



SANTHIGIRI COLLEGE OF COMPUTER SCIENCES

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SANTHIGIRI INTERDISCIPLINARY RESEARCH CENTER (SIRC)

2023-2024



J. J. Thomas
PRINCIPAL

SANTHIGIRI COLLEGE OF COMPUTER SCIENCES
VAZHITHALA P. O., THODUPUZHA
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The **Annual Report** of the Santhigiri Interdisciplinary Research Center highlights a series of impactful academic activities and events held throughout the year, emphasizing the dedication of its faculty to research, collaboration, and knowledge exchange.

Santhigiri Interdisciplinary Research Centre (SIRC), is a knowledge economy dissemination center officially inaugurated and blessed on 3rd November 2023 by Rev.Fr Mathew Manjakunnel CMI, Provincial, Carmel Province Muvattupuzha .



It is a center of academic research and skill excellence contributes unparalleled resources to the research community through collaboration and creativity. Principal Rev.

Fr.Prof.Dr.Baby Joseph CMI, Director Research Dr.Neetha Thomas, Dean Research Ms. Sigma Sathyan.along with the various Department coordinators and Cell in charges under SIRC makes team assimilation, aids in developing and nurturing research and development.



Faculty and students who are having a spark of innovative thoughts with right aptitude, attitude can flourish from SIRC platform. SIRC incorporates IPR Cell, Entrepreneurship cell, IDEA Club and SHIP steer students to systematically and diligently discover entrepreneurial opportunities and aids them to formally establish their start-ups via an effective combination of taught courses, intense research supported by supervision, and mentorship by highly accomplished entrepreneurs, thus possibility of commercialization happens through formal technology transfer.

In the area of **paper presentations**, faculty members actively participated in both national and international conferences. Ms. Dalbina Dalan presented a paper on "Automation integration for Black Soldier Fly Larvae Farming in Kerala for Sustainable Waste Management" at the Multidisciplinary Approaches to SDGs & International Partners Meet 2024, organized by Rajagiri College of Social Sciences. Dr. Neetha Thomas contributed to the 7th International Conference on Computer Applications in Electrical Engineering at IIT Roorkee in October 2023 and presented another paper on "Machine

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"Learning-Based Classification" at the Second Computing Congress in December 2023, with a Scopus indexed publication in progress. Other notable presentations included Dr. Bincy Baby and Ms. Ambili V, who both shared insights on "The Role of Artificial Intelligence in Education" at the Bharat Matha International Conference. Mr. Shibu Braham's presentation at the International Conference on Sustainability, held at Mar Athanasius College, focused on the changing livelihood patterns in Kerala and their impact on sustainability. Additionally, Treesa Thomas discussed the role of AI in both formal and informal education, with her conference paper published in the International Journal for Research in Applied Science and Technology.

The **paper publications** section reflects the continued scholarly output of the center's faculty. Ms. Sigma Sathyan published a paper on "Computer-Aided Design System for Early Detection and Screening of Glaucoma using Pretrained Convolutional Neural Networks" in the International Research Journal of Modernization in Engineering Technology and Science. Ms. Siji Antony's research on drug-related problems among inpatients was published in the Asian Journal of Pharmaceutical Research and Health Care. Dr. Neetha Thomas also had significant contributions with two papers, one on deep learning methodology for PCOS prediction and another on machine learning classification, both awaiting Scopus-indexed publication. Dr. Bincy Baby and Ms. Ambili V's papers on AI in education were also published in the Bharat Matha International Conference proceedings.

Faculty also contributed as **conference paper reviewers**, further establishing their expertise in the field. Ms. Dalbina Dalan reviewed papers for the International Conference on Computational Sciences and Sustainable Technologies (ICCSST-2023). Dr. Neetha Thomas served as a reviewer for several prestigious events, including the International Conference on Sustainable Advanced Computing (ICSAC 2024) and the International Conference on Theoretical and Applied Computing (ICTAC 2024), among others. These roles underscore the faculty's active engagement with the academic community and their contribution to maintaining the quality of research.

In terms of **conference participation**, both Ms. Sigma Sathyan and Dr. Neetha Thomas participated in the International Conference on Multidisciplinary Approaches to SDGs & Partners Meet 2024, organized by Rajagiri College of Social Sciences. This involvement highlights the center's commitment to promoting sustainable development goals (SDGs) and fostering interdisciplinary collaboration.

The **workshops conducted** by the departments at Santhigiri College also played a significant role in enhancing faculty and student skills. The Department of Commerce hosted a workshop on Research Methodology for Project Work, with Dr. Ajay Joseph serving as the resource person. Additionally, a skill-sharing program for second-year B.Com students on tools like SPSS, Power BI, Google Data Studio, and Excel/Google Sheets was organized in association with Nirmala College, Muvattupuzha. Other workshops included sessions on Cloud Computing by the Department of Computer Science, a two-day Neuro Nexus workshop by the Department of Social Work, and an expert talk by Mr. Shantin Jose, MD of Mampampil Motors LLP, focusing on navigating the business world for BBA students. Dr. Bincy Baby also conducted a workshop on research methodology at Basелиos Poulouse Second College.

The center's commitment to academic exchange is evident in its **faculty exchange programs**, notably with Mr. Solymon VL, Head of the Department of Management at Rajagiri Viswajyothi College, Vengoor, fostering collaborative academic efforts between institutions.





Finally, the **SHIP & IDEA Programs** provided platforms for innovation and idea exchange. Brain Tech 2k24 offered phases for idea submission and presentations, encouraging creative and entrepreneurial thinking among faculty and students.

In summary, the Santhigiri Interdisciplinary Research Center has made substantial strides in fostering a rich academic environment through paper publications, presentations, conferences, workshops, and collaborations. The faculty’s active involvement in research, teaching, and academic exchange reflects the institution’s commitment to excellence and global academic participation.

Details

Paper Presentations

Faculty Name	Topic
Ms. Dalbina Dalan	Automation integration for Black Soldier Fly Larvae Farming in Kerala for sustainable Waste Management Multidisciplinary approaches to SDGs & International Partners Meet 2024 organized by Rajagiri College of Socail Sciences
Dr. Neetha Thomas	Presented paper in 7th International Conference on Computer Applications in Electrical Engineering-Recent Advances in IIT Roorkee on October 2023.
Dr. Neetha Thomas	Presented a pape “Machine Learning-Based Classification in Second Computing Congress Organized by Advanced Computing Research Society December 2023 (A Scopus Indexed publication in processing).
Dr. Bincy Baby	Presented an international paper on "Role of Artificial Intelligence on Education" at the Bharat Matha International Conference.
Ms. Ambili V	Presented an international paper on "Role of Artificial Intelligence on Education" at the Bharat Matha International Conference.
Mr. Shibu braham	Participated in the "International Conference on Sustainability: Assessment & Challenges" at Mar Athanasius College, Kothamangalam, from 10th to 12th, January 2024. He presented a paper titled "Changing Livelihood Pattern of Kerala and its Impact on Sustainability," emphasizing the college's dedication to global knowledge exchange on sustainability issues
Treesa Thomas	International conference on “ Role of AI in Formal and Informal Education for Students. ” The insights shed light on the

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	transformative potential of AI in both formal and informal educational settings. The Conference paper is published in the International Journal for Research in Applied science and Technology with ISSN 2321-9653.
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Paper Publications

Faculty Name	Topic
Ms. Sigma Sathyan	Computer Aided Design System for early Detection and screening of Glaucoma using pretrained Convolutional Neural Networks Journal Name International Research Journal of Modernization in Engineering Technology and Science (IRJMETS) Volume 05, Issue 05, May 2023
Ms. Siji Antony	Drug Related Problems among inpatients of General Medicine Department of a Tertiary Care Hospital in South India Journal Name Asian Journal of Pharmaceutical Research and Health Care Volume 15 Issue 1 January-March 2023 Published by Wolters Kluwer - Medknow
Dr. Neetha Thomas	"A Deep Learning Methodology CNN-ADAM for the Prediction of PCOS from Text Report" in 7th International Conference on Computer Applications in Electrical Engineering-Recent Advances in IIT Roorkee on October 2023. (A Scopus Indexed publication in processing)
Dr. Neetha Thomas	"Machine Learning-Based Classification in Second Computing Congress Organized by Advanced Computing Research Society December 2023 (A Scopus Indexed publication in processing).
Dr. Bincy Baby	"Role of Artificial Intelligence on Education" at the Bharat Matha International Conference.
Ms. Ambili V	"Role of Artificial Intelligence on Education" at the Bharat Matha International Conference.
Treesa Thomas	"Role of AI in Formal and Informal Education for Students. The Conference paper is published in the International Journal for Research in Applied science and Technology with ISSN 2321-9653.

Conference Paper Reviewer

Faculty Name	Conference Name
Ms. Dalbina Dalan	International Conference on Computational Sciences and



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	Sustainable Technologies (ICCSST-2023)
Dr. Neetha Thomas	(ICSAC 2024) International Conference on Sustainable Advanced Computing, Organized by CHRIST (Deemed to be university), Bangalore
Dr. Neetha Thomas	(ICTAC 2024) International Conference on Theoretical and Applied Computing, Organized by Amal Jyothi College of Engineering, Science and Engineering Research Board and Liverpool Hope University on January 2024
Dr. Neetha Thomas	(IACIDS 2023) International Conference on Artificial Intelligence, Communication, IoT, Data Engineering and Security, Organized by CHRIST (Deemed to be university), Pune on November 2023.
Dr. Neetha Thomas	(ICSCC 2023)- 9th International Conference on Smart Computing and Communication, organized by Muthoot Institute of Technology and Science & Association with IEEE Kerala section August 17-19 2023

Conference Participations

Faculty Name	Conference Name
Ms. Sigma Sathyan	International conference on Multidisciplinary approaches to SDG's & Partners Meet on 10-13 January 2024, Organized by Rajagiri college of social sciences and Rajagiri Business school, Kerala.
Dr. Neetha Thomas	International conference on Multidisciplinary approaches to SDG's & Partners Meet on 10-13 January 2024, Organized by Rajagiri college of social sciences and Rajagiri Business school, Kerala.

Workshops Conducted

Department of Commerce	Workshop on Research Methodology in Project Work held on January 19, 2024. Dr. Ajay Joseph served as the resource person, with active participation from HoD, faculty members, and students
Department of Commerce	A skill sharing program for second year B.Com students on SPSS, POWER BI/GOOGLE DATA STUDIO, EXCEL/GOOGLE SHEET initiated by Nirmala College Muvattupuzha in association with Department of Commerce, Santhigiri College of Computer Sciences, Vazhithala
Department of Computer science	Workshop on Cloud Computing
Department of Social Work	Two day Workshop –Neuro Nexus

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Department of Management Studies	<p>Navigating the business world: Expert talk</p> <p>Mr. Shantin Jose, the dynamic and visionary MD of Mampampil Motors LLP, a leading automobile dealer in Kerala, graced the BBA students with an expert talk on starting a new project.</p>
SIRC	<p>Dr. Bindiya M Varghese. Associate Professor & Dean, Department of Computer Science, RCSS.</p> <p>Session signifies a holistic approach to promoting research and scholarly activities, session highlights the institution's commitment to enabling faculty members to achieve excellence in research endeavors while simultaneously cultivating a culture that nurtures and sustains a thriving research community in Santhigiri campus.</p>

Resource person

Dr. Bincy Baby	January 15, 2024 for Workshop on Research Methodology at Baselios Poulse Second College.
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Faculty Exchange Programs

Department of Management Studies	<p>Mr. Solymon VL, Head, Department of Management, Rajagiri Viswajyothi College of Applied Sciences in Vengoor. This partnership reflects a shared commitment to academic excellence and the mutual enrichment of faculty members from both institutions. Through the collaborative efforts envisioned in this MOU, it is anticipated that the participating faculties will contribute significantly to the advancement of knowledge and pedagogical practices.</p>
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SHIP & IDEA Programs

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Brain Tech 2k24 (Phase I)	Idea Submission
Brain Tech 2k24 (Phase II)	Presentation of Idea

Summary of Report

Events	Count
Paper Publication	7
Paper Presentation	7
Conference Participation	2
Conference papers Reviewers	5
Workshops Conducted	6
Resource Person	1
Faculty Exchange Program	1
SHIP & IDEA Programs	2

Report Prepared by,

Dr. Neetha Thomas

Director, SIRC




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