

Prof. Meera Bai S



HOD

 meera.priyan@gmail.com

UG: T.K.M. College of Engineering, Kollam, University of Kerala, India

PG: University of Kerala, India

PhD (On going): Kalasalingam Academy of Research and Education, Tamil Nadu, India

Educational Qualifications (as per chronological order)

- 1990- B.Tech., Chemical Engineering- (4th Rank in University) from T.K.M. College of Engineering, Kollam, affiliated with the University of Kerala.
- 2000- Post Graduate Diploma in Computer Application- from IGNOU.
- 2001- Advanced Diploma in Computer Application - from IGNOU.
- 2012- M.Tech., in Biotechnology & Biochemical Engineering, University of Kerala.
- 2015- Certificate course in Process Engineering (Chemical Engineering), PETRO Institute, Affiliated to National Centre for Labour and Learning, Government of India.
- 2022- Pursing PhD in Biotechnology. Kalasalingam Academy of Research and Education

Area of Interest:

- | | |
|---|--|
|  Fermentation Technology |  Algal Biorefinery |
|  Biopolymer |  Pyrolysis (conventional,
Microwave) |
|  Biofuels | |
|  Bioremediation | |

Professional Experience:

- ❖ Head of the Department, April 2021 onwards in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.

- ❖ Assistant professor, December 2012 onwards -- in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ Senior Lecturer, January 2009 to December 2012 -- in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ Lecturer, July 2007 to January 2009 -- in the Department of Biotechnology and Biochemical Engg. at Sree Buddha College of Engg, Pattoor, Kerala, India.
- ❖ District Coordinator, Science and Technology Entrepreneurship Development Project (Jan 1999 – June 2007) –Coordinate and implement all activities of STED in the districts. Mission of employment generation through science and technology (MEGSAT) is a main project undertaken by STED.
- ❖ Guest Lecturer (1996-1998) – in the department of Polymer Science and Rubber Technology, University College of Engg, Thodupuzha.
- ❖ Guest Lecturer (1994-1996) – in the department of Industrial Chemistry, S N College, Punalur.
- ❖ Engineer Executive (March 1993 – September 1993) -- in MAS Combustible Pack Ltd. Palakkad, which is a company manufacturing combustible cartridge cases for defence purposes.
- ❖ Apprentice (August 1990- August 1991) -training in Fertilizers And Chemicals Limited, Cochin Division, Kerala, India

Grants & Funding

Research grants from KSCSTE, ANERT, KTU for student Projects.

Outreach activities

- Participated in the Indo-Japan Workshop "Frontiers in Analytical and Applied Pyrolysis for Energy and Environment" by the Centre for Outreach and Digital Education, Indian Institute of Technology, Madras from 26th to 27th February 2024
- 12 Days International Faculty Development Programme by EDII; Technopark, Kerala, India.
- 5 Days National Workshop on Problem-solving skills in Bioprocess Engineering, IIT Madras, India.
- FDP on 'Recent Development of Biopolymer and Sustainable composites for engineering applications, SBCE Pattoor, 15th-19th March 2021.
- FDP on Learning Outcome-based Approach for curriculum planning and Development, Master soft ERP Solutions- 30th January 2021.
- Three-day FDP on “Research Methodology and Scientific Writing” organized by Sree Buddha College of Engineering, Alappuzha from 29th June – 1st July 2020.
- 3-day FDP on “Communicative English Skills for Engineering Students and Faculty” Mar Baselios Institute Of Technology And Science [MBITS] in association with ASAP and TCS from 28th-30th June 2020.
- National level FDP on Waste management September, TKMCE, Kollam, 2021.
- 15 days industrial training in Kerala State Drugs and Pharmaceuticals, Cherthala, Kerala, India.
- 7 days ISO auditors Training in Sree Buddha College of Engineering.

- 15 days training in Defence Research Laboratory, Pune, India.
- 15 days industrial training in Indian Rare Earths Limited, Chavara, Kerala, India.
- 10 days design training in FACT Engineers Design Organization, Udyogamandal, Cochin, Kerala, India.

FDP/ WORKSHOP CONDUCTED/ORGANISED

Many programs are Organized, Recent events are listed below.

- International Conference on “Smart and Green Materials for Biotechnology, Biochemical and Mechanical Applications” The Department of Biotechnology and Biochemical Engineering, Department of Mechanical Engineering, and Department of Food Technology, SBCE, from November 30th to December 2nd, 2023.
- National FDP on “Novel Technological Advancement in Downstream Processing”, sponsored by APJ Abdul Kalam Technological University, Department of Biotechnology and Biochemical Engineering, SBCE, 30th January 2023 -3rd February 2023.
- National level FDP on “Research Methodology, Scientific writing and Publication ethics” sponsored by APJ Abdul Kalam Technological University, Department of Biotechnology and Biochemical Engineering, SBCE, 23-25 January 2023.
- National level FDP on Biofuels – Recent Trends and Future Prospects, Department Biotechnology and Biochemical Engineering, SBCE, September 2021.
- National Workshop on SCILAB, Department Biotechnology and Biochemical Engineering, SBCE, August 2020.
- National Workshop on Bioprocess plant Design sponsored by AICTE at Sree Buddha College of Engineering in January 2013.
- National Workshop on Entrepreneurship and Inauguration of IEDC at SBCE in 2013.

Courses taught at SBCE

Bioprocess Engineering,
Downstream Processing,
Fermentation Technology,
Fluid Flow and Particle
Technology,
Heat Transfer Operations,
Environmental Engineering,
Principles of Management,

Disaster Management,
Basic Biochemical Engineering,
Bioprocess Instrumentation,
Numerical Techniques,
C++ Programming,
Programming in C,
Engineering Properties of Food
Materials.

Research Publications

1. **Santhakumari, M. B.**, Pandi, E., Mohan, M., Daniel, A. R., & Balakrishnan, V. (2024). *Biomass: Resources and Sustainable Utilization. In Bioeconomy for Sustainability* (pp. 3-39). Singapore: Springer Nature Singapore.
2. Sajin, J. B., Devarajan Yuvarajan, T. Raja, **S. Meera Bai**, and K. K. Kalesh. "Study of thermal stability and characterization of novel bioplastic as a potential alternate for synthetic fiber replacement in polymer composite." *Biomass Conversion and Biorefinery* (2023): 1-9.

3. Vidya, S., C. Chandran, and **S. Meera Bai**. "*Dye decolourization using fungal laccase: A Review.*" International Journal of Innovations in Engineering and Technology 8, no. 1 (2017): 118-123.
4. **Bai, S. Meera**, and Muhammad Nabeel. "*Biodiesel from Waste Vegetable Oil-A Study on Production and Performance.*" Int J Latest Trends Eng Technol 5, no. 3 (2015)
5. **Bai, S. Meera**, and P. Prasad. "*Extraction of Phytochemicals from the Stem and Leaves of the Ayurvedic Medicinal Plant Vitexnegundo as Possible Therapeutic against Vibrio cholera.*" International Journal of Latest Trends in Engineering and Technology 5, no. 1 (2015): 96-100.
6. **Bai, S. Meera**, and N. Ramachandran. "*Process optimization by Placket-Burman designs for the production of protease enzyme from Bacillus subtilis under submerged fermentation.*" Int. J. Innov. Eng. Biotechnol 4 (2014): 34-39.

Conference Publications

1. Meera Bai. S, Merine Francis, Swathishma, Sandra Vijay, Adriel Raji Koshy and Vanavil Balakrishnan, Investigation of Thermal Characteristics of the Seaweeds Collected from Kollam Coastal Area for Utilization as a Feedstock for Bio-Oil Production, International Conference on New Horizons in Biotechnology (NHBT-2023), Organized by BRSI and CSIR National Institute for Interdisciplinary Science and Technology (NIIST), November 26-29, 2023; Trivandrum, Kerala, India.
2. Meera Bai S, Sreelakshmi Narayanankutty, Theertha Vinod, - Exploring seaweed pyrolysis for sustainable biomass utilization, International Conference on "Smart and Green Materials for Biotechnology, Biochemical and Mechanical Applications, Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India from November 30th to December 2nd, 2023.
3. Adriel Raji Koshy, Merine Francis, Sandra Vijay, Swathishma, & Meera Bai S- Utilizing Seaweeds as a Sustainable Bioresource for Pyrolysis- Based Biochar Production, International Conference on "Smart and Green Materials for Biotechnology, Biochemical and Mechanical Applications", Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India, from November 30th to December 2nd, 2023.
4. Nimi Mariya Jose, Meera Bai S presented a paper entitled "Production of Bioplastic from Renewable sources-a Review at National Conference on Biotechnology Research Innovations and Opportunities (BRIO-2020) organized by Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India from 18th to 19th June, 2020.
5. Sujana S Nair, Meera Bai S and Malu Ravi presented an e-poster entitled "Sustainable Bacteriological Approach for the Production of Bioplastics in a Bio-Engineered Medium" in the International Virtual Conference on Natural Products and Synthetic Biology (ICNSB 20) jointly organized by School of Bio sciences and Technology, Vellore Institute of Technology and Society of Chemical and Synthetic Biology, TamilNadu, India from 4th to 5 th July 2020

6. Meera Bai S and Malu Ravi, presented a paper entitled “Utilization of Low-Cost Materials in the Sustainable Production of Bioplastics: Scrap to Scope” National Conference on Biotechnology Research Innovations and Opportunities (BRIO-2020) organized by Department of Biotechnology & Biochemical Engineering, SBCE, Alappuzha, Kerala, India from 18th to 19th June, 2020.
7. Meera Bai.S, Ramachandran Nellickal, “Media engineering for the production of protease enzyme from Bacillus Subtilis under submerged fermentation, “World Congress on Biotechnology”, 2012

Membership of Professional Bodies

- Life member in IChE (Indian Institute of Chemical Engineers)
- Life member in BRSI (Biotech Research Society of India)

Roles and Responsibilities handled

- Board of Studies Chairman – Biotechnology, Sree Buddha College of Engineering (Autonomous)
- Board of Studies member – Food Technology, APJ Abdul Kalam Technological University.
- Examination Board Chairman, Food Technology, & Biotechnology, APJ Abdul Kalam Technological University.
- Team member of the Scrutiny Board for Question paper (KTU, University of Kerala).
- Team member in university syllabus revision committee (KTU, University of Kerala).
- Team member in university evaluation committee (KTU, University of Kerala).
- Team member in NAAC / NBA accreditation committee.
- Deputy warden of Ladies hostel.
- Examination cell coordinator.
- Innovation and Entrepreneurship Development cell coordinator.

Website link:

<https://scholar.google.com/citations?hl=en&user=lqxrAY8AAAAJ>