



**MADRAS CHRISTIAN COLLEGE
(AUTONOMOUS)**

DEANERY - RESEARCH & DEVELOPMENT

ANNUAL REPORT

2023 - 2024

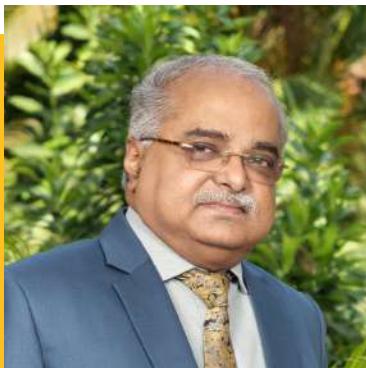


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CONTENTS

Message from Principal	i
Message from Dean - Research & Development	ii
Message from Associate Dean - Sciences	iii
Message from Associate Dean - Humanities	iv
Message from Coordinator - MCC Research Colloquium	v
Impact Assessment of Initiatives	vii
Strategic Growth and Impact at Madras Christian College	01
Release of Annual Report 2022-2023	06
Stakeholder Engagement	07
Capacity Building for Faculty & Research Scholars	11
Book Publication Drive 2024	21
Interdisciplinary Conclave 2024	39
Inter-Institutional Visits	43
Academic Visitors	45
Global Engagement	47
Institutional Ethics Committee	50
Seed Money Grant	53
Cash Incentives for Publication in Indexed Journals	59
List of Research Supervisors for the PhD Programme	65
List of PhD Scholars Admitted in 2023-2024	73
Research Publications	77
Projects	105
Patents	109
List of Programmes organised by MCC Research Colloquium	113
A Year in Review (2023 - 2024)	124

Foreword



Dr. P Wilson
Principal & Secretary

I am happy to write the foreword for the Annual Report of the Office of Research & Development in Madras Christian College. The pursuit of research and the creation of new insights are not merely academic endeavours but are the lifeblood of a vibrant and progressive institution, and are fundamental to nurturing a thriving research ecosystem like that of Madras Christian College. The Annual Report serves as a compelling and comprehensive narrative of the progress achieved through initiatives that reflect a strategic plan along with meticulous execution that has resulted in tangible and impactful outcomes across diverse disciplines. The year has seen an increase in research activities marked by increased stakeholder engagement in conducting capacity building programmes, securing research grants, publications in indexed journals and impactful workshops. The dedication to creating awareness of the nuances of scientific writing and publishing and facilitation of publications in reputable journals is truly commendable.

I wish to specifically appreciate the Dean and Associate Deans for their efforts in transforming ideas into actionable strategies all while considering the perspectives of our faculty members and seamlessly navigating the process of change. I wish to commend the strategy of handholding the faculty through democratizing the book writing thus rendering them opinion makers and subsequently benchmarking them to publish articles through their validated opinions as thought leaders in Scopus and Web of Science indexed journals. I encourage the office of the Dean R&D to validate this conceptual approach which emerged from their perspectives. Additionally, I would like to give special recognition to the MCCRC for its dedicated efforts to popularize research and reaching out to various regions of India through online programmes.

I am convinced that the initiatives led by the Office of the Dean R&D will remain sustainable, provided that the college continues to support and nurture research in future. As we look forward to the coming year, I am confident that the momentum generated will continue to propel the College towards greater heights of research excellence.

Dr. P Wilson
Principal & Secretary
Madras Christian College

Dr. Tabitha Durai
Dean - Research & Development



It is with great pride that I present the Annual Report of the Deanery of Research and Development (R&D) for 2023-2024. This year has been one of remarkable progress and innovation, and this report serves as a testament to the progress, dedication and hard work of our team.

As you turn the pages, you will encounter a diverse range of programmes highlighting our ongoing commitment to developing a sustainable ecosystem for research on campus. The success stories detailed within these pages represent the culmination of hours of hard work, intellectual curiosity and a collaborative spirit. We have made significant strides in reducing publications in predatory and cloned journals and have gradually increased in the number of Scopus publications. This reflects on our commitment to research integrity and the pursuit of high quality scholarship in the campus. The Annual Conclave on “Designing Service Learning Programmes” brought together faculty from across departments promoting interdisciplinary collaborations.

Looking ahead, we are actively pursuing new avenues of research, designing new initiatives from the Deanery and the expansion of research facilities. The Deanery remains committed to providing faculty and research scholars the necessary resources and an environment that encourages interdisciplinary exploration and collaboration.

I would like to thank the Principal, Dr. P Wilson for his guidance and continued support towards the initiatives and activities of the Office of Research & Development.

Dr. Tabitha Durai
Dean - Research & Development



Dr. P Hanumantha Rao
Associate Dean - R&D (Sciences)

I have had a great privilege of being a part of the Deanery – Research and Development during the academic year 2023-24. During the year, the Deanery has strived hard to work towards enhancing the research ecosystem in the college in line with the institutional objectives.

The agenda included capacity building programmes among the faculty and research scholars, collaborative efforts with other institutions, policy drafting, and incentivisation schemes. All the agendas of the Deanery were outcome based, and I had an opportunity to contribute and learn during the process. The Deanery had worked on drafting of the IPR Policy and the Policy for Research, in which I had a chance to play a part in writing and reviewing the drafts. With respect to the IPR generation, the college filed five patents during the period, and it was highly satisfactory to have coordinated the process.

It was a great experience to be in the team, which conducted the first Research and Publications Ethics course for research scholars during 2023. Coordinating the seed money grant proposal screening and through the entire process of the six projects was a great experience by itself. I also have had a part to work during the organisation of various programmes organised by the Deanery. Overall, it was a wonderful time for me with a wonderful team with ample of opportunities to peer-learn during the course of various activities.

I thank the college for having given me this opportunity, and I wish the entire college community to have a fruitful research year.

Dr. P Hanumantha Rao
Associate Dean (Sciences) - Research & Development

Dr. Marilyn Gracey Augustine Associate Dean - R&D (Humanities)



It is with great pleasure and feeling of accomplishment I am writing this foreword. As we reflect upon the journey of the past year, I am to acknowledge God's abundance grace in every activity that was organized by the Deanery, Research and Development, MCC.

In 2023-24, the Deanery demonstrated its commitment towards creating an inter-disciplinary approach towards research. A series of strategic initiatives were undertaken to create value and achieve its mission. The pinnacle was the publication of 17 books, themed around the Sustainable Development Goals of the UNO. Faculty, Research scholars, students and subject experts both from college as well as from other institutions contributed articles to these books. The editors and authors were from various departments resulting in an interdisciplinary analytical approach towards the SDGs goals. This initiative was the hallmark of the Deanery's activities for the year 2023-24. This report provides a comprehensive insight into our programmes, achievements, and contributions towards research activities on campus which has expanded and refined in quality. Deanery's initiatives in organizing a three-day spread workshop on Service Learning Programme is yet another milestone activity.

I am deeply grateful to our Principal and the team members, whose hard work and dedication have been instrumental in achieving the goals. Also thankful to the support extended by every member of the college towards the deanery. Looking ahead, I wish the Deanery, Research and Development all the very best for another exciting year ahead.

May the Vision and the Mission of the institution continue to shine and may the Deanery, Research and Development play a vital role in it. In Hoc Signo.

Dr Marilyn Gracey Augustine
Associate Dean (Humanities) - Research & Development



Dr. R Vijay Solomon

MCC Research Colloquium Coordinator

The Madras Christian College Research Colloquium (MCCRC) played a pivotal role in advancing research capabilities throughout the 2023-2024 academic year. Through a combination of online discussions, targeted workshops, and strategic outreach programmes, MCCRC significantly contributed to the development of research skills and knowledge.

Online Engagement & Impact:

During the academic year, MCCRC organized 30 online discussions, featuring 34 expert resource persons. These discussions addressed a wide array of critical research topics, including the application of AI tools in research, effective manuscript writing and publishing strategies, journal selection processes, the cultivation of an innovation culture and R&D ecosystems, intellectual property rights, the role of data science in research, manuscript polishing techniques, plagiarism awareness, service-learning programmes, book and film reviews, book publication drives, interdisciplinary perspectives on specific topics like mushrooms, infographic creation, e-content development, multimodal blogging, and research visibility. A total of 1696 participants actively engaged in these discussions, contributing over 1900+ man-hours of collaborative learning and knowledge exchange.

Faculty Development Programmes (FDPs):

In collaboration with AIACHE, MCCRC conducted a five-day national online Faculty Development Programme titled "The Nuances of Scientific Writing and Publishing" from October 10th to 14th, 2023. This programme attracted 210 participants from over 90 institutions across the country, fostering a truly national learning environment. The FDP featured five technical sessions, alongside inaugural and valedictory programmes. Key sessions included journal selection by Dr. R Vijay Solomon, which highlighted the importance of avoiding predatory journals; theoretical and conceptual frameworks using service learning as an example, presented by Dr. P Wilson; research design, plagiarism, and research questions discussed by Dr. B Chinna Muthu; research methods, questionnaire preparation, and data collection by Dr. V Muthukumar; and journal website navigation by Dr. Vasupradha. Participant feedback underscored the impactful and eye-opening nature of these sessions.

MCCRC also organized a 10-day online FDP on "The Art of Research and Publishing in Indexed Journals" from May 13th to 22nd, 2024. This programme witnessed an overwhelming response, with over 270 registrations and 190-210 regular participants representing 61 institutions nationwide. The FDP covered topics such as databases and research metrics by Dr. P Hanumantha Rao, predatory and cloned journals by Dr. R Vijay Solomon, plagiarism by Dr. B Chinna Muthu, AI tools by Dr. J Shiny Priyadharshini, reference managers by Dr. N Nirmal Thyagu, manuscript writing by Dr. Feminna Sheeba and Dr. Tabitha Durai, book writing and research indices by the IQAC team, and journal submission by Dr. U Senthilkumar. Each session was complemented by hands-on assignments, and participants received graded certificates (A, A+, A++) based on their performance.

Outreach Programmes:

MCCRC extended its expertise through several outreach programmes. In collaboration with INCHE, a three-day faculty development programme was conducted at CSI College of Engineering, Nilgiris, from September 28th to 30th, 2023, engaging 45 faculty members. This programme focused on theoretical frameworks, research ethics, and journal publication strategies. Additionally, a two-phase workshop on Research Methodology and Manuscript Writing, held in November 2023 and March 2024, provided comprehensive training on research design, selection methods, publication processes, and effective writing for top journals.

MCCRC, in partnership with Pune Knowledge Cluster and BASF Chemicals India Pvt. Ltd., organized a mentorship programme for WEnyan Scholarship winners (women in STEM) from Maharashtra during November and December 2023. This programme, led by Dr. R Vijay Solomon and Dr. N Nirmal Thyagu, involved three phases of mentorship, focusing on research proposal drafting and refinement. The programme successfully empowered 28 students with the skills and insights necessary to create high-quality research proposals.

The Madras Christian College Research Colloquium's activities during the 2023-2024 academic year demonstrated a robust commitment to research excellence. Through a blend of informative online discussions, impactful faculty development programmes, and strategic outreach initiatives, MCCRC has effectively equipped a diverse audience with essential research skills and knowledge. By addressing critical topics like journal selection, manuscript writing, and ethical research practices, and by extending its expertise to institutions across the nation and beyond, the MCCRC has significantly contributed to the advancement of research capacity, leaving a lasting impact on academic and professional development.

Dr. R Vijay Solomon
MCC Research Colloquium Coordinator

IMPACT ASSESSMENT OF INITIATIVES

A brief impact assessment of the various intervention strategies adopted by the College through the Deanery of Research & Development

Interventions	Initiatives	Impact
Capacity Building - MCC Research Colloquium	<ul style="list-style-type: none"> Workshops on Research Methodology, Scientific Publishing 	<ul style="list-style-type: none"> Publications in Indexed Journals Reached 1000 faculty across India Mentorship & Support
Interdisciplinary Culture of Research	<ul style="list-style-type: none"> Interdisciplinary Conference Cross Functional Team of Resource Persons 	<ul style="list-style-type: none"> Increased Awareness & Interest Collaborations in research projects Shift in Institutional Research Culture
Incentivisation	<ul style="list-style-type: none"> Cash Incentives MCC Alumni Awards 	<ul style="list-style-type: none"> Increased Publication Output Enhanced Research Quality
Financial Support & Grants	<ul style="list-style-type: none"> Seed Money Grant Cash Incentives MCC Alumni Awards 	<ul style="list-style-type: none"> Research Activity & Dissemination Promotes Collaboration Identify areas for major projects
Infrastructure	<ul style="list-style-type: none"> Research Scholars Chamber Equipment Internet Connectivity Upgraded Laboratories 	<ul style="list-style-type: none"> Dedicated Meeting Spaces Availability of lab equipment Access to Online Resources

228

RESEARCH SCHOLARS

72

RESEARCH SUPERVISORS

19

RESEARCH DEPARTMENTS

Rs. 28,48,125

RESEARCH FUNDING SANCTIONED

Rs. 6 Lakhs

SEED MONEY GRANT

5

PATENTS

124

INDEXED PUBLICATIONS IN 2024

1000 +

FACULTY TRAINED ACROSS INDIA

Strategic Growth and Impact At Madras Christian College

Madras Christian College is committed to offer a conducive research environment and actively encourages faculty members to conduct quality research and publish their work in reputed international journals. At the onset of the COVID-19 pandemic in 2020, Dr. P Wilson assumed office and recognized the critical need to raise awareness about predatory and cloned journals within our academic community.

This realization led to the organic formation of the MCC Research Colloquium through a series of informal online discussions focused on the art of scholarly publishing and scientific writing. The initiative has significantly enhanced our research output, increasing the number of publications in Scopus and Web of Science-indexed journals. Moreover, the MCC Research Colloquium has played a vital role in maintaining publication quality, guiding faculty, research scholars, and students to avoid substandard journals. As a result, there has been a notable decline in predatory publications, enabling MCC to consistently achieve over 100 publications annually for the fourth consecutive year since 2021 (Figure 1).

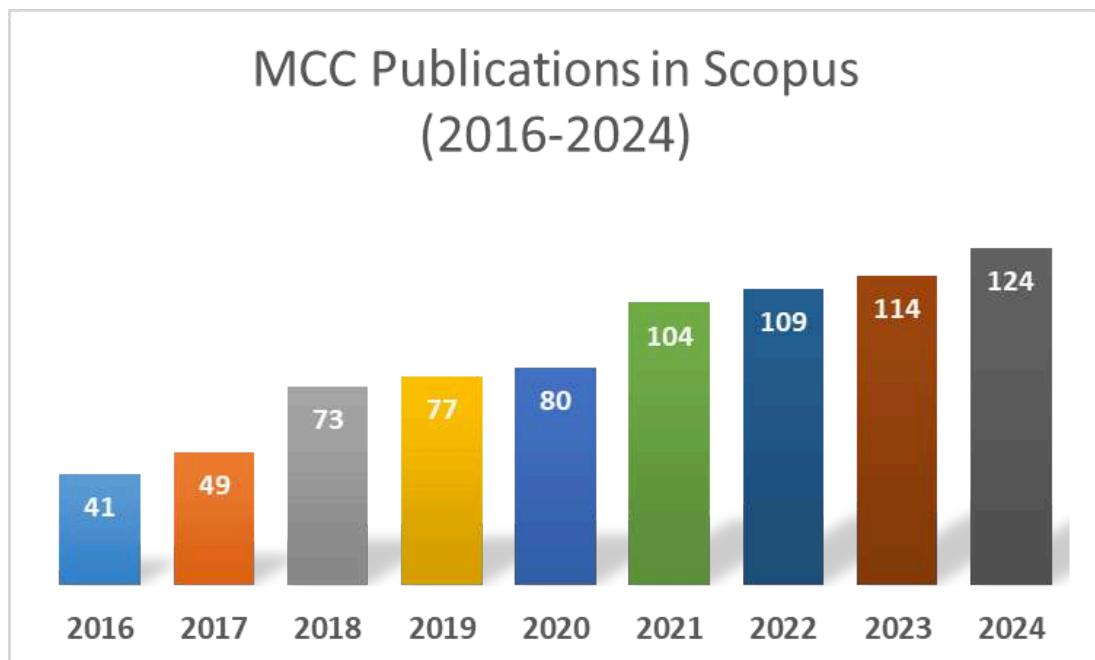


Figure 1. Number of research publications in Scopus indexed journals since 2016

This progress has significantly increased our score in the Research component of the National Institutional Ranking Framework (NIRF) since 2016. Notably, MCC's score in Research and Professional Practice—which accounts for 15% of the overall ranking—rose from a modest 26.2 out of 100 in 2017 to an impressive 70.5 in 2024. As a result, MCC has emerged as one of the top five colleges in India for research, recognized for its high-quality publications in Web of Science and Scopus as per NIRF 2024. This achievement is a testament to the dedicated efforts of the MCCRC team, whose extensive capacity-building programmes, FDPs, and workshops have empowered our academic community to reach new heights in research excellence.

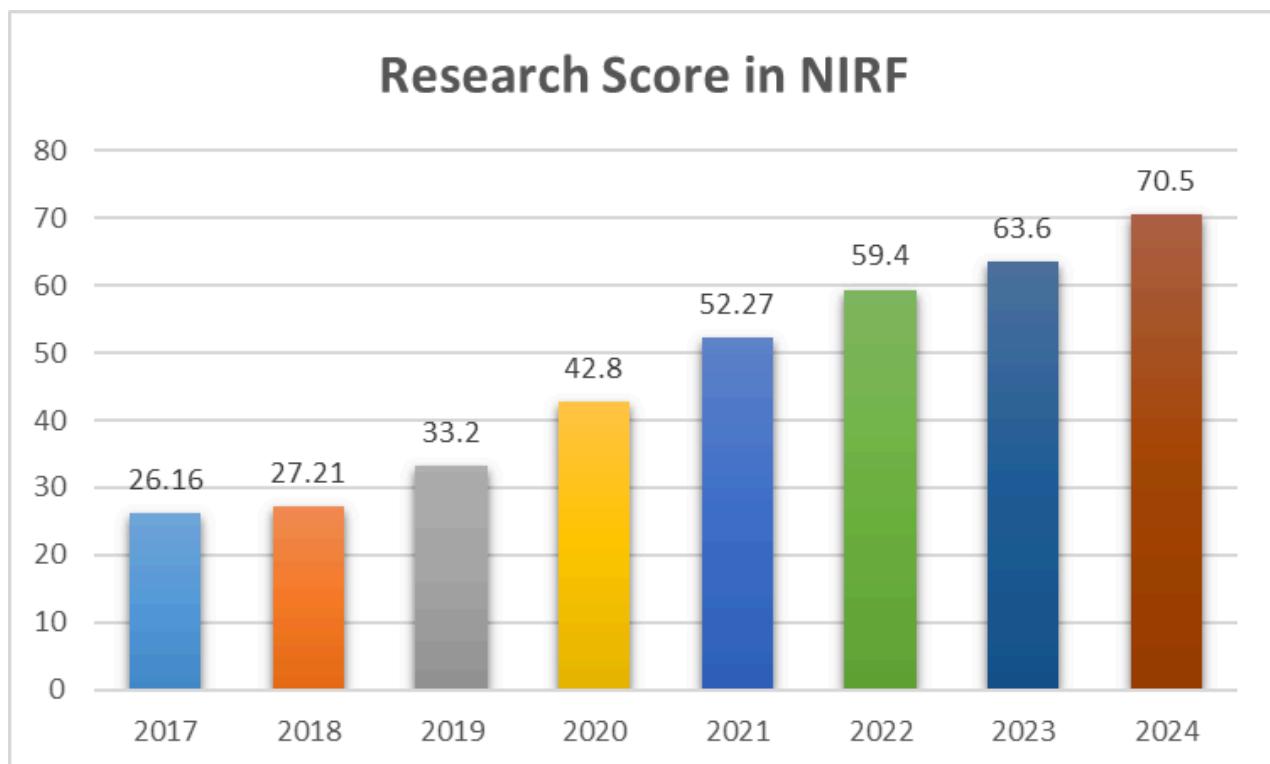


Figure 2. Research and professional practice score in NIRF since 2017

In 2021, the Deanery R&D introduced the MCC Seed Money Grant to encourage faculty members to undertake mini projects that are socially relevant, scientifically challenging, and exploratory, including pilot studies and prototype development. These projects initially received a grant of Rs. Forty Thousand and was then increased to Rs. One Lakh with a project period of nine months.

A total of Rs. 23.4 lakh was allocated, facilitating 42 distinct projects and directly benefiting 59 faculty members spanning diverse academic departments, as illustrated in Figure 3. This financial support served as a catalyst, empowering faculty members to conduct crucial preliminary studies, refine their research proposals, and subsequently pursue larger, more comprehensive research grants from external funding agencies, thereby enhancing the institution's overall research output and impact.

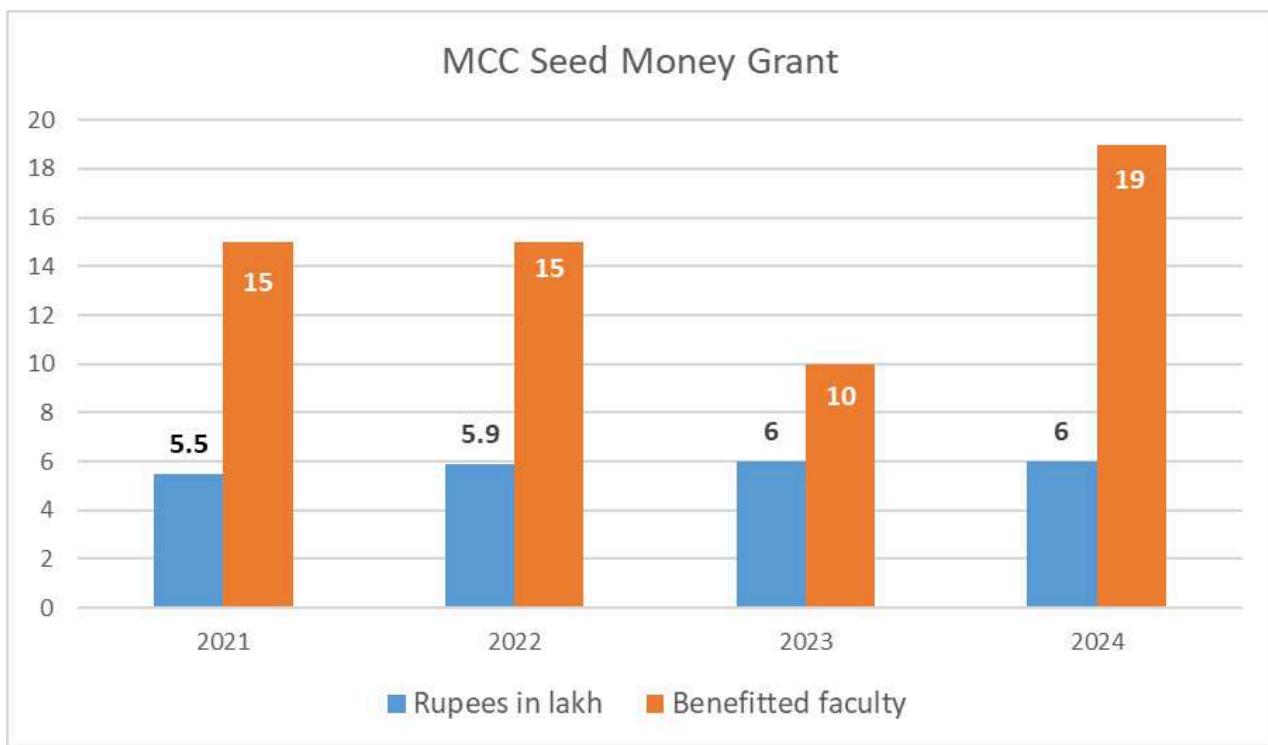
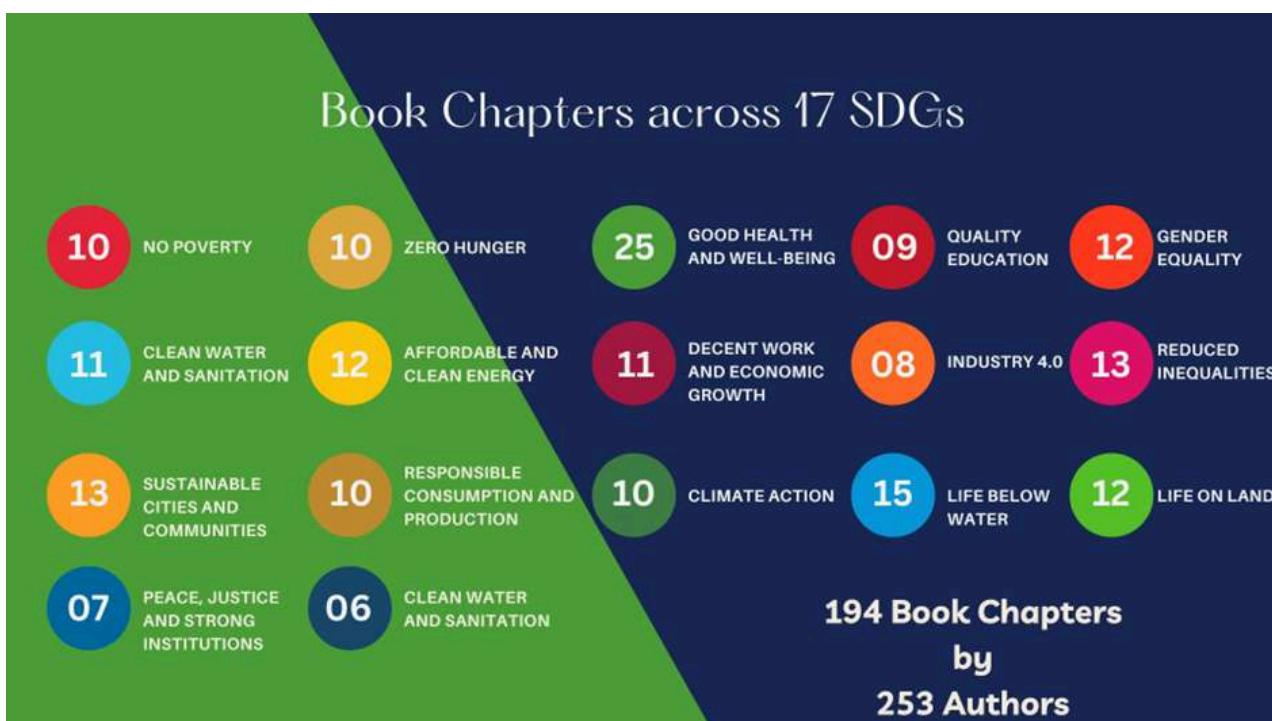


Figure 3. MCC Seed Money Grant since 2021 – Amount disbursed and Number of faculty members benefitted.

To strengthen research integrity, the Research and Publication Ethics course was introduced for research scholars. This two-week, in-person programme covers the UGC-prescribed 2-credit course and is designed for newly enrolled research scholars. Faculty members conduct sessions on key topics such as the philosophy and ethics of research, plagiarism, research conduct and misconduct, journal selection, hypothesis formulation, thesis writing, data collection, and ethical guidelines for publishing. The course incorporates interactive sessions, case studies, group discussions, and a model exam. Certificates are awarded upon successful completion, and to date, over 90 research scholars have completed the course.

MCC Research Colloquium (MCCRC) has extended its expertise to capacity-building programmes for other institutions upon invitation. In 2023-2024, the MCCRC team conducted an outreach programme at Maris Stella College, Vijayawada, benefiting around 80 faculty members. Additionally, outreach programmes were organized for INCHI at Kethi, Ooty, and the Maritime University, with a Phase I online session followed by an in-person Phase II session in Chennai conducted by the Deanery R&D. A significant collaboration was also established with the Pune Knowledge Cluster, Maharashtra, wherein MCC's Deanery R&D jointly organized a Mentorship Programme for WEyan Scholarship Winners 2023-2024 from November to December 2023. Furthermore, MCCRC partnered with the All India Association for Christian Higher Education (AIACHE) to train over 1,000 faculty members through online Faculty Development Programmes (FDPs) and successfully raised funds for AIACHE.

In 2023-2024, the Deanery R&D launched a major initiative aligned with the United Nations' Sustainable Development Goals (SDGs) under the theme "MCC for SDG". A book publishing drive was undertaken, resulting in the publication of 17 books - one for each SDG. A total of 194 chapters were contributed by 253 faculty members and research scholars from MCC and Colleges from the state and India. These books were published through Notion Press and are available on E-Commerce websites. Preparatory workshops were conducted for editors and authors, providing them with a standardized template. The entire process, including expenses, was covered by the Deanery R&D. This initiative provided faculty members with a platform to begin their publishing journey, instilling confidence to pursue high-impact journal publications and book chapters with reputed international publishers.



To foster interdisciplinary research, an Interdisciplinary Conclave on a “Century of Health: From Discovery to Policy” was organized in March 2023, encouraging faculty, research scholars, and students to explore cross-disciplinary collaborations. In March 2024, a consultation meeting on Service-Learning was conducted by the Deanery to explore its implementation within MCC. This workshop enabled participants to draft proposals for service-learning programmes tailored to their respective departments.

To further motivate faculty, research scholars, and students to publish in UGC-CARE, Scopus, and Web of Science-indexed journals, cash incentives have been awarded since 2021, along with certificates of appreciation. So far, Rs. 2.44 lakh has been disbursed, with Rs. 2.2 lakh allocated in 2023-2024 (Figure 4). Additionally, department-wise research publications are regularly featured in the college newsletter as a token of appreciation. The Deanery R&D also supports faculty members presenting their research at conferences by covering registration fees, benefiting numerous faculty members.

More importantly, faculty members who make outstanding research contributions through publications in indexed journals are recognized annually at the convocation through the Alumni Publication Awards. Each year, three awards that include cash prize and citation are presented for both Science and Arts disciplines.

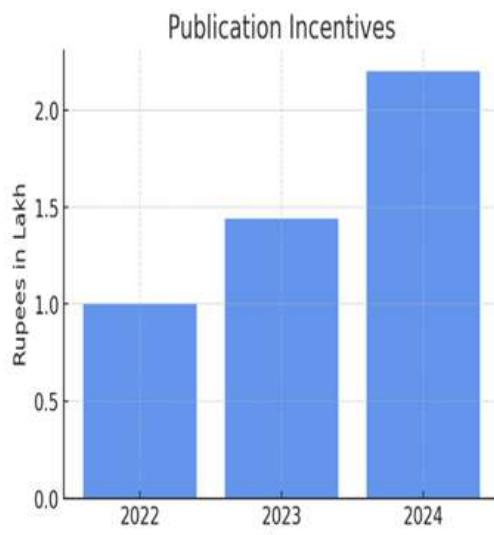


Figure 4: Cash Incentives for publications

Madras Christian College has been nurturing research and innovations, and in particular creating a patenting ecosystem. Various awareness programmes are being organized on patenting since 2020. The IPR Cell of the college was created in 2022 with an objective to create awareness on patenting and other IPs. Twelve patents were filed during 2022, and five in 2024. The filed patents were in the field of mathematics, chemistry and biotechnology, as well as utility patents. The IPR cell also encourages commercialization and technology transfer of the filed patents. End-to-end support is provided by the IPR Cell through complete funding of patent filing until grant and subsequent renewal.

The remarkable progress in MCC's research ecosystem is a testament to the institution's unwavering commitment to academic excellence, innovation, and ethical scholarship. Through strategic initiatives such as the MCC Seed Money Grant, Research and Publication Ethics course, Incentivization, Interdisciplinary Conclaves, Faculty Development Programmes, and International Collaborations, MCC has created a robust research culture that empowers faculty and scholars to pursue impactful research. The sustained efforts of the Deanery of Research and Development along with the MCC Research Colloquium, coupled with institutional support for quality publications, outreach programmes, and capacity-building initiatives, have significantly enhanced research visibility and credibility. With a steadfast focus on sustainable development, interdisciplinary collaboration, and scholarly integrity, MCC continues to set new benchmarks in research and education. Moving forward, these collective efforts will further strengthen MCC's standing as a premier institution, inspiring future generations to lead, innovate, and contribute meaningfully to the global research community.

Release of Annual Report 2022 - 2023



Release of Annual Report 2022 - 2023



The Deanery of Research and Development (R&D) at Madras Christian College marked a significant milestone with the unveiling of a first of its kind annual report for the 2022-23 academic year, a document that meticulously details the institution's robust research endeavors and advancements. Dr. P Wilson, Principal & Secretary, formally released the comprehensive report on 3rd April 2024 at the Founders Day Celebrations at MCC. Dr. Tabitha Durai, Dean (R&D), received the first copy, acknowledging the collective dedication and collaborative spirit that fuelled the year's achievements and propelled scholarly excellence. The event served as a testament to the college's unwavering commitment to expanding the frontiers of knowledge, promoting a culture of intellectual curiosity, and making meaningful contributions to the wider academic landscape through its diverse and impactful research initiatives.

STAKEHOLDER ENGAGEMENT

Stakeholder Engagement

Open House for Research Scholars

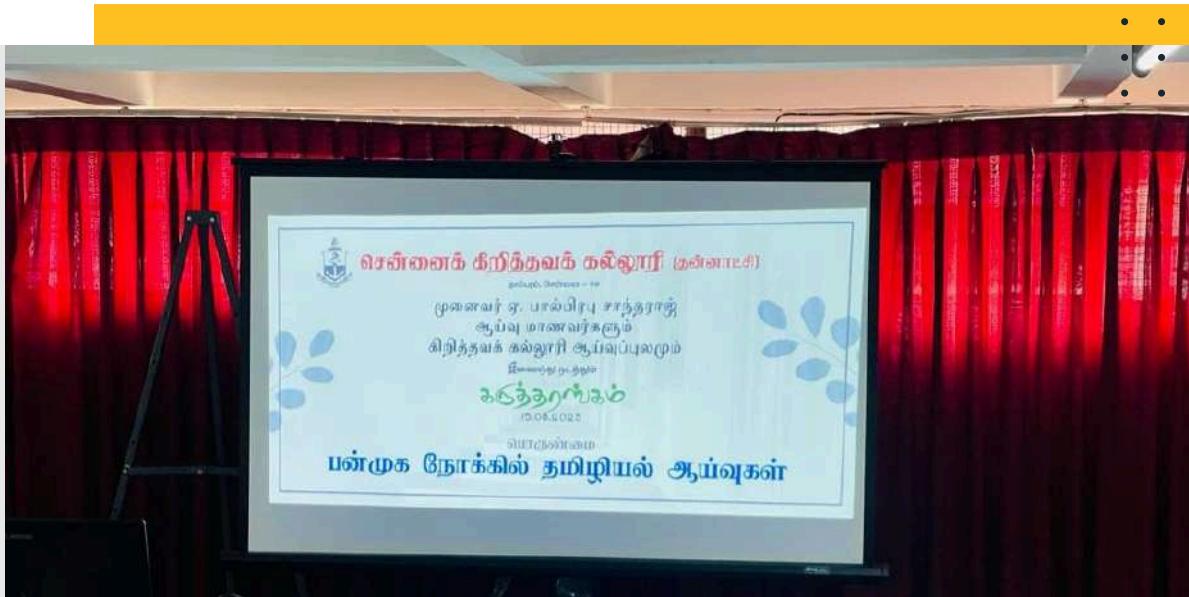


The "Open House for Research Scholars," organized by the Deanery of Research and Development at Madras Christian College, took place on Thursday, July 20, 2023, in S120 - Seminar Hall. The primary objective of this event was to provide a valuable platform for research scholars, both part-time and full-time, to engage in meaningful interactions with the Principal. Scholars were able to share their concerns and requirements for facilities to be provided. Rules and procedures pertaining to the University of Madras and Madras Christian College were shared to ensure that the research scholars were informed.



Stakeholder Engagement

Research Scholars Meet - Department of Tamil



A one-day seminar for scholars of the Phd Programme of the Department of Tamil was organized by Dr. Y Paul Prabu Santharaj along with the Deanery on August 15, 2023. The seminar, titled "Tamil Studies in Diversity," aimed to explore various dimensions of Tamil culture and literature. The keynote address was delivered by Dr. Gnanachandra Johnson, former Head of the Department of Tamil. A congratulatory audio-visual presentation from the Principal, Dr. P Wilson, was also screened. Subsequent sessions featured presentations by scholars. Dr. Y Paul Prabhu Santharaj delivered the closing speech, marking the end of an enriching exploration into the diverse dimensions of Tamil studies.



Stakeholder Engagement

Coffee with Principal - Research Supervisors



The Coffee with Principal for Research Supervisors was held on 29 January, 2024 in the Council Room. About 49 research supervisors of the research departments in MCC attended. Dr Tabitha Durai, Dean R&D, made a presentation about norms of the PhD Programme as specified by the University of Madras and Madras Christian College. A Google Form was circulated to curate the difficulties faced by the research supervisors. The issues mentioned were clarified and addressed. This was followed by interactions with the Principal.





CAPACITY BUILDING FOR FACULTY & RESEARCH SCHOLARS

Certificate Course

Research and Publication Ethics Course



The Deanery, Research and Development conducted the Research and Publication Ethics Course for Ph.D. scholars from 20 July to 3 August 2023, as mandated by the UGC and University of Madras. Of the 55 registered scholars, 38 attended regularly, passed the assessments, and received completion certificates. Fifteen faculty members from MCC contributed their expertise, making it an enriching experience for the participants. The culmination of this valuable learning experience was marked by a Valedictory Programme on September 26th, 2023, held at the International Guest House. This ceremony, graced by Dr. P Wilson and Chief Guest Dr. D Gnanaraj Thomas, celebrated the scholars' achievements with the formal distribution of their well-earned certificates.



Faculty Development Programme

Nuances of Scientific Writing and Publishing in Collaboration with INCHE

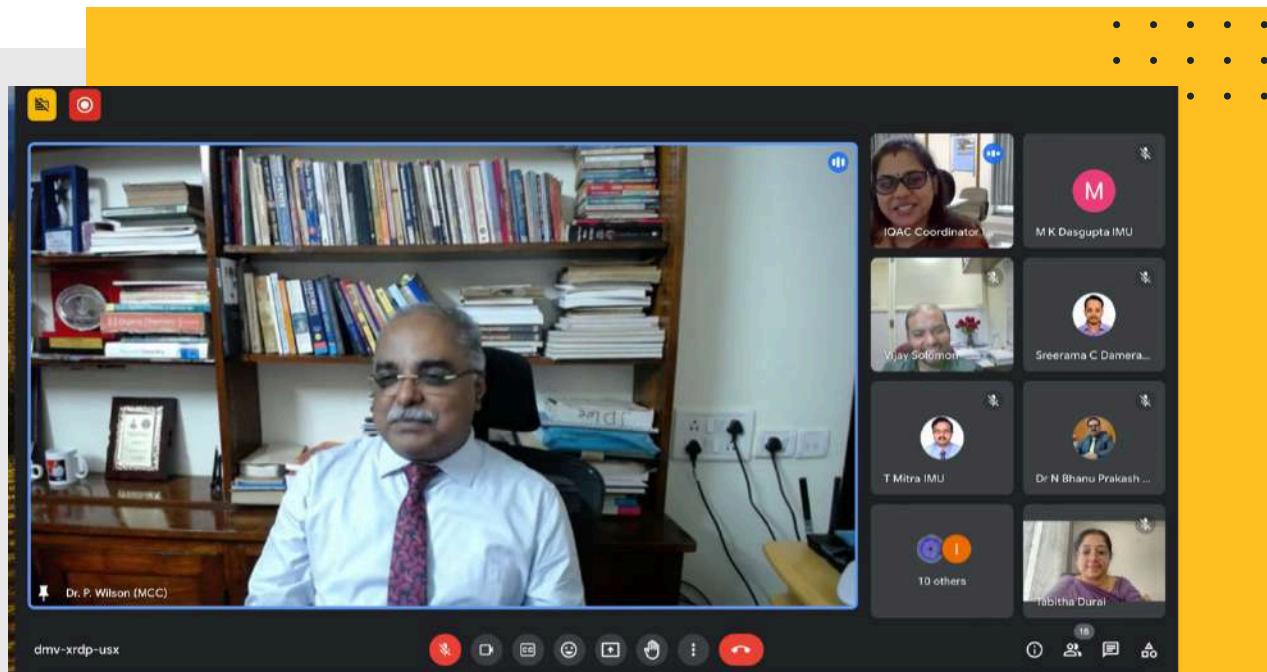


The International Network for Christian Higher Education (INCHE) and MCC organized a three-day faculty development programme on scientific writing and publication at CSI College of Engineering, Ketti, Nilgiris, from September 28-30, 2023. About 45 faculty from CSI Colleges in Tamil Nadu attended this FDP. Topics covered included theoretical frameworks, research ethics, types of research papers, literature review, research gaps, data analysis, research metrics, and journal publications. Resource persons included Dr. P Wilson, Dr. Feminna Sheeba, Dr. Tabitha Durai, Dr. R Vijay Solomon, Dr. A Jabarali, and Dr. U Senthilkumar. This programme significantly enhanced the participants' scientific writing and publication skills, contributing to knowledge advancement and improved student learning.

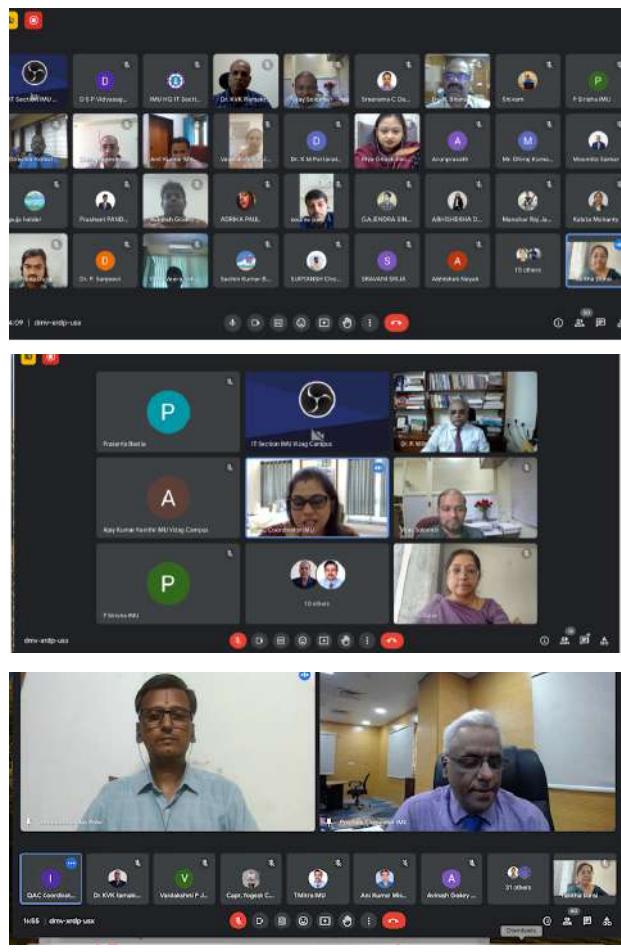


Faculty Development Programme

Indian Maritime University - Phase I



Madras Christian College (MCC) hosted a two-day workshop on Research Methodology and Manuscript Writing on November 6-7, 2023, designed to equip participants with essential skills in research and academic writing. The workshop commenced with Dr. P Wilson providing an understanding of research design types and selection methods, followed by Dr. R Vijay Solomon's comprehensive overview of diverse research types and appropriate publication formats. The second day focused on the practical aspects of publication, detailing the intricacies of the publication process by Dr. P Hanumantha Rao. Dr. Tabitha Durai concluded the workshop with an insightful session on crafting clear, concise, and well-structured research papers, emphasizing the importance of effective communication in scholarly writing.



Workshop

Mentorship Programme for WEnyan Scholarship Members



BASF collaborates with Pune Knowledge Cluster
(an initiative facilitated by the office of the Principal Scientific Advisor to the Government of India) for
WEnyan : a research scholarship program driven by women for women





The WEnyan Scholarship and Mentorship Programme for Women in STEM Education & Careers, sponsored by BASF Chemicals India Pvt. Ltd and executed by Pune Knowledge Cluster, guided 28 students at the Bachelors, Masters, and PhD levels through mentoring from Dr. R Vijay Solomon and Dr. N Nirmal Thyagu from Madras Christian College.

The mentoring process spanned three phases: Phase I on November 8-9 focused on drafting research proposals via Zoom; Phase II on November 29-30 involved one-on-one feedback sessions; and Phase III in December aimed to finalize proposals. This programme empowered students with essential skills for creating effective research proposals.

Misconceptions

pubs.acs.org/jchemeduc

Are Heating and Stirring Required to Dissolve Salt in Water? Answers from Quantitative Experimental Evidence

Perla Valdez and K. Christopher Smith[®]

 Cite This: *J. Chem. Educ.* 2020, 97, 3624–3629

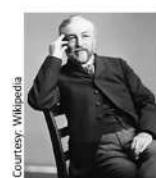
 Read Online

CONCLUSIONS

The data and results reported here quantitatively demonstrate that sodium chloride dissolves in water without heating or stirring.



"Why?" Matters



Courtesy: Wikipedia
Samuel Pierpont Langley

American aviation pioneer, astronomer, physicist, and professor at Univ. of Pittsburgh



Courtesy: <https://greenlightrights.com/icon/the-wright-brothers/>

Workshop

Research Integrity and Journal Publication - SDNB College



The 5-Day Workshop on Research Integrity and Journal Publication was organised by SDNB College for Women from 8th - 12th January 2024. Dr. U Senthilkumar introduced research fundamentals, databases, and metrics; Dr. N Nirmal Thyagu emphasized effective literature searches; Dr. Tabitha Durai provided guidance on scientific writing and manuscript structure (IMRaD); Dr. R Vijay Solomon discussed journal selection and identifying predatory journals; and Dr. P Hanumantha Rao demonstrated journal finders and the peer review process, focusing on selecting appropriate journals for publication. The workshop ended with the Valedictory Address by Dr. P Wilson.



Workshop

Preparatory Workshop on Book Publication Drive



A preparatory workshop for editors of the book publication drive was held at Madras Christian College on February 7, 2024, with over 35 faculty members attending. Dr. Tabitha Durai, Dean of Research and Development, led discussions on the publishing process, emphasizing the significance of the forthcoming publications on the seventeen SDG themes. The meeting included a presentation on publishing protocols and an engaging open discussion, reflecting the collective enthusiasm for the initiative.



Workshop

SPSS for Research Scholars



A workshop on SPSS, held from February 12th to 16th, 2024, at MCC's Gift Siromoney Computing Laboratory, provided invaluable statistical analysis training for research scholars. It covered data entry, transformation, chi-square tests, t-tests, ANOVA, correlation, regression analysis, and advanced techniques like cluster and factor analysis using SPSS. Interactive sessions and hands-on exercises fostered equipped participants with essential skills for rigorous data analysis in their research. Faculty from the Department of Statistics served as resource persons for the sessions.



Endowment Lecture

Mangalore Vasant Kini Endowment Lecture



Madras Christian College's Deanery of Research and Development organized the first Mangalore Vasant Kini Endowment Lecture on Interdisciplinary Service-Learning Programmes on March 4th, 2024. Held at the Chemistry Seminar Hall, the lecture aimed to foster departmental collaboration for service-learning programmes. Dr. Brian MacHarg from Appalachian State University highlighted the importance of these programmes for societal engagement and academic growth. Faculty members who were part of the Service learning programme in their respective departments were present.



Faculty Development Programme Indian Maritime University - Phase II



Madras Christian College, Deanery – Research & Development, and MCC Research Colloquium hosted the Phase II In-Person workshop titled "Research Article Writing and Publishing" at the Indian Maritime University on March 21-22, 2024.

This event aimed to equip researchers with essential skills for crafting high-quality research articles. Day 1 featured Dr. R Vijay Solomon's sessions on Introduction to Journals and a hands-on workshop. Dr. N Nirmal Thyagu discussed Types of Research, and Principal Dr. P Wilson spoke on research design. On Day 2, Dr. Feminna Sheeba led a session on Literature Review and Research Gap, followed by Dr. Tabitha Durai's guidance on Manuscript Writing. Participants learned about research article formats, literature review strategies, and manuscript writing, empowering them to target top journals effectively.

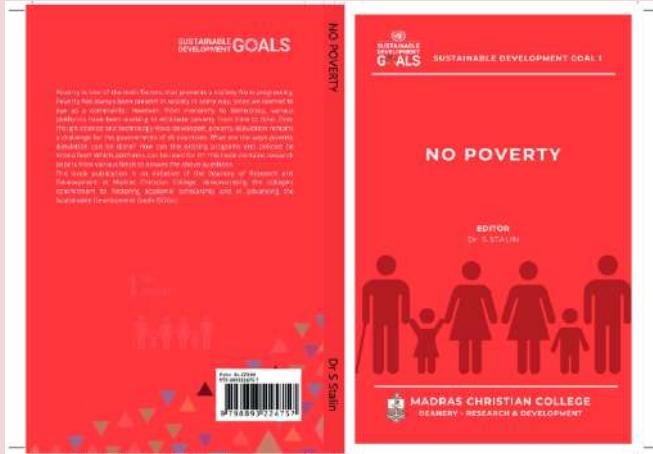


BOOK PUBLICATION DRIVE 2024



NO POVERTY

Poverty Alleviation from a Multisectoral Perspective



Persistent poverty remains a hurdle to societal progress, despite scientific and technological progress

[Flipkart](#)  [amazon](#)  [notionpress.com](#) 

"No Poverty" is a Sustainable Development Goal focused on eradicating poverty in all its forms worldwide. It addresses poverty as a multifaceted issue involving income deprivation and lack of access to essential resources, services, and opportunities for well-being. The goal emphasizes effective social protection systems, equal access to resources, and economic empowerment for vulnerable populations. Dr. Stalin S, the editor of this publication, explores the complexities of poverty eradication and the need for collaborative efforts across sectors to meet SDG 1 comprehensively. Even though science and technology have developed, poverty alleviation remains a challenge for the governments of all countries. Poverty has always been present in society in some way, since we learned to live as a community. However, from monarchy to democracy, various platforms have been working to eliminate poverty from time to



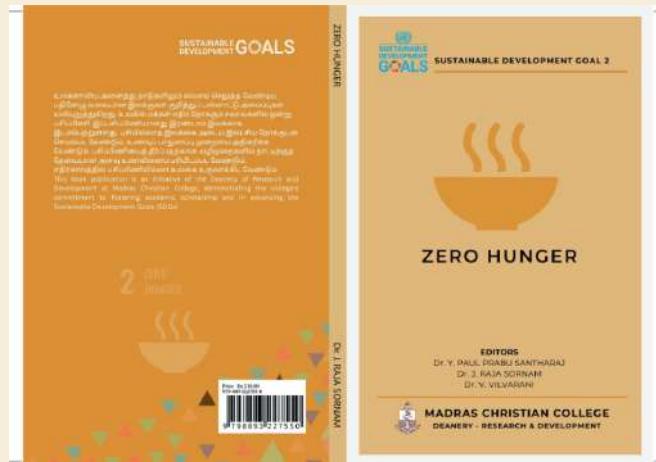
time. What are the ways poverty alleviation can be done? How can the existing programmes and policies be intensified? Which platforms can be used for it? This book contains research papers from various fields to answer the above questions.

10 Book Chapters

14 Authors

ZERO HUNGER

பசிப்பினையில்லா உலகம்



Highlighting hunger as a key challenge, this book explores food security and access through research papers to contribute to a hunger-free world by 2030



"Zero Hunger" is a Sustainable Development Goal focused on eradicating hunger and achieving food security for all. Achieving this goal involves ensuring everyone has access to sufficient, safe, and nutritious food by promoting sustainable agriculture, investing in rural development, and improving food distribution systems. Edited by Dr. Y Paul Prabu Santharaj, Dr. J Raja Sornam, and Dr. V Vilvarani, this publication explores innovative approaches for achieving Zero Hunger globally, emphasizing the need for interdisciplinary collaboration and holistic strategies under SDG 2. A world without hunger emphasizes seventeen types of goals that all countries around the world should be focused on. One of the challenges faced by people in the world is hunger. The United Nations has set a goal to end hunger by 2030. This class has been included as a secondary target. To achieve the goal of not being hungry, you have to work with.



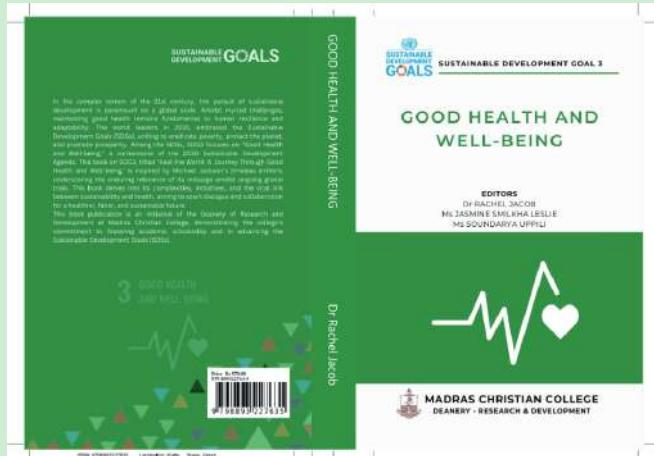
idealism. This book contains ten research papers on appetite. During the Sangam period, it elaborates on the concepts of physical health, eating habits, food security, and the problems faced by the countries of the world to create a world without hunger.

10 Book Chapters

12 Authors

GOOD HEALTH AND WELL-BEING

Heal the World



Focusing on sustainability and health is key to navigating the complex challenges of the 21st century, promoting a healthier, more equitable, and sustainable future

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"Good Health and Well-being" is a Sustainable Development Goal focused on ensuring universal access to healthcare and promoting overall well-being. SDG 3 aims for universal health coverage, access to essential medicines and vaccines, and reducing communicable and non-communicable diseases. Achieving this goal requires tackling health determinants like poverty, inequality, inadequate sanitation, and pollution. Edited by Dr. Rachel Jacob, Ms. Jasmine Smilkha Leslie, and Ms. Soundarya Uppili, this publication explores strategies to improve health outcomes globally, emphasizing preventive healthcare, health education, and equitable access to services. The world leaders in 2015, embraced the Sustainable Development Goals (SDGs), uniting to eradicate poverty, protect the planet, and promote prosperity. Among the SDGs, SDG 3 focuses on "Good Health and Well-being,



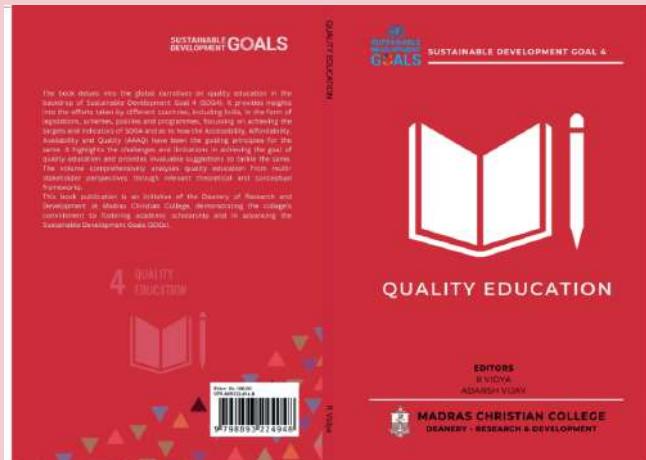
a cornerstone of the 2030 Sustainable Development Agenda. This book delves into its complexities, initiatives, and the vital link between sustainability and health, aiming to spark dialogue and collaboration for a healthier, fairer, and sustainable future.

25 Book Chapters

44 Authors

QUALITY EDUCATION

Mapping the Global Trajectories



Examining global efforts in India to achieve SDG4's AAAQ goals in education for sustainable development

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"Quality Education" is a Sustainable Development Goal that emphasizes ensuring inclusive and equitable education for all. It recognizes education as a fundamental human right and a key driver of sustainable development. Achieving this goal involves providing quality education, eliminating disparities, and promoting lifelong learning. Edited by R Vidya and Adarsh Vijay, this publication explores global education trends and strategies to enhance educational quality and accessibility, highlighting the importance of investing in education for individual empowerment and societal development. This book delves into the global narratives on quality education in the backdrop of Sustainable Development Goal 4 (SDG 4). It provides insights into the efforts made by different countries, including India, through legislation, schemes, policies, and programmes, focusing on achieving the targets and indicator of SDG 4.



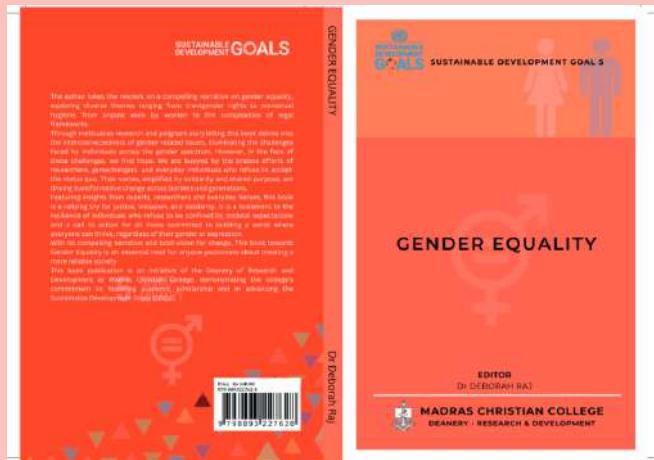
It also examines how the Accessibility, Affordability, Availability, and Quality (AAQ) have served as the guiding principles for these initiatives. The volume comprehensively analyses quality education through relevant theoretical and conceptual frameworks.

09 Book Chapters

10 Authors

GENDER EQUALITY

Empowering through Equality



Experts, researchers, and advocates champion gender equality and societal progress in this call to action for a just and inclusive world



"Empowering through Equality" addresses SDG 5 - Gender Equality, highlighting the need for gender parity and empowering women and girls worldwide. This goal aims to eliminate gender-based discrimination and promote equal rights and opportunities in all areas of life, recognizing gender equality as essential for sustainable development. Edited by Dr. Deborah Raj, this publication explores strategies for advancing gender equality and women's empowerment. The author takes the readers on a competing narrative on gender equality, exploring diverse themes ranging from transgender rights to menstrual hygiene, from unpaid work by women to the complexities of legal frameworks. Through meticulous research and poignant storytelling this book delves into the interconnectedness of gender related issues, illuminating the challenges faced by individuals across the gender spectrum. It is a testament to the resilience of individuals



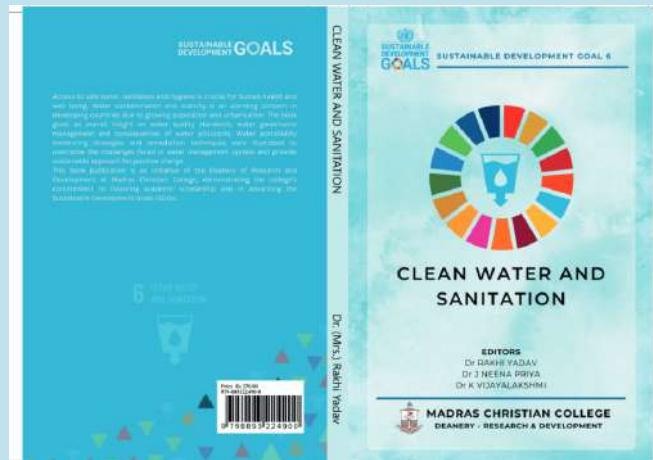
who refuse to be confined by societal expectations and a call to action for all those committed to building a world where everyone can thrive regardless of their gender or expression.

12 Book Chapters

24 Authors

CLEAN WATER AND SANITATION

Maximizing water resources for sustainable future: water quality standards, harvesting for improved accessibility



Analyzing water quality standards, governance, and pollution effects, the text proposes monitoring, remediation, and sustainable management strategies

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"Clean Water and Sanitation" emphasizes ensuring access to safe and affordable drinking water and sanitation for all. It highlights the importance of clean water and sanitation for health, poverty reduction, and sustainable development, focusing on sustainable management of resources, especially in underserved communities. Edited by Dr. (Mrs.) Rakhi Yadav, Dr. J Neena Priya, and Dr. K Vijayalakshmi, this publication addresses challenges like water scarcity, pollution, and inadequate sanitation, exploring innovative solutions and advocating for policies that recognize water and sanitation as fundamental human rights. Access to safe water, sanitation and hygiene is crucial for human health and well-being. Water contamination and scarcity is an alarming concern in developing countries due to growing population and urbanisation. The book gives an overall insight on water quality standards, water governance



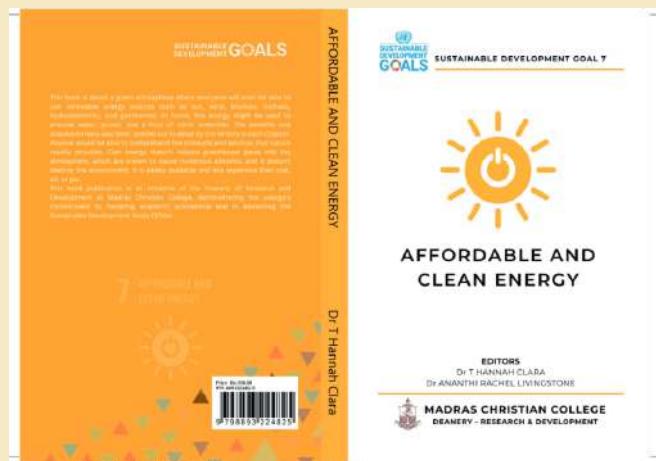
management and consequences of water pollutants. Water portability monitoring strategies and remediation techniques were illustrated to overcome the challenges faced in water management system and provide sustainable approach for positive change.

11 Book Chapters

31 Authors

AFFORDABLE AND CLEAN ENERGY

Green energy available as a renewable source



Promoting a sustainable future, this book explores solar, wind, biomass, and other renewables for household needs, including their advantages, disadvantages, and environmental effects



"Green Energy Available as a Renewable Source" addresses SDG 7 - Affordable and Clean Energy, highlighting the role of sustainable energy in economic development and climate change mitigation. This goal aims to provide affordable, reliable, and modern energy for all, emphasizing a shift to cleaner, renewable sources. Edited by Dr. Hannah Clara, Dr. Ananthi Rachel Livingstone, and Mr. Surya D, the publication explores strategies for advancing renewable energy technologies and promoting energy efficiency, aiming to accelerate the transition to a sustainable energy future and support environmental protection and socio-economic development. This book is about a green atmosphere where everyone will soon be able to use renewable energy sources such as sun, wind, biomass, biofuels, hydroelectricity, and geothermal. At home, this energy might be used to provide water, power, and a host of other



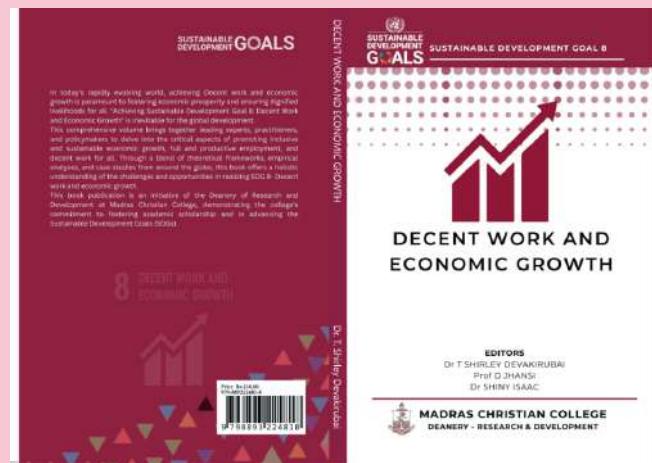
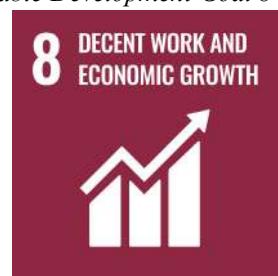
amenities. The benefits and drawbacks have also been spelled out in detail by the writers in each chapter. Anyone would be able to comprehend the products and services that nature readily provides.

12 Book Chapters

22 Authors

DECENT WORK AND ECONOMIC GROWTH

Provides actionable insights for policymakers, businesses, civil society, and international organizations to accelerate progress towards SDG 8



Insights explore achieving inclusive economic growth, employment, and decent work (SDG 8) for a holistic view of implementation



Decent Work and Economic Growth delves into strategies for promoting inclusive and sustainable economic growth, full and productive employment, and decent work for all. This goal recognizes the importance of creating opportunities for decent employment, entrepreneurship, and innovation, particularly for marginalized and vulnerable populations. Dr. T Shirley Devakirubai, Prof. D Jhansi, and Dr. Shiny Isaac, as the editors of this publication, bring their expertise to explore policies and initiatives aimed at fostering economic growth while ensuring social inclusion and environmental sustainability. In today's rapidly evolving world, achieving Decent work and economic growth is paramount to fostering economic prosperity and ensuring dignified livelihoods for all. "Achieving Sustainable Development Goal 8: Decent Work and Economic Growth" is inevitable for development.



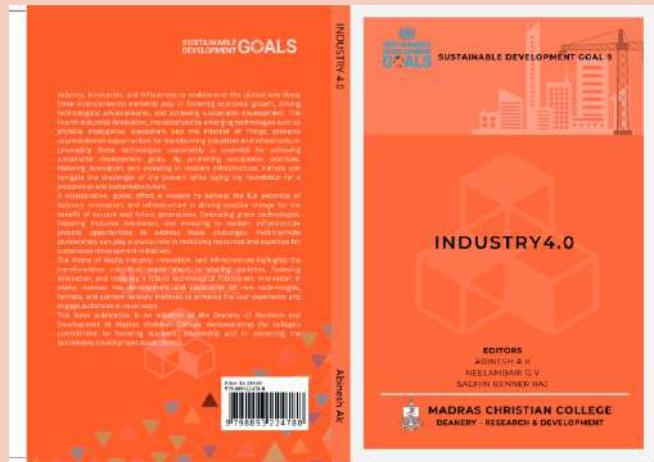
This comprehensive volume brings together leading experts, practitioners, and policymakers to delve into the critical aspects of promoting inclusive and sustainable economic growth.

11 Book Chapters

18 Authors

INDUSTRY 4.0

Navigating Technological Frontiers through Innovation



Industry, Innovation, and Infrastructure
drive growth, progress, and sustainability
New technologies (AI, blockchain, IoT)
hold promise, but responsible use is key
for achieving sustainable development
goals



"Navigating Technological Frontiers through Innovation" addresses SDG 9 - Industry, Innovation, and Infrastructure, emphasizing the role of innovation and infrastructure in economic growth and sustainable development. This goal focuses on building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation. Edited by Abinesh AK, G V Neelambari, and Sachin Benner Raj, the publication explores emerging technologies, innovation ecosystems, and infrastructure development strategies.

Their collaborative efforts aim to harness technology's transformative potential to tackle global challenges and promote sustainable development and prosperity. Embracing green technologies, fostering inclusive innovation, and investing in resilient infrastructure present opportunities to address these challenges. Public-private partnerships can play a role in mobilizing

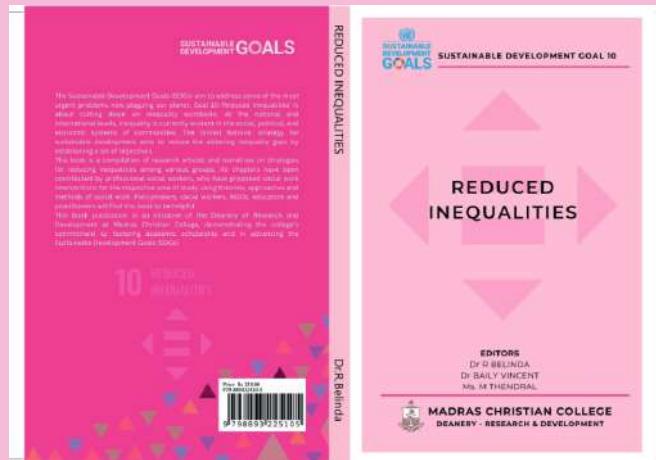


expertise for sustainable development initiatives. The theme of Media Industry, Innovation, and Infrastructure highlights the transformative role that media plays in shaping societies, fostering innovation, and requiring a robust technological foundation.

08 Book Chapters

13 Authors

REDUCED INEQUALITIES



Analyzing strategies to reduce inequality across diverse groups, social workers propose interventions based on their theories and methods targeting policymakers, NGOs, educators, and practitioners

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Reduced Inequalities, underscores the imperative of addressing inequalities within and among countries to promote inclusive and sustainable development. This goal recognizes that inequality undermines social cohesion, hampers economic growth, and threatens peace and stability. Dr. R Belinda, Dr. Baily Vincent, and Ms. M Thendral, as the editors of this publication, bring their expertise to explore the root causes of inequality and identify strategies for promoting social, economic, and political inclusion.

Through collaborative efforts, they advocate for policies and interventions that address disparities in income, wealth, and access to opportunities, contributing to a more equitable and just society. At the national and international levels, inequality is currently evident in the social, political, and economic systems of communities. The United Nations' strategy for sustainable



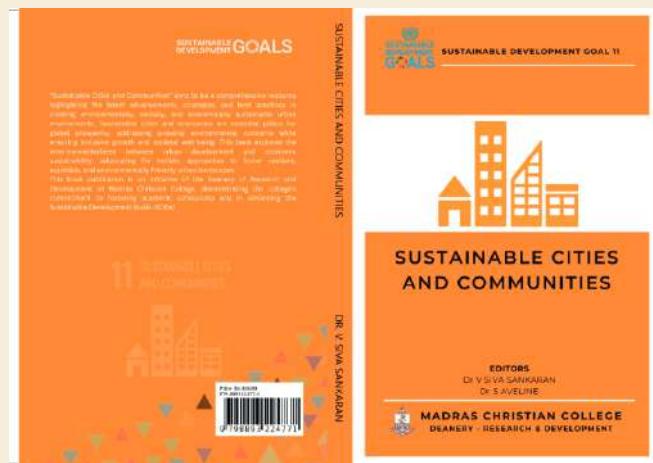
development aims to reduce the widening inequality gaps by establishing a set of objectives. This book is a compilation of research articles and narratives on strategies for reducing inequalities among various groups.

13 Book Chapters

26 Authors

SUSTAINABLE CITIES AND COMMUNITIES

Focus on Building Modern Social, Economic and Environment Sustainability.



Highlighting and exploring the creation of environmentally, socially, and economically sustainable urban environments that ensure inclusive growth and societal well-being



"Focus on Building Modern Social, Economic, and Environmental Sustainability" addresses SDG 11 - Sustainable Cities and Communities, emphasizing the creation of inclusive, safe, resilient, and sustainable cities. This goal highlights the need for adequate housing, transportation, public spaces, and environmental sustainability while preserving cultural heritage. Edited by Dr. S Aveline and Dr. V Siva Sankaran, the publication explores urban planning, infrastructure development, and community engagement strategies.

It advocates for strategic policies in promoting sustainable urbanization, disaster resilience, and improved urban living. "Sustainable Cities and Communities" aims to be a comprehensive resource highlighting the latest advancements, strategies, and best practices in creating environmentally,



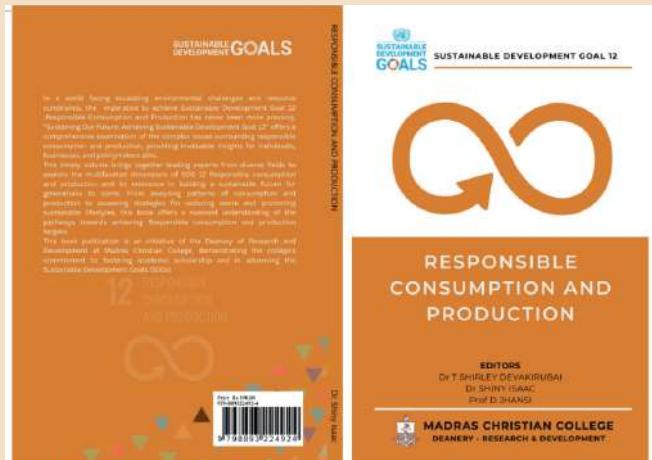
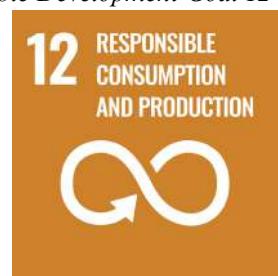
socially and economically sustainable urban environments. Sustainable cities and economies are essential pillars for global prosperity, addressing pressing environmental concerns while ensuring inclusive growth and societal well-being.

13 Book Chapters

15 Authors

RESPONSIBLE CONSUMPTION AND PRODUCTION

Highlights innovative approaches and technologies for enhancing resource efficiency and reducing waste generation and adopt sustainable production and consumption



Experts explore SDG 12: Responsible Consumption and Production, examining consumption patterns, waste reduction, and sustainable lifestyles for a sustainable future



"Highlights Innovative Approaches and Technologies for Enhancing Resource Efficiency and Reducing Waste Generation" addresses SDG 12 - Responsible Consumption and Production. This goal emphasizes promoting sustainable consumption and production, decoupling economic growth from resource use and environmental degradation, and ensuring social equity and environmental sustainability. Edited by Dr. T Shirley Devakirubai, Prof. D. Jhansi, and Dr. Shiny Isaac, the publication explores innovative approaches for resource efficiency, waste reduction, and sustainable supply chains. "Sustaining Our Future: Achieving Sustainable Development Goal 12" offers a comprehensive examination of the complex issues surrounding responsible consumption and production, providing invaluable insights for individuals, businesses, and policymakers alike. From analysing patterns



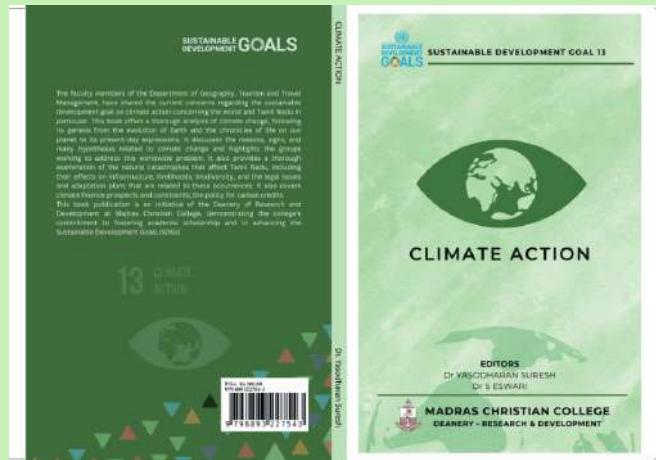
of consumption and production to assessing strategies for reducing waste and promoting sustainable lifestyles, this book offers a nuanced understanding of the pathways towards achieving responsible consumption and production targets.

10 Book Chapters

16 Authors

CLIMATE ACTION

Climate Change and its Implications in Tamil Nadu



Examining climate impact from Earth's evolution to contemporary manifestations, discussing causes, indicators, and various hypotheses and adaptation strategies in Tamil Nadu

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"Climate Change and Its Implications in Tamil Nadu" addresses SDG 13 - Climate Action, recognizing the urgent need to combat climate change and its impacts. This goal emphasizes the importance of strengthening resilience and adaptive capacity to climate-related hazards and natural disasters. Dr. Yasodharan Suresh and Dr. S Eswari, as the editors of this publication, bring their expertise to explore the impacts of climate change on ecosystems, economies, and communities in Tamil Nadu. Through collaborative efforts, they aim to raise awareness about climate change, promote climate resilience strategies, and advocate for climate action at the local, national, and global levels. This book offers a thorough analysis of climate change, following its genesis from the evolution of Earth and the chronicles of life on our planet to its present-day expressions. It discusses the



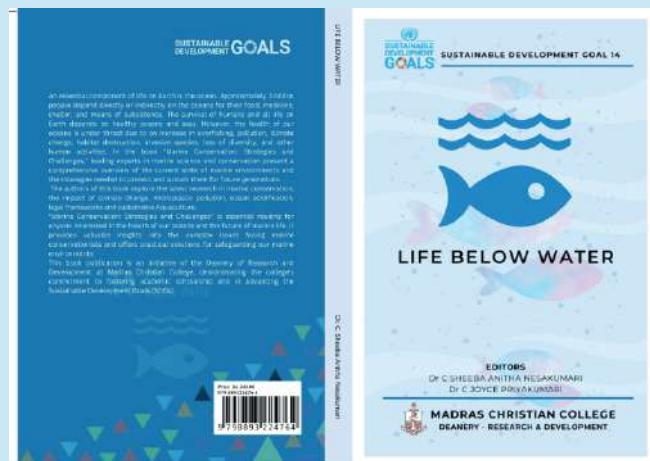
reasons, signs and many hypotheses related to climate change and highlights the groups working to address this worldwide problem. It also covers climate finance prospects and constraints, the policy for carbon credits.

10 Book Chapters

13 Authors

LIFE BELOW WATER

Marine Conservation: Strategies and Challenges



**Vital to billions, the ocean faces threats.
"Marine Conservation" explores solutions
to protect it for the future**

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"Marine Conservation: Strategies and Challenges" addresses SDG 14 - Life Below Water, recognizing the critical importance of conserving and sustainably managing marine resources. This goal emphasizes the need to protect marine ecosystems, reduce marine pollution, and promote sustainable fisheries management. Dr. C Sheeba Anitha Nesakumari, Dr. C Joyce Priyakumari, and Ms. R Malavika, as the editors of this publication, bring their expertise to explore strategies for marine conservation and sustainable ocean governance. In the book "Marine Conservation: Strategies and Challenges," leading experts in marine science and conservation present a comprehensive overview of the current state of marine environments and the strategies needed to protect and sustain them for future generations. The authors explore the latest research in marine conservation, the impact of climate change, microplastic pollution,

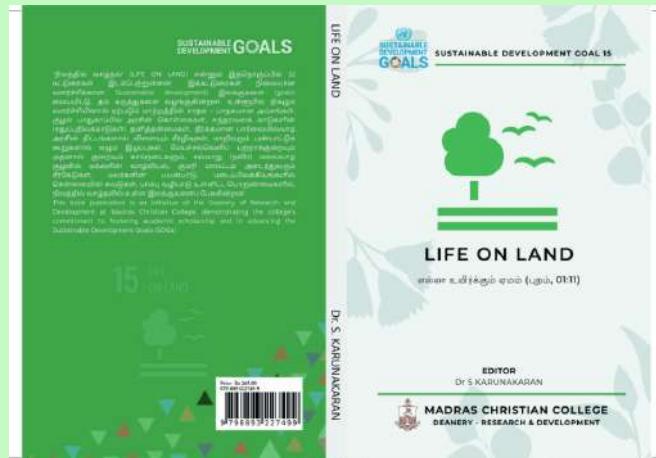


ocean acidification, legal frameworks and sustainable Aquaculture. "Marine Conservation: Strategies and Challenges" is essential reading for anyone interested in the health of our oceans and the future of marine life.

15 Book Chapters
28 Authors

LIFE ON LAND

எல்லா உயிர்க்கும் ஏமம் (புறம். 01:11)



"Life on Land" explores altered realities across various aspects like religion, geography and culture urging sustainable development for our land and future



"Life on Land" focuses on conserving and restoring terrestrial ecosystems and biodiversity, aiming to halt deforestation, combat desertification, and restore degraded land. Edited by Dr. S Karunakaran, the publication explores strategies for biodiversity conservation, ecosystem restoration, and sustainable land management. Collaborative efforts aim to advocate for policies promoting land stewardship, protecting endangered species, and restoring ecosystems for the well-being of present and future generations. "Life on Land" presents 12 altered realities explored by individual researchers, spanning religious, geographical, cultural, political, ethical, and economic dimensions of land. Our interaction and manipulation of land has consequences that alter the realities and shape our destinies. 'Life on Land' covers 12 such altered realities through studies carried out by individual researchers. The book thus

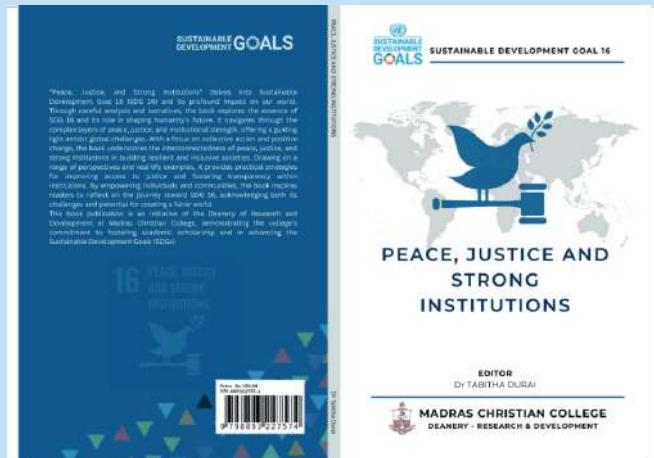


covers the possible dimensions to land: religious, geographical, cultural, political, ethical and economical, emphasising the need to initiate 'Sustainable Development Goals' by individuals and government alike, through their studied policies.

12 Book Chapters
14 Authors

PEACE JUSTICE AND STRONG INSTITUTIONS

Advocating Peace – Building the Foundations for a Better World



Exploring the essence of SDG 16 and its role in shaping humanity's future by navigating through the complex layers of peace, justice and institutional strength



"Advocating Peace – Building the Foundations for a Better World" addresses SDG 16 - Peace, Justice, and Strong Institutions, recognizing the fundamental importance of promoting peaceful and inclusive societies. This goal emphasizes the need to reduce violence, ensure access to justice for all, and build effective, accountable, and inclusive institutions at all levels. Dr. Tabitha Durai, as the editor of this publication, brings her expertise to explore strategies for conflict resolution, peacebuilding, and strengthening democratic governance. Through careful analysis and narratives, the book explores the essence of SDG 16 and its role in shaping humanity's future. It navigates through the complex layers of peace, justice, and institutional strength, offering a guiding light amidst global challenges. With a focus on collective action and positive change, the book underscores the interconnectedness of peace,

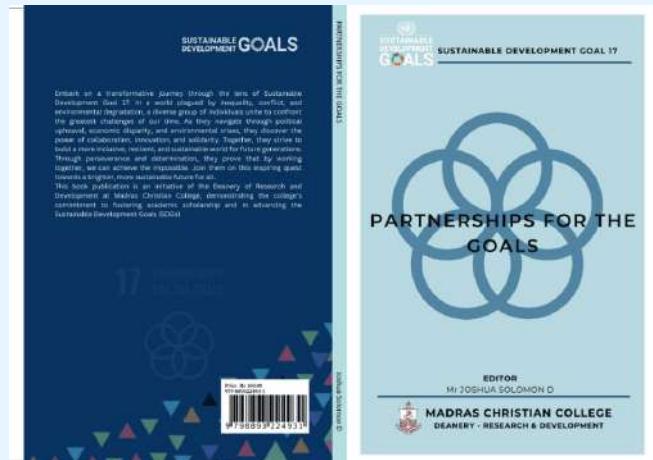


justice, and strong institutions in building resilient and inclusive societies. The book inspires readers to reflect on the journey toward SDG 16, acknowledging both its challenges and potential for creating a fairer world.

07 Book Chapters

08 Authors

PARTNERSHIPS FOR THE GOALS

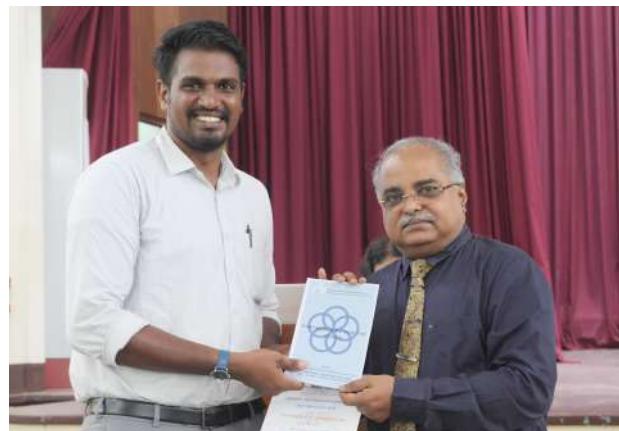


Embark on a transformative journey through the lens of Sustainable Development Goal 17 by navigating global challenges through collaboration and innovation to create a more inclusive, resilient, and sustainable world.



Partnerships for the Goals, underscores the importance of collaboration and partnerships in achieving the Sustainable Development Goals. This goal emphasizes the need for multi-stakeholder partnerships, including governments, civil society, private sector, and academia, to mobilize resources and share knowledge and expertise.

Joshua Solomon D, as the editor of this publication, brings his expertise to explore innovative approaches to partnership building and collaboration for sustainable development. Through collaborative efforts, they aim to strengthen international cooperation, leverage resources effectively, and foster a culture of shared responsibility for achieving the SDGs by 2030. Embark on a transformative journey through the lens of Sustainable Development Goal 17. In a world plagued by inequality, conflict, and environmental degradation, a diverse group of individuals unite to confront the greatest



challenges of our time. As they navigate through political upheaval, economic disparity, and environmental crises, they discover the power of collaboration, innovation, and solidarity.

06 Book Chapters

06 Authors



INTERDISCIPLINARY CONCLAVE 2024

Conference

Interdisciplinary Conclave on Designing and Implementing Service-Learning Programmes for Sustainable Community Engagement



The Deanery Research and Development at Madras Christian College organized a three-day Interdisciplinary Conclave on Designing and Implementing Service-Learning Programmes for Sustainable Community Engagement from March 4-5 and 7, 2024. Dr. Bryan MacHarg, Director of Academic Civic Engagement at Appalachian State University, was the resource person.

On March 4, he delivered a general lecture on Service Learning, marking the First Kini Endowment Lecture, followed by departmental presentations on social engagement. On March 5, Dr. MacHarg conducted a workshop for faculty on integrating Service Learning into curricula, involving NGOs, planning and executing these programmes, and measuring their outcomes. Interactive sessions encouraged group discussions and Q&A



Conference

Interdisciplinary Conclave on Designing and Implementing Service-Learning Programmes for Sustainable Community Engagement



The event concluded with a networking lunch, fostering further discussion and collaboration among faculty members, who left with valuable insights into structured Service Learning Programmes (SLP) and enhanced skills in the nuances of research methodology and manuscript writing.

INTER-INSTITUTIONAL VISITS

Inter-Institutional Visit

Voorhees College, Vellore



The II MA English students of the Voorhees College, Vellore accompanied by their two faculty visited Madras Christian College on 28 August 2023. They attended a workshop on Research Methodology organized by the Deanery. As part of the workshop, the students visited Miller Memorial Library and were oriented by Librarian Dr. P Yesudoss about library resources. Followed by this, the students had a lecture by Dr. R Vijay Solomon on Research Publication Ethics and about predatory journals. The students considered this visit highly informative and beneficial.



ACADEMIC VISITORS

Academic Visitors

Dr. Swaminathan Sivaram



The Deanery – Research and Development organized an interactive meeting with Padmashri Dr. Swaminathan Sivaram for the faculty members and research scholars of the science departments of the college on 8th August 2023. Dr. Sivaram, an alumnus of the Department of Chemistry, Madras Christian College, is currently an Honorary Professor and INSA Senior Scientist at IISER, Pune.

An engaging interactive meeting, designed to foster collaboration and highlight research achievements, brought together Heads, faculty members, and research scholars from the Science Departments. The Heads of the Departments of Physics (Aided), Chemistry (Aided), Botany, and Zoology delivered informative presentations, showcasing their respective departments' facilities, infrastructure, research expertise, unique activities, ongoing and completed projects, and research publications. Dr. Sivaram, a distinguished participant, commended the departments' progress while emphasizing the critical importance of interdisciplinary research for generating valuable data and developing impactful models. He further urged the attendees to focus their research efforts on addressing larger societal challenges, such as climate change, and highlighted the potential of the Pulicat research facility for conducting field research that could contribute to solving highly pertinent societal issues. The meeting proved to be a valuable learning experience for the faculty members and research scholars, offering insights into collaborative research strategies and the significance of addressing real-world problems.

GLOBAL ENGAGEMENT

Global Engagement

Dr. Mohan Balasubramanian, University of Warwick



On the 9th of January 2024, Madras Christian College's Deanery of International Programmes and Deanery of Research and Development jointly organized a global engagement event titled "Facilitating Higher Education Abroad for Students and Research Scholars" in the Council Room. The event featured Dr. Mohan Balasubramanian from the University of Warwick, UK, as the guest speaker. Attended by 35 research scholars from various departments, the session aimed to provide insights into pursuing higher education opportunities abroad. Students actively engaged in interactions with the speaker.



Global Engagement

Dr. Ajayan Vinu, University of Newcastle



Dr. Ajayan Vinu from the University of Newcastle visited Madras Christian College and engaged with faculty members and research scholars who had expressed interest in collaborating with his laboratory on 17th April 2024. The visit facilitated discussions on potential research collaborations, providing an opportunity for MCC's academic community to explore new avenues for research and development. Dr. Ajayan Vinu's expertise and insights were highly appreciated, and the meeting marked the beginning of promising partnerships aimed at enhancing the institution's research capabilities.



MADRAS CHRISTIAN COLLEGE

INSTITUTIONAL ETHICS COMMITTEE

LIST OF MEMBERS

The IEC-MCC has been established in accordance with the rules set by the Indian Council of Medical Research (ICMR) to support research that involves human participants. Due to the progress in science and technology, it is now imperative to safeguard the rights and well-being of those participating in the research process. The purpose of establishing the Institutional Ethics Committee is to guarantee adherence to ethical norms in all biomedical, social, and behavioural scientific research that involves human subjects undertaken at Madras Christian College.



Swapna Sundar
Chairperson



Dr Tabitha Durai
Member Secretary



T G Nithya
Medical Scientist



Dr P Raghu Babu
Medical Scientist



Dr T Premalatha
Clinician



Dr T N Ravi Shankar
Clinician



Rev John Prasad
Philosopher



Dr G Selvi
Legal Expert



Dr N Thirupalu
Layman

MCC - Institutional Ethics Committee



The Institutional Ethics Committee at Madras Christian College held a meeting on January 31, 2024, to review research proposals submitted by Dr. Hannah Frederick, Ms. Sandhya K, and Dr. A Jabarali. The committee engaged in rigorous discussions, with Dr Frederick's proposal approved with specific recommendations. Ms. Sandhya K's proposal received unanimous approval for its comprehensive structure and ethical compliance. Dr A Jabarali's proposal required minor revisions for improved clarity. The meeting concluded with a dedication to ethical research practices and the unanimous approval of the meeting's minutes.



SEED MONEY GRANT

Incentivization

Seed Money Grant 2023 - 2024



Since 2021, the Deanery for Research and Development at Madras Christian College has awarded Seed Money Grants (SMG) to faculty for microprojects, fostering scientific and social research and promoting outcome-based research, benefiting 36 faculty members to date. On June 22, 2023, the final evaluation of Seed Money Grant proposals was held in the Council room. Dr. Sanjay Kumar from IIT Madras served as the external expert. Applicants presented their proposals which were evaluated based on the background of the study, objectives, theoretical framework, methodology, timeline, expected outcomes, and budget. Six proposals were shortlisted for the 2023–2024 grants.



Incentivization

Seed Money Grant 2023 - 2024



Mid-term review of SMG projects

The first mid-term review of the 2023 SMG projects was held online on November 1, 2023, with Dr. Vigneshwara Illavarasan from IIT Delhi as the external expert. Presenters updated their project's progress, and evaluations were focused on objectives achieved, methodology, timelines, expenditure, and outcomes. The second mid-term review, was held online on February 5, 2024, with Dr. Vigneshwara Illavarasan, to assess the progress and improvements made since the first review.



SEED MONEY GRANT 2023 - 2024

AWARDEES



DR. S STALIN

Department of Tamil – Aided

தாம்பரம் சுற்றியுள்ள பகுதிவாழ் மக்களிடையே சென்னைக் கிறித்தவக் கல்லூரி ஏற்படுத்திய மேம்பாட்டை ஆவணப்படுத்தல்.

DR. E IYYAPPAN

Department of Chemistry - Aided

Piezo catalytic effect of substituted hydroxyapatite nanoparticles for environmental remediation:
A green approach.



DR. G GNANASEKARAN

Department of Botany

Tree community structure and carbon stocks of Madras Christian College campus, India.

SEED MONEY GRANT 2023 - 2024

AWARDEES



DR. REJI JV

Department of Botany

In vitro mass multiplication of selected rare and threatened tropical dry evergreen forest tree species for species recovery and conservation.



MR. TONY THOMAS

Department of Business Administration

Innovative practice in management education –
An art-based learning approach.



DR. P PERSIS GLORY

Department of Computer Science – Shift II

Development of cutting-edge Learning Management System (LMS) – A Web application for learning fundamentals of Computers and Information technology for MCC-RSL school students.

CASH INCENTIVES FOR PUBLICATION IN INDEXED JOURNALS



Incentivization

Cash Incentives for Research Publication in Indexed Journals



The Deanery – Research and Development at Madras Christian College has prioritized incentivizing research to enhance the institution's research culture. Annually, the Institution offers incentives to faculty and research scholars for indexed research publications. The Deanery scrutinised the research papers for indexing and duplicate submissions, considering publications in UGC-CARE List Group I and Group II journals. Ultimately, 71 papers from 45 authors were selected for incentives. On “Appreciation Day” held on March 15, 2024, at MCC–MRF Innovation Park, cheques worth Rs. 2000 and certificates were awarded to 29 faculty members and 16 research scholars. Dr. Ganapati D Yadav, National Science Chair of the Government of India, and Emeritus Professor, was the Chief Guest and spoke on MCC's innovation and research culture and presented the awards.



CASH INCENTIVES FOR PUBLICATION

List of Faculty awarded for the year 2023 - 2024

Name	Department	Number of Papers Published	Cash Incentive in Rs.
Dr. S Sagathevan	Economics	1	2000
Ruth Elizabeth Jacob	Economics	1	2000
Dr. T Jaba Priya	Chemistry - Aided	1	2000
Dr. Baily Vincent	Social Work - SFS	1	2000
Dr. J Shiny Priyadarshini	Computer Science (MCA)	1	2000
Dr. Rachel Jacob	Journalism	2	4000
Dr. K Sathish Kumar	Mathematics - Aided	2	4000
Dr. S Daniel Abraham	Chemistry - SFS	1	2000
Dr. S Aveline	Business Administration	1	2000
Dr. T Sathish Kumar	Microbiology	2	4000
D Padma Prabha	Computer Application (BCA)	1	2000
Asha Thomas	Mathematics - SFS	1	2000
Dr. V Mahalakshmi	Microbiology	1	2000
J Aruna	English - Aided	1	2000
Dr. Marilyn Gracey Augustine	History	3	6000
R Kavitha	Chemistry - Aided	3	6000
Dr. K Vijayalakshmi	Chemistry – SFS	2	4000
Dr. T Shirmila	Commerce – Aided	1	2000

CASH INCENTIVES FOR PUBLICATION

List of Faculty awarded for the year 2023 - 2024

Name	Department	Number of Papers Published	Cash Incentive in Rs.
Dr. P Mohanchander	Zoology	2	4000
Dr. J Sudarvizhi	Tamil – Aided	4	8000
Dr. R Vijay Solomon	Chemistry - Aided	2	4000
Dr. J Christina Jebapriya	Physics - SFS	1	2000
Dr. Jojan Job	Philosophy	1	2000
Dr. S Janet Mary	Communication	1	2000
Dr. G Gnanasekaran	Botany	3	6000
Dr. A Gughan Babu	History	1	2000
Dr. S Muthukandhan	Tamil - Aided	2	4000
Dr. T Shirley Devakirubai	Commerce - SFS	1	2000
Dr. Tabitha Durai	Commerce - Aided	1	2000

CASH INCENTIVES FOR PUBLICATION

List of Research Scholars awarded for the year 2023 - 2024

Name	Department	No. of Papers Published	Cash Incentive in Rs.
Thirumurugan V	Botany	1	2000
Judah Jacob	Microbiology	1	2000
B Aysha Rifana	Physics - Aided	2	4000
Joyanna Elsa Noble	Chemistry - Aided	1	2000
Shruti Vinod	Chemistry - Aided	1	2000
K H Durga Prasad	Chemistry - Aided	1	2000
Cheriyam Ebenezer	Chemistry - Aided	7	14000
Reshma Rensil Francis	Chemistry - Aided	1	2000
David Samuvel Michael	Chemistry - Aided	1	2000
Liju R	Chemistry - Aided	1	2000
Jenova I	Physics - Aided	2	4000
Dona Benny	Physics - Aided	1	2000
Venkatesh K	Physics - Aided	3	6000
Eunice E	Physics - Aided	1	2000
Anishkar Feroshwa Joy King	Botany	1	2000
M Nivetha	Botany	1	2000



LIST OF RESEARCH SUPERVISORS FOR THE PHD PROGRAMME

LIST OF RECOGNIZED RESEARCH SUPERVISORS FOR THE PHD PROGRAMME

NAME	QUALIFICATION	DESIGNATION
Dr. Mekala Rajan Department of English	M.A., M.Phil., Ph.D.	Associate Professor & Head
Dr. S Franklin Daniel Department of English	M.A., M.PHIL., PH.D.	Associate Professor
Dr. Ann Thomas Department of English	M.A., B.Ed., Ph.D.	Assistant Professor
Dr. P David Prabhakar Department of Tamil	M.A., M.Phil., Ph.D.	Associate Professor & Head
Dr. P George Department of Tamil	M.A., M.Phil., Ph.D.	Associate Professor
Dr. N Ilango Department of Tamil	M.A., M.Phil., Ph.D.	Associate Professor
Dr. Y Paul Prabu Santharaj Department of Tamil	M.A., M.Phil., Ph.D.	Associate Professor
Dr. D Meshak Department of Tamil	M.A., Ph.D.	Assistant Professor
Dr. N Kanikkaraju Department of Tamil	M.A., M.Phil., Ph.D.	Assistant Professor
Dr. J Sudarvizhi Department of Tamil	M.A., M.Phil., Ph.D.	Associate Professor
Dr. S Muthukandhan Department of Tamil	M.A., M.Phil., Ph.D.	Assistant Professor

NAME	QUALIFICATION	DESIGNATION
Dr. S Yagna Sekhar Department of Languages	M.A., Ph.D.	Associate Professor & Head
Dr. R Venkataramanujam Department of History	M.A., M.Phil., Ph.D.	Assistant Professor & Head
Dr. K Ashok Department of History	M.A., B.Ed., M.Phil., Ph.D.	Assistant Professor
Dr. S D Christopher Chandran Department of Political Science	M.A., M.Phil., Ph.D.	Associate Professor & Head
Dr. Ashik J Bonofer Department of Political Science	M.A., M.Phil., Ph.D.	Assistant Professor
Dr. N Ansuman Department of Public Administration	M.A., M.Phil., Ph.D.	Assistant Professor & Head
Dr. B Madhana Rekha Department of Public Administration	M.A., M.Phil., Ph.D.	Assistant Professor
Dr. V Vijay Devanesan Department of Public Administration	M.A., M.A.(PM&IR), M.A. (Pol.Sci.), M.B.A., M.Phil., Ph.D.	Assistant Professor
Dr. S Kalyani Department of Public Administration	M.A., M.A. (Pol.Sci.), M.B.A., M.Phil., Ph.D.	Assistant Professor
Dr. Meera Rajeev Kumar Department of Public Administration	M.A., M.Phil., Ph.D.	Assistant Professor
Dr. V Jacqueline Raja Bai Department of Economics	M.A., M.Phil., B.Ed., Ph.D.	Associate Professor & Head
Dr. D Merlin Juliet Arul Thangam Department of Economics	M.A., M.Phil., Ph.D.	Associate Professor

NAME	QUALIFICATION	DESIGNATION
Dr. A Annadurai Department of Economics	M.A.,M. Phil., Ph.D.	Associate Professor
Dr. S Ramakrishnan Department of Economics	M.A., M.Phil., Ph.D.	Assistant Professor
Dr. V Kumari Sunitha Department of Philosophy	M.A., Ph.D.	Assistant Professor in-charge
Dr. D Prince Annadurai Department of Social Work	M.A. (S.W.), M.A. (Psy), Ph.D.	Assistant Professor
Dr. Tamilarasi Mailachalam Department of Commerce	M.Com., M.Phil., Ph.D.	Associate Professor & Head
Dr. Hannah Frederick Department of Commerce	M.Com., M.Phil., B.Ed., Ph.D.	Associate Professor
Dr. Vijayakumari Joseph Department of Commerce	M.Com., B.Ed., Ph.D.	Assistant Professor
Dr. T Shirmila Department of Commerce	M.Com., M.B.A., M.Phil., Ph.D.	Assistant Professor
Dr. Florence John Department of Commerce	M.Com., M.Ed., M.Phil., Ph.D.	Assistant Professor
Dr. Tabitha Durai Department of Commerce	M.Com., M.Phil., Ph.D.	Assistant Professor
Dr. M Anli Suresh Department of Commerce	M.Com., M.F.M., M.B.A., M.Phil., Ph.D.	Assistant Professor
Dr. B Chinna Muthu Department of Commerce	M.Com. M.Phil., Ph.D.	Assistant Professor
Dr. V Muthukumar Department of Commerce	M.Com. M.Phil., MBA., Ph.D.	Assistant Professor

NAME	QUALIFICATION	DESIGNATION
Dr. T Robinson Department of Mathematics	M.Sc., M.Phil., Ph.D., Ph.D. (Disability Sc.)	Associate Professor & Head
Dr. Thomas Rosy Department of Mathematics	M.Sc., MPhil., Ph.D.	Associate Professor
Dr. S Sunil Varma Department of Mathematics	M.Sc., Ph.D.	Assistant Professor
Dr. K Sathish Kumar Department of Mathematics	M.Sc., MPhil., Ph.D.	Assistant Professor
Dr. S Joshua David Department of Statistics	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. V Haridoss Department of Statistics	M.Sc., M.Phil., MBA, Ph.D.	Assistant Professor
Dr. G Kumarapandian Department of Statistics	M.Sc., Ph.D.	Assistant Professor
Dr. A Jabarali Department of Statistics	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. Johanan Christian Prasana Department of Physics	M.Sc., M.Phil., Ph.D.	Associate Professor
Dr. S Karthikeyan Department of Physics	M.Sc., Ph.D.	Assistant Professor
Dr. N Nirmal Thyagu Department of Physics	M.Sc., Ph.D.	Assistant Professor
Dr. P Wilson Department of Chemistry	M.Sc., B.Ed., B.C.S., Ph.D.	Principal & Secretary Associate Professor

NAME	QUALIFICATION	DESIGNATION
Dr. T Mary Vergheese Department of Chemistry	M.Sc., M.Ed., M.Phil. (Edu), Ph.D.	Assistant Professor
Dr. Rakhi Yadav Department of Chemistry	M.Sc., B.Ed., Ph.D.	Assistant Professor
Dr. E Rajkumar Department of Chemistry	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. R Vijay Solomon Department of Chemistry	M.Sc., Ph.D.	Assistant Professor
Dr. E Joyce Sudandara Priya Department of Botany	M.Sc., M.Phil., Ph.D.	Associate Professor & Head
Dr. S Ravi Shankar Department of Botany	M.Sc., Ph.D.	Assistant Professor
Dr. P Selva Singh Richard Department of Botany	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. G Gnanasekaran Department of Botany	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. M Kumar Department of Botany	M.Sc., Ph.D.	Assistant Professor
Dr. B Babu Department of Botany	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. R Ranjith Kumar Department of Botany	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. C Joyce Priyakumari Department of Zoology	M.Sc., M.Phil., Ph.D.	Assistant Professor & Head

NAME	QUALIFICATION	DESIGNATION
Dr. Ananthi Rachel Livingstone Department of Zoology	M.Sc., Ph.D.	Assistant Professor
Dr. J Logamanya Tilak Department of Zoology	M.Sc. Ph.D.	Assistant Professor
Dr. Nirmala Mohan Department of Commerce (SFS)	M.Com, M.Phil., Ph.D.	Associate Professor & Head
Dr. T Shirley Devakirubai Department of Commerce (SFS)	M.Com, M.Phil., Ph.D.	Assistant Professor
Dr. V Shanmugasundaram Department of Commerce (SFS)	M.Com, M.Phil., Ph.D.	Assistant Professor
Dr. R Belinda Department of Social Work (SFS)	M.A. (S.W.), M.Phil., Ph.D.	Associate Professor & Head
Dr. G F Alban Nishanth Lalu Department of Social Work (SFS)	M.S.W., M.Phil., Ph.D.	Associate Professor
Dr. V Mahalakshmi Department of Microbiology (SFS)	M.Sc., M.Phil., Ph.D.	Associate Professor & Head
Dr. S Niren Andrew Department of Microbiology (SFS)	M.Sc., Ph.D.	Assistant Professor
Dr. K Kavitha Department of Microbiology (SFS)	M.Sc., M.Phil., Ph.D.	Associate Professor
Dr. T Sathish Kumar Department of Microbiology (SFS)	M.Sc., M.Phil., Ph.D.	Assistant Professor
Dr. P Hanumantha Rao Department of Microbiology (SFS)	M.Sc., Ph.D., SLET	Assistant Professor



LIST OF PHD SCHOLARS ADMITTED IN 2023-2024

LIST OF PHD RESEARCH SCHOLARS

DETAILS OF PHD RESEARCH SCHOLARS ADMITTED (2023 – 2024)

NAME	NAME OF THE SUPERVISOR	FULL-TIME/ PART-TIME ENROLLMENT	DATE OF ENROLLMENT
Alan P G C Department of English	Dr. S Franklin Daniel	Full-time	17.10.2023
Grace Mariam Philip Department of Botany	Dr. B Babu	Full-time	08.11.2023
Christiya Joy Department of Zoology	Dr. J Lokamanya Tilak	Full-time	08.11.2023
Adeline Jeba Pushpa Department of Commerce	Dr. Vijayakumari Joseph	Full-time	08.03.2024
Shynu Shajimon Department of Botany	Dr. B Babu	Full-time	11.03.2024
Lalitha H Department of Commerce	Dr. Tabitha Durai	Full-time	11.03.2024
Vignesh V Department of History	Dr. K Ashok	Full-time	11.03.2024
Riyax Mohamed M R Department of History	Dr. K Ashok	Full-time	11.03.2024
Nivetha R Department of History	Dr. R Venkataramanujam	Full-time	11.03.2024
Priyambada Sagolsem Department of History	Dr. K Ashok	Full-time	11.03.2024

NAME	NAME OF THE SUPERVISOR	FULL-TIME/ PART-TIME ENROLLMENT	DATE OF ENROLLMENT
Haajira M Department of Maths	Dr. K Sathish Kumar	Full-time	11.03.2024
Mukilan Antony Department of Microbiology	Dr. P Hanumantha Rao	Full-time	19.03.2024
Bharath Shreemon Department of Tamil	Dr. D Meshak	Full-time	19.03.2024
Karen Roshie S Department of English	Dr. S Franklin Daniel	Full-time	20.03.2024
Revathi V Department of Tamil	Dr. D Meshak	Full-time	20.03.2024
Smlin Sheeba Department of Tamil	Dr. D Meshak	Full-time	20.03.2024
Deepika Department of Economics	Dr. A Annadurai	Full-time	21.03.2024
Susan Silvia N Department of Microbiology	Dr. V Mahalakshmi	Full-time	21.03.2024
Jaina Sara Joy Department of Chemistry	Dr. P Wilson (Principal)	Full-time	22.03.2024
Agalya B R Department of Microbiology	Dr. V Mahalakshmi	Full-time	22.03.2024
Angeline Sarah Sundari S Department of Zoology	Dr. Ananthi Rachel Livingstone	Full-time	25.03.2024
Hannah Jebamalar G Department of Economics	Dr. D Merlin Juliet Arul Thangam	Full-time	26.03.2024

NAME	NAME OF THE SUPERVISOR	FULL-TIME/ PART-TIME ENROLLMENT	DATE OF ENROLLMENT
David Abishek G Department of Commerce	Dr. T Sharmila	Full-time	17.04.2024
Lalnunnnemi Department of Chemistry	Dr. E Rajkumar	Full-time	24.04.2024
Mullai Kodi Department of Chemistry	Dr Rakhi Yadav	Full-time	03.05.2024
Remi Feniton Department of Chemistry	Dr. R Vijay Solomon	Full-time	04.05.2024
Paul Lalremruot Pakhuongte Department of Microbiology	Dr. V Mahalakshmi	Full-time	06.05.2024
Nithish Kumar G Department of Tamil	Dr. N Kanikkaraju	Full-time	13.05.2024
Auxilia Jossie J Department of Statistics	Dr. S Joshua David	Full-time	13.05.2024
Nithya Lakshmi Department of Political Science	Dr. Ashik J Bonofer	Full-time	13.05.2024
Rubha T Department of Economics	Dr. A Annadurai	Full-time	16.05.2024
Ramachandran S Department of Maths	Dr. K Sathish Kumar	Full-time	17.05.2024
Akhil Antony Department of Botany	Dr. M Kumar	Full-time	22.05.2024
Cathlin Esther R Department of English	Dr. S Franklin Daniel	Full-time	28.05.2024

RESEARCH PUBLICATIONS

List of Publications (UGC CARE - Group II)

2023

Source: SCOPUS as on 25th March 2024

Department of Chemistry

1. Defect assisted Reactive Oxygen Species generation for photocatalytic degradation of methylene blue by nano-structured zinc oxide synthesized in CTAB medium

Murali R., Amirthavalli C.

Materials Chemistry and Physics, 2023, 294, 127014

<https://doi.org/10.1016/j.matchemphys.2022.127014>

2. Do mono- or diphenol substitutions in phenanthroline-based ligands serve in effective separation of $\text{Am}^{3+}/\text{Eu}^{3+}$ ions? - Insights from DFT calculations

Vinod S., Ebenezer C., Solomon R.V.

Separation Science and Technology (Philadelphia), 2023, 58(4), 627-641

<https://doi.org/10.1080/01496395.2022.2160352>

3. Application of *Salvinia* sps. in remediation of reactive mixed azo dyes and Cr (VI) - Its pathway elucidation

Biju L.M., K V.G., Senthil Kumar P., **Kavitha R.**, Rajagopal R., Rangasamy G.

Environmental Research, 2023, 216, 114635

<https://doi.org/10.1016/j.envres.2022.114635>

4. Mixed polycyclic aromatic hydrocarbon degradation by halotolerant bacterial strains from marine environment and its metabolic pathway

Muralidharan M., Gayathri K.V., Kumar P.S., Preethi D.S., **Kavitha R.**, Rajagopal R., Rangasamy G.

Environmental Research, 2023, 216, 114464

<https://doi.org/10.1016/j.envres.2022.114464>

5. Synergistic enhancement of corrosion protection of carbon steels using corrosion inhibitors and biocides: Molecular adsorption studies, DFT calculations and long-term corrosion performance evaluation

Anandkumar B., Krishna N.G., **Solomon R.V.**, Nandakumar T., Philip J.

Journal of Environmental Chemical Engineering, 2023, 11(3), 109842

<https://doi.org/10.1016/j.jece.2023.109842>

6. Writing Electronic Configuration: An Easy Approach

Gnanamani S.G.

Resonance , 2023, 28(4), 659-664.

<https://doi.org/10.1007/s12045-023-1589-1>

7. Selective Detection of Copper Ions and Biological Activities of Isoniazid Schiff Bases

Hemalatha G.M., Thirunavukkarasu K., **Kumar C.R.**, Thamim M., Thirumoorthy K.

ChemistrySelect , 2023, 8(2), e202204898. <https://doi.org/10.1002/slct.202204898>

8. Christmas Tree Model of Periodic Table of Chemical Elements

Gnanamani S.G., Vergheese M., Nancy S.J., Nivetha B.

Resonance, 2023, 28(3), 475-478.

<https://doi.org/10.1007/s12045-023-1567-7>

9. Host-Guest Complex of Cucurbituril with 5-Fluorouracil: Structural Study, Effect on

Cytotoxicity, and Intracellular ROS Generation

Priya T.J., Sugumar R.W., Harini M., Prasad N.R.

Pharmaceutical Chemistry Journal, 2023, 56(11), 1526-1534

<https://doi.org/10.1007/s11094-023-02824-1>

10. Exploring the solvation of water molecules around radioactive elements in nuclear waste water treatment

Ebenezer C., Solomon R.V.

Physical Sciences Reviews, 2023, <https://doi.org/10.1515/psr-2022-0262>

11. Role of sulphur and oxygen in phosphine ligands in the extraction process of Am³⁺ over Eu³⁺ ions in water medium – A theoretical study

Ebenezer C., Solomon R.V.

Journal of Molecular Liquids, 2023, 382, 122035

<https://doi.org/10.1016/j.molliq.2023.122035>

12. Peripherally “tertiary butyl ester” functionalized bipyridine cored dendrons: from synthesis and characterization to molecular dynamic simulation study

Raju L., Nikkhah S.J., Vandichel M., Rajkumar E.

New Journal of Chemistry, 2023, 47(18), 8913-8924

<https://doi.org/10.1039/d3nj00335c>

13. Computational assessment of amino acid-coupled benzanthrone 2-aminoacetamides as molecular probes for insulin amyloid fibril visualization

Francis, R.R., Ebenezer, C., Solomon, R.V., Wilson, P.

New Journal of Chemistry, 47(28), 13247- 13259, 2023,

<https://doi.org/10.1039/d3nj02222f>

14. Deciphering the structure-property relationship and antioxidant mechanisms of Trehalose – An in-silico approach

Prasad, K.H.D., Ebenezer, C., Solomon, R.V., Iyyappan, E.

Journal of Molecular Structure, 1291, 135957, 2023,

<https://doi.org/10.1016/j.molstruc.2023.135957>

15. Environmentally friendly synthesis and computational studies of novel class of acridinedione integrated spirothiopyrrolizidines/indolizidines

Raju, R., Raghunathan, R., Arumugam, N., Almansour, A.I., Kumar, R.S.,

Vivekanand, P.A., **Ebenezer, C., Solomon, R.V.,** Perumal, K.

Green Processing and Synthesis, 12(1), 20230036, 2023,

<https://doi.org/10.1515/gps-2023-0036>

16. From Sink to Shelf: Organic Solvents

Simiyon, G.G., Vergheese, T.M., Nivetha, B.

Resonance, 28(5), 817- 822, 2023, <https://doi.org/10.1007/s12045-023-1607-3>

17. Green Synthesis of Cyclic Carbonates from Epoxides and CO₂ Using Transition Metal Substituted Polyoxometalate-PDDA Hybrid Catalysts

Jan, R., **Biji, C.A.,** Shakeela, K., Shaikh, R.R., Rao, G.R.

Catalysis Letters, 2023,

<https://doi.org/10.1007/s10562-023-04392-1>

18. Highly Selective Turn-on Fluorescence Sensor for Cd²⁺ Ions by Tripodal Organic Ligand

Muralakar, P., Ravi, S., Gayathri, P., Abraham, S., Jebasingh, B., Anthony, S.P.,

Ebenezer, C., Solomon, R.V.

Journal of Fluorescence, 2023, <https://doi.org/10.1007/s10895-023-03348-3>

19. Investigations on 3D-structure, properties and antibacterial activity of two new curcumin derivatives

Jonathan, D.R., DravidaThendral, E., Krishna Priya, M., Angeline Shirmila, D., Anish Fathima, A., Yuvashri, R., Usha, G.

Journal of Molecular Structure, 1292, 136063, 2023,

<https://doi.org/10.1016/j.molstruc.2023.136063>

20. Particle on a ring model for polyacenes

Samuel Michael, D., Edwin, N., Solomon, R.V., Wilson, P.

Computational and Theoretical Chemistry, 1225, 114166, 2023,

<https://doi.org/10.1016/j.comptc.2023.114166>

21. Synthesis and characterization of a single crystalline exocyclic double-bonded NLO active chalcone derivative: (2E) -2-(2,4,6-trimethoxybenzylidene) -3,4-dihydro-2H-naphthalene -1-one

Jonathan, D.R., Balasubramanian, S., Manivannan, S., Ramesh, S., Irshad Ahamed, J., Afsar, N.

Journal of Molecular Structure, 1291, 135990, 2023,

<https://doi.org/10.1016/j.molstruc.2023.135990>

22. Synthesis of Biologically Active α -Tetralone Condensate: Growth of Single Crystal, Characterization by Experimental and Simulation Methods

Afsar N., **Jonathan, D.R.**, Ramesh, S., Manivannan, S., Ahamed, J.I. Polycyclic Aromatic Compounds, 2023,

<https://doi.org/10.1080/10406638.2023.2216836>

23. Trianglimine-Mediated Selective Sieving of Cis Isomer from the Mixture of Dihaloethenes: A Combined Molecular Dynamics and DFT Investigation

Noble, J.E., Ebenezer, C., Solomon, R.V.

ChemPhysChem, 2023, 24(24), e202300575, <https://doi.org/10.1002/cphc.202300575>

24. Explorations on the synthesis, structure, DFT, DNA binding properties and molecular docking of tridentate Schiff base Copper (II) complexes

Lakshmi praba, J., **Ebenezer, C., Solomon, R.V.**, Venkatesan, M.

Chemical Physics Impact, 2023, 7, 100286, <https://doi.org/10.1016/j.chphi.2023.100286>

25. Anticancer Potential of Dendritic Poly(aryl ether)-Substituted Polypyridyl Ligand-Based Ruthenium(II) Coordination Entities

Raju, L., Javan Nikkhah, S., Christas, M., Vandichel, M., **Eswaran, R.**

ACS Applied BioMaterials 2023, 6(10), 4226-4239, <https://doi.org/10.1021/acsabm.3c004>

26. Mechanical and corrosion characteristics of micro-arc oxidized magnesium alloy (ZE41) friction stir welds in modified SBF

Sivashanmugam, N., Harikrishna, K.L., Rao, S.R.K., **Justin, S.J.S., Wilson, P.**

Physica Scripta, 2023, 98(10), 105901, <https://doi.org/10.1088/1402-4896/acf350>

27. Spectroscopic and theoretical approach of DNA interaction and anticancer studies of bio-pharmaceutically active pyrimidine derived Cu(II) and Zn(II) complexes

Sankarganesh, M., Jose, P.A., Raja, J.D., Revathi, N., Sakthivel, A., Rajesh, J., Gurusamy, S., **Solomon, R.V.**

International Journal of Biological Macromolecules, 2023, 249, 126095

<https://doi.org/10.1016/j.ijbiomac.2023.126095>

28. Insight into designing of 2-pyridone derivatives for COVID-19 drug discovery - A computational study

Samuel, J.G., Malgija, B., Ebenezer, C., Solomon, R.V.

Structural Chemistry, 2023, 34(4), 1289-1308,

<https://doi.org/10.1007/s11224-022-02076-x>

29. Coordination compounds of iron, ruthenium and osmium

Raju, L., Rajkumar, E.

Photochemistry and Photophysics of Coordination Compounds: Fundamentals and Applications, 2023, 135-203, <https://doi.org/10.1016/B978-0-12-824493-7.00008-3>

30. Biosynthesis of bioactive pigment from halotolerant *Bacillus cereus* for fabric – an eco-friendly initiative

Mary, P.A.T., Gayathri, K.V., Kumar, P.S., Rajagopal, R., **Kavitha, R.**, Kumar, S. U., Doss, C.G.P., Rangasamy, G.

Biomass Conversion and Biorefinery, 2023,

<https://doi.org/10.1007/s13399-023-04729-1>

Department of Chemistry (SFS)

31. Investigation on the effect of electron beam impact on chitosan anchored mixed ligand Schiff base complexes for cyclohexane oxidation

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Department of Journalism

109. Does fear drive health app adoption? The role of threat perception in diabetes app usage

Gopalakrishnan, T.R., **Jacob, R.**, Periyandavar, I.

Diabetes and Metabolic Syndrome: Clinical Research and Reviews, 2023, 17(10), 102857

<https://doi.org/10.1016/j.dsx.2023.102857>

List of Publications (UGC CARE - Group II)

2024

Source: SCOPUS as on 25th March 2024

Department of Statistics

1. Analyzing the COVID-19 Pandemic's Effects on College Students: E-Learning Experience, Challenges and Resource Awareness

Jabarali, Abdul Kani., Sathya Kumar, Harish., Barak, Yusuf Sharukkhan

Journal of Library and Information Services in Distance Learning, 2024,

<https://doi.org/10.1080/1533290X.2024.2332806>

2. Phyto-nano-MgO quantum dots by ultrasonic formulation for evaluation of toxin In-Vivo/Vitro/Silico sequels

Sreevidya S., Yadav S., Sanwaria S., Katre Y., Kotasthane A., **Kumar R.S.**, Singh A.K., Susan M.A.B.H.

Chemical Engineering Journal, 2024, 483, 149089

<https://doi.org/10.1016/j.cej.2024.149089>

3. A study on perception of water scarcity with particular reference to chennai corporation zone

Kumarapandiyam G., Priya P.R., Franklin R.G., Vignesh R.

Investigacion Operacional, 2024, 45(1), 45-50

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85186109498&partnerID=40&md5=62fd147cce85b624a7b5ecebb662a570>

Department of Chemistry (Aided)

4. Highly Selective Turn-on Fluorescence Sensor for Cd²⁺ Ions by Tripodal Organic Ligand

Muralakar P., Ravi S., Gayathri P., Abraham S., Jebasingh B., Anthony S.P., **Ebenezer C., Solomon R.V.**

Journal of Fluorescence, 2024, 34 (3), 1229-1240,

<https://doi.org/10.1007/s10895-023-03348-3>

5. Computational Tools and Techniques in Designing Ligands for the Selective Separation of Actinide and Lanthanide: A Review

Ebenezer C., Solomon R.V.

Comments on Inorganic Chemistry, 2024

<https://doi.org/10.1080/02603594.2024.2305884>

6. Theoretical Insights into the Structural and Optical Properties of D- π -A-based Cyanostilbene Systems of α and β Variants

Femina C., Sajith P.K., Remya K., Thomas R., **Solomon R.V.**

ACS Omega, 2024

<https://doi.org/10.1021/acsomega.4c00850>

7. Rational Design of Selenophene-infused BODIPY Molecules as Fluorogenic Probes for Lung Tumor Imaging – A Computational Approach

Kumar S., Ebenezer C., Jaccob M., Solomon R.V.

ChemistrySelect, 2024, 9(7), e202304036

<https://doi.org/10.1002/slct.202304036>

8. A theoretical study on radical scavenging activity of phenolic derivatives naturally found within *Alternaria alternata* extract

Abraham A.B., Panneerselvam M., **Ebenezer C.**, Costa L.T., **Solomon R.V.**

Organic and Biomolecular Chemistry, 2024, 22(10), 2059-2074

<https://doi.org/10.1039/d3ob02126b>

9. Unravelling the sensing efficacy of graphene oxide towards hazardous volatile organic compounds in the polyurethane industry

Bernardshaw L.J., Dev P.R., Solomon R.V., Wilson P.

New Journal of Chemistry, 2024, 48(6), 2734-2742

<https://doi.org/10.1039/d3nj03762b>

10. Unveiling the Computational Insights into Na-Decorated Hydrogen-Substituted Graphdiyne for Efficient Tracing and Trapping of Nitrogen and its Oxides

Ramasamy R., Dev P.R., Solomon R.V., Wilson P.

Materials Today Communications, 2024, 39, 108734

<https://doi.org/10.1080/02603594.2024.2305884>

11. Synthesis, structure determination, molecular interaction, optical, thermal and anticancer activity studies, pharmacokinetic evaluation, and in-silico analysis of monocarbonyl curcumin derivative: An approach to drug discovery

Fathima A.A., **Jonathan D.R.**, Yuvashri R., Laavanya K., Usha G.

Journal of Molecular Structure, 2024, 1308, 138122

<https://doi.org/10.1080/02603594.2024.2305884>

12. Synthesis, structural examination, molecular interaction analysis, invitro and insilico

anticancer activity investigation of a new curcumin derivative: 1- (4 – chlorobenzoyl) - 3, 5 - bis ((E) - 4 - methoxybenzylidene) piperidin - 4 – one
Fathima A.A., Kumaravel V., **Jonathan D.R.**, Sadasivam S.K., Yuvashri R., Usha G.
Chemical Physics Impact, 2024, 8, 100559 <https://doi.org/10.1080/02603594.2024.2305884>

13. Computational Insights into the Fusion of Thiophene to Aza BODIPY Based Molecules for Better Organic Solar Cell Applications
Rwithik D.K., Ebenezer C., Solomon R.V.
Chemical Physics Impact, 2024, 8, 100489,
<https://doi.org/10.1080/02603594.2024.2305884>

14. Exploring electron donor and acceptor effects: DFT analysis of ESIPT/GSIPT in 2-(oxazolinyl)-phenols for photophysical and luminophore enhancement
Panneerselvam M., Francis R.R., Nathiya S., **Solomon R.V.**, Jaccob M., Costa L.T.
Journal of Chemical Physics, 2024, 160(17), 174302
<https://doi.org/10.1080/02603594.2024.2305884>

15. Computational exploration of the structure-photophysical property relationship of 2,6-dicyanoaniline derivatives for optoelectronic applications
Sridhar S.K., Solomon R.V.
Journal of Molecular Structure, 2024, 1295, 136626
<https://doi.org/10.1016/j.molstruc.2023.136626>

16. Synthesis, structural, spectral, thermal, and optical characterization of a new curcumin derivative: A promising material for NLO applications
Yuvashri R., **Reuben Jonathan D.**, Anish Fathima A., Laavanya K., Usha G
Journal of Molecular Structure, 2024, 1295, 136705
<https://doi.org/10.1080/02603594.2024.2305884>

17. Conjugation-modulated optoelectronic and anti-corrosion properties of pyrrole oligomer: Insights from DFT/TD-DFT analysis
Gajalakshmi D., Tamilmani V., Ebenezer C., Solomon R.V.
Journal of Molecular Structure, 2024, 1295, 136722
<https://doi.org/10.1080/02603594.2024.2305884>

18. Exploring the solvation of water molecules around radioactive elements in nuclear waste water treatment
Ebenezer C., Solomon R.V. Physical Sciences Reviews, 2024, 9(3), 1703-1715
<https://doi.org/10.1515/psr-2022-0262>

19. Breaking free from academic scams: Five key reflections on the cloned journal conundrum

Solomon R.V.

Learned Publishing, 2024, 37(1), 44-48

<https://doi.org/10.1002/leap.1590>

20. Zinc in Industry

Raju L., Deviga G., Mariappan M., **Rajkumar E.**

Zinc: Early Development, Applications, and Emerging Trends, 2024, 136-153

<https://doi.org/10.1201/9781003412472-13>

21. Unique Complexes of Zinc and Their Applications

Sukumar E., Sivamurugan V., **Rajkumar E.**

Zinc: Early Development, Applications, and Emerging Trends, 2024, 169-184,

<https://doi.org/10.1201/9781003412472-15>

Department of Chemistry (SFS)

22. Evaluation of batch and packed bed adsorption column for chromium(VI) ion removal from aqueous solution using chitosan-silica-g-AM/orange peel hydrogel composite

Shankar P., Thandapani G., **Kumar V.**, Parappurath Narayanan S.

Biomass Conversion and Biorefinery, 2024, 14(2), 2745-2760

<https://doi.org/10.1007/s13399-022-02450-z>

23. Evaluation of efficacy of chitosan oligosaccharide-salicylaldehyde Schiff base to extract copper(II) and chromium(VI) from synthetic wastewater

Sharmila K., Srinivasan L., **Vijayalakshmi K.**, Alshalwi M., Alotaibi K.M., Sudha P.N., Supriya Prasad P., Sugashini S., Lavanya G., Deepa M.

Biomass Conversion and Biorefinery, 2024, 14(2), 2745-2760

<https://doi.org/10.1007/s13399-024-05522-4>

24. Electrochemical Sensing of Vitamin C Using Graphene/Poly-Thionine Composite Film Modified Electrode

Murugan R.V., Magesh V., **Vijayalakshmi K.**, Atchudan R., Arya S., Sundramoorthy A.K.

Micro and Nanosystems, 2024, 16(1), 57-64

<https://doi.org/10.2174/0118764029290865240209072023>

25. Chapter 14 - Thermal properties of aged polymer composites

Abraham S.D., Antony R.

Aging and Durability of FRP Composites and Nanocomposites, 2024, 321-340

<https://doi.org/10.1016/B978-0-443-15545-1.00010-X>

26. Green Synthesis of Cyclic Carbonates from Epoxides and CO₂ Using Transition Metal Substituted

Polyoxometalate-PDDA Hybrid Catalysts

Jan R., **Biji C.A.**, Shakeela K., Shaikh R.R., Rao G.R.

Catalysis Letters, 2024, 154(4), 1631-1641

<https://doi.org/10.1007/s10562-023-04392-1>

Department of Physics

27. Molecular structure elucidation -Quantum computational approach, Solvent impact analysis, topological investigation and Molecular docking of N-[2-(7-methoxynaphthalen- 1 -yl) ethyl] acetamide

Kanimozhi G., Tamilselvan S., Saral A., **Kaleeswaran S.**, Geetha E., Manikandan A., Muthu S.

Chemical Physics Impact, 2024, 8, 100539

<https://doi.org/10.1016/j.chphi.2024.100539>

28. Anti-fibrinolytic activity, electron delocalization, vibrational spectra, drug - likeness properties and bio-activity studies on Anagrelide

Sunil Kumar V., Murthy Potla K., Srishailam K., **Kaleeswaran S.**, Javed S., Manikandan A., Muthu S.

Results in Chemistry, 2024, 7, 101379

<https://doi.org/10.1016/j.rechem.2024.101379>

29. An Ion Conducting Membrane Based on Polyvinylidene Fluoride-Hexafluoropropylene and Cellulose Acetate Propionate: Application to Electrochemical Devices

Venkatesh K., Jenova I., Karthikeyan S., Madeswaran S., Arivanandhan M., Zurnansyah; Sujiono E.H.

AIP Conference Proceedings, 2024, 2799(1), 20134

<https://doi.org/10.1063/5.0182003>

30. Molecular structural, vibrational spectra, dual descriptor, electronic transition and biological evaluations of ethyl 4-hydroxy-3-methoxycinnamate using density functional theory

Bharathy G., Prasana J.C., Reeda V.S.J., Prasath M., Manikandan A.

Chemical Physics Impact, 2024, 8, 100558

<https://doi.org/10.1016/j.chphi.2024.100558>

Department of Communication

31. An Overview of the Need for Circular Economy on Electric Vehicle Batteries

Padmanabhan S., Joel C., Mahalingam S., Deepak J.R., Kumar T.V., **Raj D.**

Nature Environment and Pollution Technology, 2024, 23 (1), 183-191,

<https://doi.org/10.46488/NEPT.2024.v23i01.014>

Department of Computer Applications

32. Auto retry circuit breaker for enhanced performance in microservice applications

Punithavathy E., Priya N.

International Journal of Electrical and Computer Engineering, 2024, 14(2), 2274-2281,

<https://doi.org/10.46488/NEPT.2024.v23i01.014>

33. Estimation of optimal threshold shifting to handle class imbalance in credit card fraud detection using machine learning techniques

Prabha D.P., Priscilla C.V.

AIP Conference Proceedings, 2024, 2802(1), 120014,

<https://doi.org/10.1063/5.0182386>

Department of Botany

34. Distribution of *Avicennia* spp. in the Andaman and Nicobar Islands with special reference to new distributional reports and post-tsunami colonization patterns

Singh A.R., **Thirumurugan V.**, Prabakaran N.

Journal of the Marine Biological Association of the United Kingdom, 2024, 104, e43,

<https://doi.org/10.1017/S0025315424000262>

35. Two new heterotypic synonyms in *Lepidagathis* (Acanthaceae: Barlerieae) from India

Gnanasekaran G., King A.F.J., Mitta M.N., Arisdason W.

Rheedia, 2024, 33(4), 359-375,

<https://doi.org/10.22244/rheedia.2023.33.04.07>

36. Butterflies as ecosystem engineers in the western ghats: a brief review with systems perspective

Richard P.S.V., Hopelan P., Pavukandy U., Basith N.

Biodiversity Hotspot of the Western Ghats and Sri Lanka, 2024, 253-274,

<https://doi.org/10.22244/rheedia.2023.33.04.07>

37. Two new species of *Lepidagathis* (Acanthaceae: Barlerieae) from the low-elevation lateritic plateaus of Karnataka and Kerala, India

King A.F.J., Kolte R.R., Nithya S.P., Arisdason W., **Gnanasekaran G.**

Rheedia, 2024, 33(4), 332-344, <https://doi.org/10.22244/rheedia.2023.33.04.04>

Department of Zoology

38. Multi-Target Drugs to Control the Progression of Age-Related Neurodegenerative Disorders

Julius A., Renuka R.R., Pothireddy R.B.

Aging Medicine and Healthcare, 2024, 15(1), 4-7,

<https://doi.org/10.33879/AMH.151.2022.08070>

39. Natural Insecticidal Activity of *Mentha piperita* (Peppermint) Oil Nanoemulsion against Agricultural Pest *Aulacophora foveicollis* (Red Pumpkin Beetle) for Environmental Sustainability

Iqbal F.M., Livingstone A.R., Lingam K., Suyambu P.

Agricultural Science Digest, 2024, 44 (1), D-5324, 146-151,

<https://doi.org/10.18805/ag.D-5324>

40. Toxicity of Long Pepper, *Piper longum* L. (Piperaceae) Leaf Extracts to the Red Flour Beetle, *Tribolium castaneum* (Herbst, 1797) (Coleoptera: Tenebrionidae)

Iqbal F.M., Livingstone A.R., Lingam K., Suyambu P.

Agricultural Science Digest, 2024, 44 (1), D-5324, 146-151,

<https://doi.org/10.18805/ag.D-5324>

Department of Microbiology

41. A Novel Nanocomposite Cellulose Acetate Membrane using Green Synthesized Silver Nanoparticles for Bioremediation of Leachate

Pakhuongte P.L., Velrajan M.

Pollution, 2024, 10(1), 168-182

<https://doi.org/10.22059/poll.2023.361606.1976>

42. Microalgal pigments as natural hues in environmentally-sustainable and commercially-prospective biopaints

Prathiksha K., Priyadarshini S.J.E., Jacob J., Jayakumar A.V., Rao P.H.

Journal of Applied Phycology, 2024, 36(1), 191-204

<https://doi.org/10.1007/s10811-023-03124-7>

43. In vitro analysis of biofilm formation and antibiotic resistance of uropathogenic *Escherichia coli*

Reshma A.A., Andrew S.N., Saradhai P., Sasikala S.

Applied Biological Research, 2024, 26(1), 43-49

<https://doi.org/10.48165/abr.2024.26.01.5>

Department of Mathematics

44. Recent Advances in Manufacturing and Processing Technologies Through Graph Theoretical Approach: A Survey

Angamuthu P., Dayal R., Gabriel S., Krishnamoorthy S.K., **Kar M.R.**

AIP Conference Proceedings, 2024, 2986 (1), 3002.

<https://doi.org/10.1063/5.0192694>

45. Tetrahedral tile pasting systems

Kalyani T., Annadurai S., Raman T.T., **Thomas D.G.**

Annals of Mathematics and Artificial Intelligence, 2024, 92 (1), 183-200

<https://doi.org/10.1007/s10472-023-09840-7>

46. Two dimensional fuzzy context-free languages and tiling patterns

John Kaspar A., Sheena Christy D.K., Masilamani V., **Thomas D.G.**

Fuzzy Sets and Systems, 2024, 485, 108961. <https://doi.org/10.1016/j.fss.2024.108961>

47. Parallel Contextual Array Insertion Deletion Grammars, Pure 2D Context-Free Grammars and Associated P Systems

Gayathri Lakshmi M., Arul Freeda Vinodhini G., Kamaraj T., **Thomas D.G.**

Theoretical Computer Science, 2024, 987, 114351

<https://doi.org/10.1016/j.tcs.2023.114351>

48. Power dominator chromatic numbers of splitting graphs of certain classes of graphs

Kumar K.S., David N.G., Nagar A.K., Subramanian K.G.

Communications in Combinatorics and Optimization, 2024, 9(2), 317-327

<https://doi.org/10.22049/CCO.2023.27744.1337>

Department of Commerce

49. Towards Sustainable Future: Exploring Path of Conscious Consumption in Chennai

David Abishek G., Shirmila T., Felicita R.

Indian Journal of Environmental Protection, 2024, 44 (2), 168- 175

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85191780919&partnerID=40&md5=e91a0fa48106b47070bc5abd12208981>

50. The Smart Sustainable Development of Automation Mobility in Industry 4.0 using IoT based Sensor Networks

Ruth F.F., **Shirmila T.**, Mishra A.K., Saraswat B.K., Srivastava S., Aeri M.

Indian Journal of Environmental Protection, 2024, 44 (2), 168- 175

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85191780919&partnerID=40&md5=e91a0fa48106b47070bc5abd12208981>

51. The Smart Sustainable Development of Automation Mobility in Industry 4.0 using IoT based Sensor Networks

Ruth F.F., **Shirmila T.**, Mishra A.K., Saraswat B.K., Srivastava S., Aeri M.

Indian Journal of Environmental Protection, 2024, 44 (2), 168- 175

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85191780919&partnerID=40&md5=e91a0fa48106b47070bc5abd12208981>

52. The mediating role of customer satisfaction for a sustainable e-banking performance

Mohapatra S., Kumar A., **Shirmila T.**, Rroy A.D., Hota S.L.

Environment and Social Psychology, 2024, 9 (6), 1986

<https://doi.org/10.54517/esp.v9i6.1986>

Department of Political Science

53. Religio-political influence on social work practice in contemporary India

Lourdu G.A., **Nathan J.P.S.**, Krishnan R.G.,

Journal of Religion and Spirituality in Social Work, 2024, 43 (2), 137- 149

<https://doi.org/10.1080/15426432.2024.2333363>

Department of Business Administration

54. Management of trust between patient and IoT using fuzzy logic theory

Rajeshkumar L., **Priya J.R.**, Sumalatha K., Arunkumar G., Suganthi D., Saravanan D.

Advances in Fuzzy-Based Internet of Medical Things (IoMT), 2024, 93 - 106

<https://doi.org/10.1002/9781394242252.ch6>

Department of Philosophy

55. Buddhist heart of asia in the works of nicholas roerich: a study

Job J.

India and Inner Asia: Commerce, Culture and Connectivity, 2024, 15 - 27

<https://doi.org/10.4324/9781003171560-3>

PROJECTS

Research Projects

2023 - 2024

Madras Christian College (MCC) has secured significant research funding from various governmental agencies for a diverse range of projects undertaken by its faculty members. This compilation details sanctioned research initiatives for the year 2023 - 2024, showcasing the institution's active engagement in research across multiple disciplines. The funding bodies represent a broad spectrum of government organizations at both the national and state levels, including the Indian Council of Social Science Research (ICSSR), the Department of School Education (Government of India), the National Fisheries Development Board (NFDB), the Tamilnadu State Council for Science and Technology (TNSCST), and the Commissioner of Police for Tambaram City. Additionally, support has been received from specialized agencies such as the Indian Council of Philosophical Research (ICPR), the National Institute of Agricultural Extension Management (MANAGE), the Tamil Nadu Urban Habitat Development Board (TNUHDB), the Tamilnadu Adidravida Housing Development Corporation (TAHDCO), the Tamil Virtual Academy, and the Entrepreneurship Development and Innovation Institute (EDII).

The research projects themselves reflect the diverse academic strengths within MCC, with principal investigators hailing from departments such as Public Administration, Social Work, Zoology, Chemistry, Botany, Economics, Commerce, History, Philosophy, Computer Applications (BCA), and Microbiology. The topics under investigation are equally varied, addressing pertinent social, scientific, and economic issues. These projects often employ rigorous methodologies, including focus group discussions, multi-stakeholder analysis, and socio-economic impact assessments, highlighting the faculty's commitment to addressing societal needs through research. In the realm of natural sciences, the projects often involve sophisticated scientific techniques and contribute to advancements in their respective fields. Furthermore, the institution is also involved in collaborative training programs aimed at enhancing skills in sectors like sustainable shrimp aquaculture.

The financial support garnered by MCC for these research endeavors is substantial, indicating the confidence of government agencies in the institution's research capabilities. The duration of these projects varies, with some being short-term initiatives while others extend over multiple years, reflecting the complexity and scope of the research being undertaken. This significant inflow of research grants not only facilitates knowledge creation and innovation but also provides valuable opportunities for faculty and potentially students to engage in cutting-edge research, further enhancing the academic environment at Madras Christian College.

PROJECTS 2023 - 2024

Name of the Staff & Department	Agency	Grant Allocated (Rs.)
Dr. R Padmamala BCA	Tamil Virtual Academy	3,60,000
Dr. N Ansuman Public Administration	Indian Council of Social Science Research (ICSSR)	1,00,000
Dr. Miriam Samuel Social Work	Department of School Education, Government of India	30,000
Dr. J Logamanya Tilak Zoology	National Fisheries Development Board(NFDB)	5,66,000
Dr. P Wilson Chemistry	Tamilnadu State Council For Science And Technology (TNSCST)	1,40,000
Dr. B Prince Solomon Devadass Social Work	Commissioner of Police, Tambaram City Police	1,00,000
Dr. B Chinna Muthu Commerce	Indian Council of Social Science Research (ICSSR)	3,75,000
MRF Innovation Park MCC	Entrepreneurship Development and Innovation Institute (EDII)	2,00,000
Dr. S Sudharsan Social Work	Tamilnadu Adidravida Housing Development Corporation (TAHDCO)	42,625
Dr. S Sudharsan Social Work	Tamil Nadu Urban Habitat Development Board (TNUHB)	90,000
Mr. Yogesh Mani D History	Indian Council of Social Science Research (ICSSR)	1,30,000
Mr. Maria Michael Nithya A History	Indian Council of Social Science Research (ICSSR)	1,30,000

PROJECTS 2023 - 2024

Name of the Staff & Department	Agency	Grant Allocated (Rs.)
Mr. P Mohanchander Zoology	National Institute of Agricultural Extension Management (MANAGE)	25,500
Dr. R Vijay Solomon Chemistry	Tamilnadu State Council For Science And Technology (TNSCST)	7,500
Dr. T Sathish Kumar Microbiology	Tamilnadu State Council For Science And Technology (TNSCST)	7,500
Dr. V Vedha Microbiology	Tamilnadu State Council For Science And Technology (TNSCST)	4,000
Dr. N Ansuman Public Administration	Tamil Nadu Urban Habitat Development Board (TNUHDB)	5,00,000
Dr. Nanda Gopal Biswas Philosophy	Indian Council of Philosophical Research (ICPR)	40,000

PATENTS

PATENTS FILED AT THE INDIAN PATENT OFFICE

S. No.	Inventor/s	Department/Unit	Title of the Patent
2022			
1	Dr. Deborah Raj	Communication	Slipper Brush
2	Dr. Deborah Raj	Communication	Easy Pour
3	Dr. Deborah Raj	Communication	Chair Legs Holder
4	Dr. Deborah Raj	Communication	Switch Board Sealer and Stand
5	Dr. Deborah Raj	Communication	Switch Board Tray
6	Dr. J Jannet Vennila	Computational Laboratory, MCC–MRF Innovation Park	Marine algae Kappaphycus alverizii based chewing gum and method of preparation thereof
7	Dr. P Hanumantha Rao, Mr. Judah Jacob, Mr. Allwin Vinoth J	Microbiology	A novel photobioculture device
8	Dr. P Hanumantha Rao, Mr. Judah Jacob, Mr. Allwin Vinoth J	Microbiology	A novel photobioculture device (PCT International filing during May 2023)
9	Dr. P Hanumantha Rao, Mr. Judah Jacob, Mr. Allwin Vinoth J	Microbiology	Herbal Composition for prevention and control of algal growth and process of preparation thereof
10	Dr. P Hanumantha Rao, Mr. Judah Jacob, Mr. Allwin Vinoth J	Microbiology	A phycoremediation reactor and a process thereof
11	Dr. T Robinson	Mathematics - Aided	Tactile graphic drawing kit

PATENTS FILED AT THE INDIAN PATENT OFFICE

S. No.	Inventor/s	Department/Unit	Title of the Patent
12	Dr. S J Samuel Justin, Dr. S Saranya, Dr. P Wilson	Chemistry - Aided	Process for the synthesis of fluorapatite nanorods
13	Mr. Priya Ranjan Dev, Dr. P Wilson	Chemistry - Aided	A photocatalytic gas sensing device and a method thereof
2024			
14	Dr. T Sathish Kumar, Mr. Samson Lijoseraj C	Microbiology	A device for performing microbiological culturing techniques
15	Mr. Judah Jacob, Dr. P Hanumantha Rao, Mr. Allwin Vinoth J	Microbiology	Immobilized microalgae systems for phcoremediation of polluted lentic systems and biomass production
16	Dr. P Hanumantha Rao, Mr. Allwin Vinoth J, Mr. Judah Jacob, Mr. Mukilan Antony L	Microbiology	A twin polymeric substrate bioreactor for immobilized microalgae cultivation and method thereof
17	Dr. T Sathish Kumar, Ms. Aiswarya Ashokan, Mr. Samson Lijoseraj C	Microbiology	A method for detecting Gram-positive bacteria
18	Mr. Allwin Vinoth J, Mr. Judah Jacob, Mr. Mukilan Antony L, Dr. P Hanumantha Rao	Microbiology	A device for immobilized microalgae cultivation with zero liquid discharge and method thereof



**LIST OF PROGRAMMES
ORGANISED BY
MCC RESEARCH COLLOQUIUM**

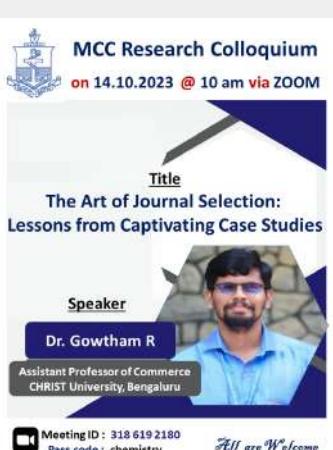
LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
126	17.06.2023	 <p>MCC Research Colloquium on 17.06.2023 @ 10 am via ZOOM</p> <p>Title Unleashing the Power of Canva in Research and Teaching</p> <p>Speaker Mr. Judah Jacob</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Mr. Judah Jacob Research Scholar	72
127	01.07.2023	 <p>MCC RESEARCH COLLOQUIUM on 01.07.2023 @ 10 am via ZOOM</p> <p>Title Literature Review for Effective Research and Publications</p> <p>Speaker Dr. Femina Sheeba</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. Femina Sheeba Department of Computer Science (MCA), Madras Christian College	59
128	08.07.2023	 <p>MCC RESEARCH COLLOQUIUM on 08.07.2023 @ 10 am via ZOOM</p> <p>Title Manuscript Writing : Dos and Don'ts</p> <p>Speaker Dr. M. Jacob Assistant Professor Loyola College, Chennai</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. M Jacob Loyola College	60

LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
129	22.07.2023	 <p>Best Practices to Improve the Culture of Innovation & entrepreneurship Among Educational institutions : A White Paper</p>	Dr. C Aarthi Head-Operations, MCC-MRF Innovation Park	38
130	12.08.2023	 <p>Navigating Research Publication Landscape as an Academic</p>	Dr. Nishanthi Gangadharan University of Cambridge	35
131	02.09.2023	 <p>R & D Ecosystem: An Inevitable Parameter in The Branding, Accreditation, and Sustainability of Liberal Arts and Science Institutions</p>	Dr. S J Samuel Justin Manager-R & D Liberal Arts and Science Institutions	36

LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
132	16.09.2023	 <p>MCC Research Colloquium on 16.09.2023 @ 10 am via ZOOM</p> <p>Title Exploring Data Science- Unleashing the Power of Data In Diverse Fields</p> <p>Speaker Ms. Prateeksha Dawn Davidson Statistician, ICMR-NIE</p> <p>Meeting ID: 318 619 2180 Pass code: chemistry</p> <p>All are Welcome</p>	Prateeksha Dawn Davidson Statistician, Indian Council of Medical Research-NIE	44
133	23.09.2023	 <p>MCC Research Colloquium on 23.09.2023 @ 11 am via ZOOM</p> <p>Title Fostering Scholarly Expression: Crafting Scientific Papers and Reviews</p> <p>Speaker Dr. Sachidanand Singh Professor & Dean Sankalchand Patel University, Gujarat</p> <p>Meeting ID: 318 619 2180 Pass code: chemistry</p> <p>All are Welcome</p>	Prof. (Dr.) Sachidanand Singh Professor, Biotechnology, Sankalchand Patel University, Mehsana, Gujarat, India.	32
134	14.10.2023	 <p>MCC Research Colloquium on 14.10.2023 @ 10 am via ZOOM</p> <p>Title The Art of Journal Selection: Lessons from Captivating Case Studies</p> <p>Speaker Dr. Gowtham R Assistant Professor of Commerce CHRIST University, Bengaluru</p> <p>Meeting ID: 318 619 2180 Pass code: chemistry</p> <p>All are Welcome</p>	Dr. Gowtham R CHRIST University	63

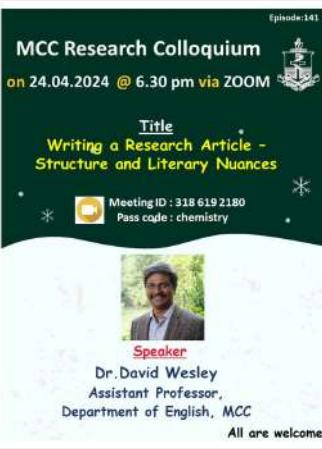
LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
135	21.10.2023	 <p>MCC Research Colloquium on 21.10.2023 @ 10 am via ZOOM Title Academic Writing: Understanding and Organizing the Mechanics of Words Speaker Ms. Christina Dhanasekaran Department of English, MCC All are Welcome Meeting ID: 318 619 2180 Pass code: chemistry</p>	Ms. Christina Dhanasekaran Department of English, Madras Christian College	42
136	25.11.2023	 <p>MCC Research Colloquium on 25.11.2023 @ 10 am via ZOOM Title An initiative to enrich the Essence of Scholarly Articles with Infographics for an Amplified Visibility in Research Publication Speaker Dr. S. Ida Madras Christian College All are Welcome Meeting ID: 318 619 2180 Pass code: chemistry</p>	Dr. S. Ida, Madras Christian College	50
137	02.12.2023	 <p>MCC Research Colloquium on 02.12.2023 @ 10 am via ZOOM Title Preventing plagiarism and effectively managing citations in scholarly writing Speaker Dr. L. Santhosh Kumar Kristu Jayanti College Bengaluru All are welcome Meeting ID: 318 619 2180 Pass code: chemistry</p>	Dr. Santhosh Kumar Kristu Jayanti College, Bangalore	72

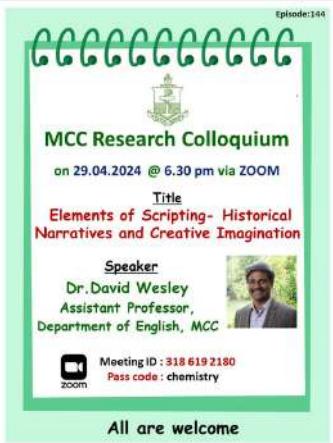
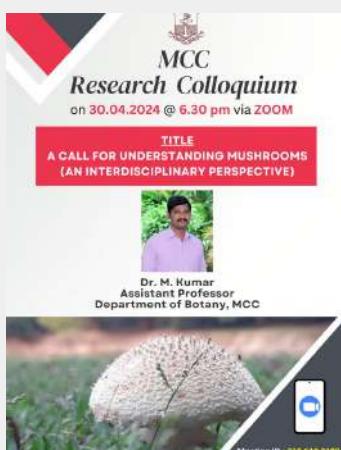
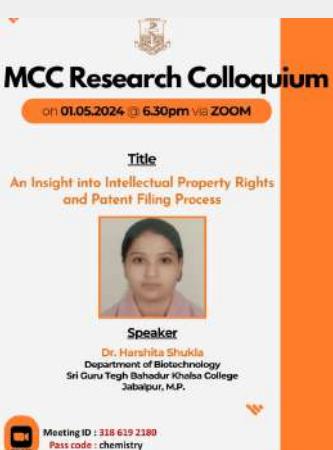
LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
138	09.03.2024	 <p>Title Beyond the Basics: Delving into the Intricacies of Service-Learning Design</p> <p>Speaker Mr. D. Joshua Solomon Assistant Professor of Economics Madras Christian College</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>All are welcome</p>	Mr. D Joshua Solomon Department of Economics, Madras Christian College	48
139	16.03.2024	 <p>Title Fostering Critical Thinking Through Culture Studies: A Multidisciplinary Approach</p> <p>Speaker Dr. G. Alan School of Social Sciences and Languages, VIT Chennai</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>All are welcome</p>	Dr. G Alan School of Social Sciences and Languages, VIT Chennai	35
140	23.04.2024	 <p>Title English at Work: Common Errors in Workplace Communication and How to Avoid Them</p> <p>Speaker Dr. S. Samuel Rufus Associate Professor, Department of English, MCC</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>All are welcome</p>	Dr. S. Samuel Rufus Department of English, Madras Christian College	140

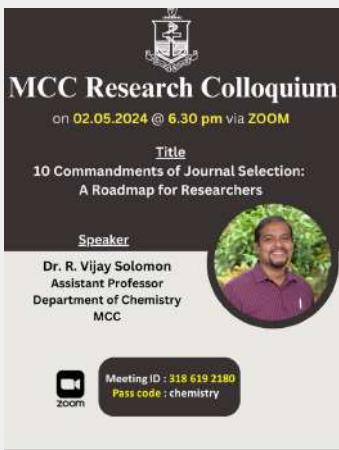
LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
141	24.04.2024	 <p>MCC Research Colloquium on 24.04.2024 @ 6.30 pm via ZOOM</p> <p>Title Writing a Research Article – Structure and Literary Nuances</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>Speaker Dr. David Wesley Assistant Professor, Department of English, MCC All are welcome</p>	<p>Writing a Research Article – Structure and Literary Nuances</p> <p>Dr. M David Wesley Department of English, Madras Christian College</p>	89
141	25.04.2024	 <p>MCC Research Colloquium on 25.04.2024 @ 6.30 pm via ZOOM</p> <p>Title Literature Review- Dovetailing Data with Words</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>Speaker Ms. Christina Dhanasekaran Assistant Professor, Department of English, MCC All are welcome</p>	<p>Literature Review- Dovetailing Data with Words</p> <p>Ms. Christina Dhanasekaran Department of English, Madras Christian College</p>	72
143	26.04.2024	 <p>MCC Research Colloquium on 26.04.2024 @ 6.30 pm via ZOOM</p> <p>Title Book and Film Review Writing – A Locutionary Exploration of Text & Screen</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>Speaker Ms. Christina Dhanasekaran Assistant Professor, Department of English, MCC All are welcome</p>	<p>Book and Film Review Writing – A Locutionary Exploration of Text & Screen</p> <p>Ms. Christina Dhanasekaran Department of English, Madras Christian College</p>	42

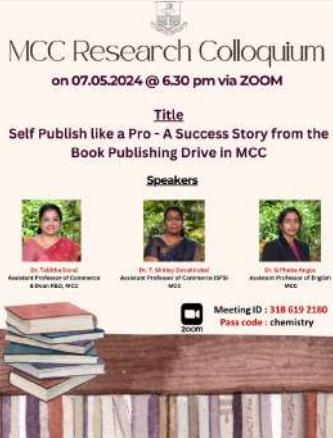
LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
144	29.04.2024	 <p>Elements of Scripting- Historical Narratives and Creative Imagination</p> <p>Speaker Dr. David Wesley Assistant Professor, Department of English, MCC</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>All are welcome</p>	Dr. M David Wesley Department of English, Madras Christian College	55
145	30.09.2024	 <p>A CALL FOR UNDERSTANDING MUSHROOMS (AN INTERDISCIPLINARY PERSPECTIVE)</p> <p>Speaker Dr. M. Kumar Assistant Professor Department of Botany, MCC</p> <p>Meeting ID : 318 619 2180</p>	Dr. M Kumar Department of Botany, Madras Christian College	40
146	01.05.2024	 <p>An Insight into Intellectual Property Rights and Patent Filing Process</p> <p>Speaker Dr. Harshita Shukla Department of Biotechnology, Sri Guru Tegh Bahadur Khalsa College Jabalpur, M.P.</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. Harshita Shukla Department of Biotechnology, Sri Guru Tegh Bahadur Khalsa College, Jabalpur, M.P.	34

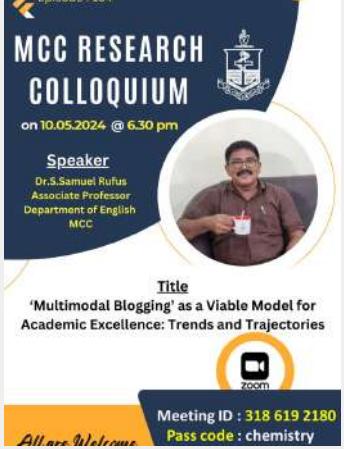
LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER	NUMBER OF DESIGNATION PARTICIPANTS
147	02.05.2024	 <p>10 Commandments of Journal Selection: A Roadmap for Researchers</p> <p>Speaker Dr. R. Vijay Solomon Assistant Professor Department of Chemistry MCC</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. R Vijay Solomon Department of Chemistry, Madras Christian College	84
148	03.05.2024	 <p>From Data to Design: A Visually Appealing Research</p> <p>Speaker Dr. Deborah Raj Assistant Professor i/c Department of Communication</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. Deborah Raj Department of Communication, Madras Christian College	45
149	04.05.2024	 <p>AI Tools in Scholarly Publishing: The Evolution of Reference Management Systems and Comparative Analysis of AI-Powered Tools</p> <p>Speaker Dr. J. Shiny Priyadarshini Department of Computer Science (MCA) MCC</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. J Shiny Priyadarshini Department of Computer Science (MCA), Madras Christian College	78

LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER DESIGNATION	NUMBER OF PARTICIPANT S
150	06.05.2024	 <p>Critical Reading of the Design of Service Learning Programme (SLP) : From Pitching to Praxis</p> <p>DR. P. WILSON PRINCIPAL & SECRETARY MCC</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p> <p>All are Welcome</p>	Dr. P. Wilson Principal & Secretary, Madras Christian College	106
151	07.05.2024	 <p>Self Publish like a Pro - A Success Story from the Book Publishing Drive in MCC</p> <p>Dr. Tabitha Durai, Dean R&D</p> <p>Dr. T Shirley Devakirubai, Department of Commerce (SFS)</p> <p>Dr. G Phebe Angus, Department of English</p> <p>Madras Christian College</p>	Dr. Tabitha Durai, Dean R&D Dr. T Shirley Devakirubai, Department of Commerce (SFS) Dr. G Phebe Angus, Department of English Madras Christian College	64
152	08.05.2024	 <p>Guidelines for Developing E-Content Facilitating Innovative Pedagogical Approaches in NEP 2020</p> <p>Dr. R Padmamala & Dr. T. Lavanya Suja Department of Computer Applications Madras Christian College</p>	Dr. R Padmamala & Dr. T Lavanya Suja Department of Computer Applications, Madras Christian College	44

LIST OF PROGRAMMES ORGANISED BY MCC RESEARCH COLLOQUIUM

MCCRC EPISODE NUMBER	DATE	TITLE OF THE TALK	SPEAKER DESIGNATION	NUMBER OF PARTICIPANT S
153	09.05.2024	 <p>MCC RESEARCH COLLOQUIUM on 09.05.2024 @ 6.30 pm via ZOOM</p> <p>Title Breaking Monotony: Path to Interdisciplinary Research</p> <p>Speaker Dr. J. Logamanya Tilak Assistant Professor Department of Zoology MCC</p> <p>Meeting ID: 888 819 2180 Pass code: chemistry</p>	Dr. J Logamanya Tilak Department of Zoology, Madras Christian College	41
154	10.05.2024	 <p>MCC RESEARCH COLLOQUIUM on 10.05.2024 @ 6.30 pm</p> <p>Speaker Dr. S. Samuel Rufus Associate Professor Department of English MCC</p> <p>Title 'Multimodal Blogging' as a Viable Model for Academic Excellence: Trends and Trajectories</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. S Samuel Rufus Department of English, Madras Christian College	39
155.	11.05.2023	 <p>MCC RESEARCH COLLOQUIUM on 11.05.2024 @ 6.30 pm via ZOOM</p> <p>Speaker Dr. U. Senthilkumar Department of Botany, MCC</p> <p>Title Increasing Research Visibility and Effectiveness through Search Engine Optimization - A Practical Approach</p> <p>Meeting ID : 318 619 2180 Pass code : chemistry</p>	Dr. U Senthilkumar Department of Botany, Madras Christian College	37

A YEAR IN REVIEW

2023 - 2024

The Office of Research and Development (R&D) at Madras Christian College through its annual report for the academic year 2023-2024, has showcased a period of significant progress and a strong commitment to creating a vibrant research ecosystem. This report highlights various initiatives and achievements, demonstrating the college's dedication to quality research, faculty development, and impactful contributions to the academic community and beyond.

Enhancing Research Quality and Output

A key focus of the Deanery has been on improving the quality of research and increasing publications in reputable journals. The establishment of the MCC Research Colloquium has played a vital role in this effort, providing guidance and support to faculty, research scholars, and students on scholarly publishing and scientific writing. This initiative has contributed to a notable increase in publications in Scopus and Web of Science-indexed journals and a decline in publications in predatory journals, reflecting a commitment to research integrity. The college has also seen a positive impact on its National Institutional Ranking Framework (NIRF) score, with a significant rise in the Research and Professional Practice component. This improvement is attributed to the enhanced quality of publications and the various capacity-building programmes and workshops conducted by the MCCRC.

Supporting Faculty Research

To further encourage research activities, the Deanery introduced the MCC Seed Money Grant, providing financial support to faculty members for socially relevant and scientifically challenging projects. This grant has enabled faculty to conduct preliminary studies and refine their research proposals, ultimately leading to the pursuit of larger grants from external funding agencies.

Promoting Research Ethics

Recognizing the importance of ethical research practices, the Deanery implemented the Research and Publication Ethics course for research scholars. This programme covers key topics such as the philosophy and ethics of research, plagiarism, research conduct, and ethical guidelines for publishing, ensuring that research scholars are well-versed in ethical considerations. The MCC Institutional Ethics Committee has also been instrumental in ensuring that ethical considerations are adhered to in research projects.

Knowledge Sharing and Collaboration

The Deanery has actively engaged in knowledge sharing and collaboration through various initiatives such as the programmes of the MCCRC, that has extended its expertise to other institutions, by conducting capacity-building programmes and workshops on research methodology and manuscript writing. An Interdisciplinary Conclave on service learning programmes was organized to inculcate cross-disciplinary collaborations among faculty, research scholars, and students.

Celebrating Achievements

The college also recognizes and celebrates research achievements through incentivization. Cash incentives are awarded to faculty, research scholars, and students for publishing in high-quality journals. Outstanding research contributions are acknowledged annually at the convocation through the Alumni Publication Awards.

Focus on Sustainable Development Goals

A significant initiative in 2023-2024 was the book publishing drive aligned with the United Nations' Sustainable Development Goals (SDGs). Seventeen books, each dedicated to one SDG, were published, featuring contributions from faculty members and research scholars across various disciplines. This project provided a platform for faculty to contribute to addressing global challenges and enhanced their publishing capabilities.

Looking Ahead

The annual report reflects the Deanery's functioning to creating a supportive and dynamic research environment at Madras Christian College. Through strategic initiatives and a focus on quality and ethics, the college continues to work towards strengthening its position as an institution for research and development. We remain dedicated to equipping our faculty and research scholars with the resources and support necessary to push the boundaries of knowledge and address the pressing challenges of our time. As we embark on the next academic year, the office of Research & Development reaffirms our commitment to excellence, integrity, and the pursuit of knowledge that serves humanity.

God bless the Madras Christian College !

Editors

Dr. Tabitha Durai Dr. Marilyn Gracey Augustine Dr. P Hanumantha Rao

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drdoffice@mcc.edu.in

<https://mcc.edu.in/research/>



**Cultivating a dynamic
research ecosystem
that inculcates excellence
and generates impactful
solutions for a
sustainable future**



MADRAS CHRISTIAN COLLEGE (Autonomous)
Office of Research & Development

