analysis of Genetic Diversity of Wild Relatives and Landraces of Food Crops. In: Biotechnology ,Vol.2, Plant Biotechnology. Anand Kumar P, Govil JN ( Eds.). Studium Press LLC, USA.
- Balaguru, B., S. John Britto, S. Soosairaj, D. Natarajan and N. Nagamurugan. 2006 Cultural and Ecological significance of sacred forests with special reference to a sacred grove in Pudukottai District of Tamil Nadu. In Kunnikanan, C., & Guru Dev Singh (ed. ) Proceeding of National Workshop on Strategy for Conservation of Sacred groves. IFGTB (Indian Council of Forestry Research) Coimbatore. Tamil Nadu, , pp 117-120.
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- Balaguru, B., and M. Selvanayagam, 2008. Biodiversity, Bio-resources and Biotechnology- an Overview, In Proceedings of National Conference on Biodiversity, Biotechnology and Bioresources for sustainable livelihood of Rural Community Selvanayagam, Francis P. Xavier and B. Balaguru (eds), Loyola College, Chennai. pp 1-18.
- Subashkumar, S., B. Velmurugan, B. Balaguru and M. Selvanayagam, 2008. Applications of Nanotechnology for Environmental Management- A Review. In Proceedings of National Conference on Biodiversity, Biotechnology and Bioresources for sustainable livelihood of Rural

Community Selvanayagam, Francis P. Xavier and B. Balaguru (eds) , Loyola College, Chennai.pp 247-259.

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- Balaguru, B., N. Nagamurugan and L. Antonie Label, 2008. Biotechnology and Intellectual Property Rights (IPR) In Proceedings of National Conference on Biodiversity, Biotechnology and Bioresources for sustainable livelihood of Rural Community Selvanayagam, Francis P. Xavier and B. Balaguru(eds) , Loyola College, Chennai. pp 271-287.
- Participatory planning for effective management of forest resources in Hilly regions –A GIS approach.2003. Proceeding of National Seminar on GIS for Rural Development, TTTI, Chennai. (Electronic Version).

#### Books/Manual/Proceedings

- Biodiversity, Biotechnology and Bioresources for sustainable livelihood of Rural Community National Conference proceedings edited by Selvanayagam, Francis P. Xavier and B. Balaguru ,Loyola Publications, Loyola College, Chennai
- QGIS - Open Source Software Learning for Mapping Bioresources -2023 (Training Manual)
- R - Open Source Software for Ecological Data analytics -2023 (Training Manual)
- Balaguru, B and M.Ghouse Basha, 2023 .Intellectual Property Rights, Bioethics and Biosafety, CBS Publisher, New Delhi (Book under processing).

#### Student Centric Science enrichment Activities

- Habia Rahman A and B. Balaguru. Distribution of Terrestrial Cyanobacteria in Lower Palani Hills, Western Ghats of Tamil Nadu in International Conference on Applied Phycology (ICAP-2022) organized by CSMCRI- Marine Algal Research Institute, CSIR, Madapam, Tamil Nadu, on 3th May 2022
- Karthick, K., P.Sathivel, N. Ahamed Sherif and B.Balaguru. Study on Phytochemical Properties of medicinal plants used as immune modulatory activities. National Conference on Emerging Trends in Plant Science and Sustainable Development organized by Department of Botany, School of Biological Sciences Bharathidasan University, Tiruchirappalli on 30th March, 2022
- Jagatheeswaran, N., S. Mohamed Jamil, A. Habib Rahman and B. Balaguru, 2022. “*Protection of Indian Traditional Knowledge System from Biopiracy, Bioprospecting of Medicinal Plants and Registration of Plant Varieties under Intellectual Property Rights – Indian Scenario*” in two days National Conference on Phytomedicine, Nanomaterials and Plant Sciences organized by Holycross College, Tiruchirappalli from 15<sup>th</sup> to 16<sup>th</sup> December 2022. **(Received Best Poster Presentation Award)**
- Jegatheeswaran, M, Benny Yogannan and B. Balaguru. Bio-mimicry - Basis for Innovation

Science. Presented paper in National level student Conclave on Innovation and Novel ideas organized by Department of Mathematics and Department of Chemistry under DBT Star College Scheme on 27th February 2023

- Mohamed Yahya, Imran and B.Balaguru. Ecofriendly Biological Innovations Presented paper in National level student Conclave on Innovation and Novel ideas organized by Department of Mathematics and Department of Chemistry under DBT Star College Scheme on 27th February 2023
- *Uyri Eluthu* (Tamil ) Bimonthly students Environmental newsletter – Mentor (March 2023 onwards –
- Digital Flora of Jamal Mohamed College –Mentor and Editor March 2023.

### Popular Articles (News Magazines and Newsletters)

- Black Wattle Plantation in Western Ghats (Tamil) *Anniyamarma Veliyeru* Kumtham Reporter May 2022
- Balaguru, B., N. Nagamurugan, S.Soosairaj, 2020. Impact of Bioinvasive plant species along altitudinal gradients in Tropical Forest Ecosystems of Tamil Nadu , Bioinvasion- Envis Newsletter, September 2020

### Paper Presentation in Symposia/Conference/Workshops)

#### International

Invasions of Non-Native plant species and habitat changes in the Western Ghats of Tamil Nadu, India” in “*11th International Conference on the Ecology and Management of Alien Plant Invasions (EMAPI)* Organized by Institute of Ecology and Botany of the Hungarian Academy of Sciences, Szombathely Hungary at Szombathely, Hungary from 30th August to 3 September 2011.

#### National

- Identifying the habitat suitability of a re-listed fish species- case study from Pichavaram Estuaries in East Coast of Tamil Nadu in National Symposium on Impact of Climate Change and Biodiversity organized by Department of Zoology, Periyar University, Salem, Tamil Nadu on 23rd January 2013.
- Impact of Invasive alien species on shola vegetation, Western Ghats of Tamil Nadu, India. In International Conference on Sustainable utilization, Management and Conservation of Bioresources Organised by Department of Botany, St.Joseph’s College, Tiruchirappalli on 10th and 11th of January 2013.
- “Seasonal variation of Phytoplankton diversity in Pichavaram Mangrove Ecosystem”. Environmental Protection and Management, Organized School of Entomology & Centre for Natural Resource Management on 29th and 30th August 2011 at Loyola College, Tamil Nadu.
- Assessment of Fin fish habitat suitability in Pichavaram region using IRS P6 LISS III satellite

Data" Environmental Protection and Management, Organized School of Entomology & Centre for Natural Resource Management on 29th and 30th August 2011 at Loyola College, Tamil Nadu.

- Estimate Biomass of an Endangered Ecosystem in Shervarayan Hills, Eastern Ghats of Tamil Nadu. National Seminar on Renewable Energy Resources held at Yadava College, Madurai. 2010.
- Significance of Bioethics in Biotechnological Research. National Conference on Biodiversity and Biotechnology for sustainable livelihood of Rural Community held at Loyola Institute of Frontier Energy, Loyola College, Chennai. 2008.
- Applications of IPR in Biotechnology. National Conference on Biodiversity and Biotechnology for sustainable livelihood of Rural Community, held at Loyola Institute of Frontier Energy, Loyola College, Chennai. 2008
- Biodiversity informatics- A promising decision making tool for Biodiversity conservation and Management. 2006. National conference on Biodiversity held at School of Entomology and centre for natural resource management Loyola College Chennai.
- Study on structure and total importance value of the woody vegetation in a sacred grove in Pudukottai district of Tamil Nadu. In Regional Seminar People, Plants held at Gadhigram Rural Institute, Gadhigram. 2003.
- Tree diversity in a sacred grove of Pudukottai district of Tamil Nadu. In National symposium held at Bharathidasan University, Tiruchirappalli. 2000.
- Effect of some medicinal plants on economic parameter and development of silk worm. In National symposium in "Trends in Natural Resources" held at St. Joseph's college, Tiruchirappalli, Tamil Nadu. 1997.
- Models for sustainable management of forest resources in the Shervarayan hills using Remote Sensing and GIS. In International Conference on Sustainable Development and Management of Natural Resources held at Holy Cross College, Tiruchirappalli, Tamil Nadu. 2003.
- Identification of biodiversity gap in Eastern Ghats using Remote Sensing and GIS. In National seminar on Remote sensing and GIS in Natural Resource Management; current status and emerging trends held at School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala. 2003.
- Anti-Fungal activity of *Acanthus ilicifolius* L - A Mangrove plant In National symposium on recent trend in plant science held at Kerala University, Trivandrum. 2000.
- Floristic analysis of select sacred groves of Pudukottai and Tanjore district of Tamil Nadu In 87th Indian science congress held at Pune university. 2000.
- The biodiversity in the sacred grove of Thiruvallarcholai in Tiruchirappalli district in Tamil Nadu, South India. In Mountain meet-'98 International seminar on environment of the mountain regions held at Govt. PGC, Rishikesh. 1998.

#### **Participation in Symposia/Conference/Workshops)**

- Online Biopython workshop organised by Department of Mathematics, Jamal Mohamed College and Nanotechnology platform (NSTC) Noida JMC organized on 11<sup>th</sup> to 12<sup>th</sup> March 2023
- Three days online workshop on Multivariate Statistical analyses in R- I organized by Biologia Life Science Llp Ahmednagar, Maharashtra on 14<sup>th</sup> to 16<sup>th</sup> February 2022



- Three days online workshop on Multivariate Statistical analyses in R -II organized by - Biologia Life Science Llp, Ahmednagar, Maharashtra on 24-27 January, 2022
- National Webinar Lecture Series on “Biosciences” from 13.07.2020 to 15.07.2020
- Two day faculty development program on Digital Classroom under DBT Star College Scheme 23-24 June 2020
- National seminar on Innovative research approaches in Biological sciences, conducted from 25<sup>th</sup> to 26<sup>th</sup> May 2022
- International Webinar Lecture Series on “Biological Sciences” from 6<sup>th</sup> July 8<sup>th</sup> July 2020
- International Webinar on Biological Innovations for Resource Management and Sustainable Development organized by Department of Botany from 24<sup>th</sup> to 26<sup>th</sup> August, 2021
- FDP on Innovative Teaching and Research methods of Academic Excellence organized by Department of Botany, Jamal Mohamed College on 24<sup>th</sup> to 29<sup>th</sup> Jan-2022
- Participated in National Seminar on Frontiers in Biological Innovations for Resource Management, Patents and Entrepreneur Development on organized by Department of Botany, Jamal Mohamed College 10<sup>th</sup> and 11<sup>th</sup> March 2020
- Faculty Development Programme on “E-Content Development” organized by the Internal Quality Assurance Cell of Jamal Mohamed College from 30<sup>th</sup> June to 4<sup>th</sup> July 2020
- Two day Webinar on Intellectual Property Rights organized by IPR Cell and PG and Research Department of Chemistry, Jamal Mohamed College from 18<sup>th</sup> & 19<sup>th</sup> July 2020
- Webinar on “National Education Policy - 2020” organized by Internal Quality Assurance Cell of Jamal Mohamed College on 08-08-2020.
- Webinar on Biological Innovations for Resource Management and Sustainable Development on 24<sup>th</sup> to 26<sup>th</sup> August 2021.
- Using IBIN Database for Conservation and Management of Forest Resources, GKVK Agriculture University, Bangalore National level 14 -02-2019 & 15-02-2019.
- Seminar on “Challenges and changes in the evaluation system” Internal Quality Assurance Cell, Jamal Mohamed College, Tiruchirappalli/Local level 18<sup>th</sup> & 19<sup>th</sup> January 2019.
- One day state level seminar on “Perspectives in Plant systematics and Conservation Biology” State level 22 -02-2019
- Science Academies Lecture Workshop on Emerging Frontiers in Plant Sciences organized Department of Botany, Periyar EVR College, Tiruchirappalli from 23<sup>rd</sup> to 24<sup>th</sup> August 2017
- Workshop on The Role of Teacher in the Present Scenario organised by the Internal Quality Assurance cell of Jamal Mohamed College, Tiruchirappalli on 10<sup>th</sup> December 2016.
- Participated in the Wildlife Census Programme organised by Tamil Nadu Forest Department, Tiruchirappalli during 14 to 16 February 2015.
- Workshop on Biodiversity awareness using open source geospatial software (FOSS4G) tools organized by OSGEO, IIIT-H, French Institute Pondicherry held at French Institute Pondicherry on 19th August, 2015.
- National Symposium on Medicinal Plants-Diversity, Utilization and Conservation organized by

Department of Botany, St. Joseph's College, Tiruchirappalli from 5<sup>th</sup> & 6<sup>th</sup> February 2001.

- International Seminar on Opportunities for life science graduates in food processing sector jointly organized by the Center for International programme, Loyola College, Chennai and Lille Catholic University, France, held on 3rd March 2011.
- State level seminar on Entrepreneurship skills in Biotechnology, Organized by Department of Plant Biology and Biotechnology, Loyola College, Chennai held on 3rd December 2008.
- Seminar on open source GIS tools organized by AU-KBC Research Centre, Anna University held on 13<sup>th</sup> October 2009.
- Seminar on Modern Trends in Biotechnology organized by Department of Plant Biology and Biotechnology, Loyola College, Chennai held on 14<sup>th</sup> February 2011.

### Industrial/Academic/Non Academic Consultancies

- **Scientific Advisor (Honorary), VAANGAI, Nagapattinam** (from 2010-2018)- Provide Scientific inputs to the project *“Characterization and Registration of Traditional Rice Varieties from Cauvery Delta and Coastal Belt of Tamil Nadu* Project funded by PPV and FRA, Ministry of Agriculture, Government of India 2010-2012 (13 lakhs).
  - **Senior Geospatial Consultant, J–Technologies India Pvt. Ltd., Chennai** (500 Crore Indo shell Group)(from 2010- 2014).
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Updated on 3 September 2023