



A COVID-19 pandemic special drive for Undergraduate Students



Identification of Research Problem & Research Communication

Internship Program (Practice School - I)

For
BITS Pilani

Course Mentor
Prof. Dr. Natarajan Gajendran
Editor, Indian Journal of
Science and Technology
www.indjst.org

Course Coordinator
Mr. Aalelai Vendhan
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www.scholarlyneeds.com



Invitation for Publication

Dear Professor/Researchers,

We invite you to submit your manuscript(s) to <https://indjst.org>. The articles must be based on new and novel research rather than a repeat of previous studies or analogous published work.

The journal is currently indexed in Web of Science (zoological records).

Indian Journal of Science and Technology is an open-access journal publishing full-length research papers and review articles covering subjects that fall under the wide spectrum of science and technology. Since its inception in 2007, the journal has showcased over 14000 quality research articles which helps our scholars during the COVID-19 pandemic for free access (<https://indjst.org/archives>) (<https://www.iseeadyar.org/ijst-articles>).

We aim to inform authors of the status of their manuscript(s) within 24 hours of submission. Indian Journal of Science and Technology is a weekly publishing journal.

Areas of Scope

Under the realm of science and technology, the coverage includes environmental science, pure and applied mathematics, agricultural research and engineering, biology, biotechnology, bioinformatics, Healthcare sciences (including clinical medicine, preventive medicine & public health), physics, biophysics, computer science, chemistry, and bioengineering, to name a few.

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Regards,

Team INDJST



About the Course

As we are all aware, the pandemic situation has brought challenges in the teaching and learning process too. This internship identifies interested young scholars having a thirst for research and at the same time pursuing UG in an institution. Initially, we have identified such motivated learners from one of the premier Institutes BITS Pilani (PS-1) for such a program. Now, to connect such scholars with research doyens, off the campus, the intended course will be useful.

The preparatory course has been offered online for a duration of 2 months and it was made free. The primary objective of this course is to prepare and encourage selected UG students from the BITS Pilani PS-1, for their 'Research aptitude' during the COVID-19 pandemic.

Participants were asked to identify research topics of social problem-solving nature; which was moderated or guided by subject doyens online/ offline or from research expert panels of iSee; they learnt how to choose meaningful research topics; so that when opportunity warranted scholars will be ready to generate/conceive ideas during the needed times.

Participants were expected to learn theoretically how to execute the objectives by adapting a suitable research methodology. Participants were given the task of preparing the data set and also to learn how to interpret the research (anticipated) outcome with the existing reports. Participants were given the opportunity to develop how to draw a meaningful conclusion from the anticipated results and the existing research advancements. Participants were also made to develop familiarity/knowledge on the topics given in the schedule.

Upon completion of the course, the participants were able to develop knowledge/skills in conceiving research problems and develop theoretical and practical knowledge on how to communicate a research piece for journal publication. They had the opportunity to interact with Journal Editor "Indian Journal of Science and Technology" and other research experts to get valuable expertise in the research communication field.

The pandemic period has been utilized by linking the scholars and mentors and preparing the motivated scholars by strengthening their research aptitude ready to kickstart for actual project work without time requirements for preparation.



Indian Society for Education and Environment (iSEE)

iSEE (www.iseeadyar.org) is a non-profit organization (NGO) founded in 2007 as a Society by the initiatives of Scientists, Educationalists, and Healthcare professionals from India.

iSEE strives to contribute its mites in the realm of Education, Environment, and Health. In this regard, iSEE has been engaged in spreading Health and Environment awareness by conducting special campaigns, seminars, and conferences and also by supporting research projects.

iSEE pays special attention to bridge knowledge gaps and economic disparity for information access among regions and strengthens the academic ties among young researchers with experts globally. In this regard, iSee conducts conferences, workshops and encourages open access publications.

Thus, iSee is benefitting the Researchers as well as the world community with the fruit of innovation through unlimited knowledge sharing. With the above objectives, iSEE Published peer-reviewed articles (> 14000 research articles through its journals of various fields) by means of open access policy, research work-sharing, the peer review process, interaction, and free access to innovative ideas by removing the regional knowledge disparity and ease the economic impediments in the learning process.



Scholarly Needs (SN)

iSEE encourages the education of millennium youths for employability with the consciousness of ethics and environmental care. It creates an exclusive forum for young researchers to learn from the peer group and to devise strategies with the help of experts to apply their learning for social problem solving through the interactive forum (www.scholarlyneeds.com).

SN is a professional platform for budding scholars/researchers to get connected among themselves and also with leading scientific professionals freely. This interactive forum accelerates free information flow to enrich young research minds and ignites their passion for innovations. In this regard, SN also networks with industries to post their problems to SN intellectual forum and seek solutions that can ultimately benefit society.

To reach out further, SN also joins hands with various Academic Institutes to conduct conferences and workshops to create a common platform for experts, researchers, educational managers, policymakers, and industrialists to join and deliberate.

SN meticulously put forward online webbing of resource persons, industry, and scholars to interact on a scientific and professional needs. Currently, SN is not hoarding any published contents to protect the interest of original publishers. At the same time, it provides the needed hyperlink or DOI of articles of research interest.

SN continuously monitors and ranks the scholar's research activities as evinced from the SN forum which is considered to be the best.

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Course Mentor

Prof. Dr. Natarajan Gajendran

Dr. Natarajan Gajendran leads the Indian Society for Education and Environment as the President. He is also the Co-founder & Chief Executive Officer of Scholarly Needs and Editor in Chief for the Indian Journal of Science and Technology.

He has held and managed several roles with flying colors in various research organizations and educational institutes in India as well as abroad. Some of his notable positions are Founder and Director of Pearl Academic Leadership Institute (PALI); Director of Curriculum Development & Review and the Head of Department (Botany) at Eritrea Institute of Technology, East Africa; Visiting Scientist, Japan; Scientific Officer at Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, and Bhabha Atomic Research Centre (BARC), Mumbai; Adjunct Faculty at Madras University.

His impeccable service has been recognized by awards from several granting institutions including the Best Teacher Award - Tamizhaga Institute of Educational Research and Advanced Development; Hiroshima International Care for the Radiation Exposed (HICARE) - International organization, Japan; Technical Excellence Award - Bhabha Atomic Research Centre (BARC)



Course Coordinator
Mr. Aalelai Vendhan

Aalelai Vendhan is the Co-founder & Chief Technology Officer of Scholarly Needs. He is also working as a Quality Control Team Leader in the Indian Journal of Science and Technology. He has been working in the journal for almost 3 years.

He has won first place in an all-India level case study competition, conducted by IIM Kashipur and is working towards the development of the product's prototype. He was also awarded as Mr. Popular of the ECE department in his undergraduate studies. He has 4 publications to his name with one best paper presentation award at an international conference.

He was also the Chairman of the IETE Student forum at his college during his undergraduate studies. Currently, he is pursuing M.Tech Microelectronics in BITS Pilani, WILP division.

Course Schedule

Week	Content	Class date
1	Orientation	31-5-2021
	Problem identification - Task 1 External Research Expert - Prof. S.E. Kannan	1-6-2021
2	Literature review - Task 2 External Research Expert - Dr. P. Swaminathan	5-6-2021
	Objectives - Task 3 External Research Expert - Dr. P. Swaminathan	9-6-2021
3	Methodology - Task 4	12-6-2021
	Results and discussion - Task 5 External Research Expert - Mr. Krishnamoorthy	17-6-2021
4	Conclusion - Task 6 External Research Expert - Dr. Vaidyanathan	22-6-2021
	Article writing - Task 7 External Research Expert - Mr. M. Soundarakumar	25-6-2021
5	Research fora - Task 8 External Research Expert - Dr. P. Swaminathan	1-7-2021
	Scholarly Needs - Task 9	6-7-2021
6	Peer review - Task 10 External Research Expert - Mr. Harish	10-7-2021
	Plagiarism - Task 11	16-7-2021
7	Final review - Feedback	19-7-2021
	Concluding session and Certificates	23-7-2021

All the sessions were mentored and discussed by Prof. Dr. Natarajan Gajendran & course coordinator Mr. Aalelai Vendhan.

Internal Experts

S.No	Name of the Expert	Topics
1.	Prof. Dr. Natarajan Gajendran	<p>How to choose a research problem relevant to social needs (Problem Identification)</p> <p>Framing of research objectives (Objectives)</p> <p>Delineating suitable methodology to execute objective (Methodology)</p> <p>Results and Discussion</p> <p>Writing a suitable Conclusion (Conclusion)</p> <p>Article Writing (Title, Authorship, Affiliations, Abstract, Keywords, Acknowledgement)</p> <p>Peer review</p> <p>Plagiarism</p> <p>Students work feedback and performance Evaluation (through the course)</p>
2.	Mr. Aaleelai Vendhan	<p>Preparing and conducting Psychometric assessment</p> <p>Literature Review</p> <p>Referencing</p> <p>Research Fora (ResearchGate, Academia, ORCID)</p> <p>Hands-on experience on Scholarly Needs (Workshop)</p> <p>Google Feedback Sheet (approx 100 questions)</p> <p>Students work feedback and performance Evaluation (through the course)</p>



External Experts

Prof. S.E. Kannan

Shri. S.E. Kannan is a former Director, who served in the Safety Research Institute of Atomic Energy Regulatory Board (AERB- SRI), Kalpakkam, Government of India.

After 39 years of distinguished service in Atomic Energy, he continued his academic contribution by serving as Professor and HoD in the School of Management, Vel Tech Technical University, Avadi, Chennai.

Shri SEK has represented our country in the International Meetings, in UK, Japan, and India, which was organized by the International Atomic Energy Agency.

He continues to motivate the youth population of India, to date, by delivering talks and organizing meetings and having dialogues with interested scholars. During his research talk as an inaugural address, in this internship, he provided valuable insights on the topic “Research Methodology”. This notable speech also included various sub-topics like identifying the research area and research problem, formulation of the problem statement, deciding the scope of the problem, execution of the project, and project documentation.



Prof. Dr. P. Swaminathan

As an Outstanding Scientist at Indira Gandhi Centre for Atomic Research (IGCAR), Dr. Swaminathan contributed to the development of the Instrumentation and Control System for Fast Breeder Test Reactor (FBTR); the Airborne Time Domain Electromagnetic System to detect deeply buried Uranium ores.

Due to his passion for teaching and research, even after he retired from DAE, he continued to offer his expertise to various academic research institutes. Thus, Dr. Swaminathan served in SASTRA University, Thanjavur as Dean, for five years. Further, he was invited to serve as Vice-Chancellor, VELS University; during that tenure, the university moved up from NAAC-B Grade to NAAC-A Grade. He has also guided the faculty members to get NBA accreditation for Engineering Programs, Management Program, and Pharmacy Program at Vels University

Due to his impeccable track record, he was honored with the prestigious Homi Bhabha Award. He is the Distinguished Alumni Awardee of the National Institute of Technology, Tiruchirappalli. As Chairman of the NAAC Peer Team, Prof. Swaminathan has assessed Higher Education Institutions across the country.

Prof.PS has provided valuable insights on the topic “Software Failures in Hard Real- Time Systems” and “Reliability of Instrumentation and Control System”. This talk also included various sub-topics like famous mission failures (Mariner-1, Therac-25, and NASA Mars Polar, Lander 1999) and the development of a safety intelligent system (waterfall model).



Mr. S. Krishnamoorthy

Mr. S. Krishnamoorthy is a retired General Manager, in the Commercial, Marketing, and Proposal sector in Bharat Heavy Electricals Limited (BHEL), Tiruchirapalli. He has served over 38 years in BHEL in various departments.

His working experience includes the following; Research and Development of Fluidised Bed Boiler specifically in the area of Coal preparation and feeding, Development of Heat Recovery Steam Generator, Contract management, Preparation and concluding License agreement for Circulating Fluidised Boiler and Proposal making, Pricing, Contract Management for Super Critical Boiler.

Mr. Krishnamoorthy has provided valuable insights on the topic “Understanding Company life”. This talk also included various sub-topics like development and marketing of boilers, situation analysis of a company, and decision-making process in a company.



Prof. Dr. G. Vaidyanathan

Dr. G. Vaidyanathan is a retired Director and an Outstanding Scientist, in Fast Reactor Technology (IGCAR), Kalpakkam. He has 38 years of experience in the Dept. of Atomic Energy, IGCAR, Kalpakkam.

Currently, he is a Guest Professor at Vellore Institute of Technology (Vellore) and National Institute of Technology (Nagaland). Also served as Visiting Professor in SRM University, Indian Institute of Technology (Madras) & Rajalakshmi Engg College, Chennai.

He has several awards to his credit: Sisir Kumar Mitra Award by Indian Institution of Chemical Engineers; Professional Excellence Award by The Institution of Engineers (INDIA); Rajbasha Bhushan Award by Department of Atomic Energy, India. He is also a Member of the Sodium Safety Panel, Atomic Energy Regulatory Board.

He exhibited himself as a passionate researcher, writer, and teacher. He has written 6 books on nuclear energy and heat transfer phenomena. During his research talk in this internship, he provided valuable insights on the topic “Fluid dynamics and Mathematical Modelling”. This talk also included various sub-topics like mathematical methods in real life, the similarity between heat transfer, fluid flow, and electric circuits, Fast Breeder Test Reactor, Steam generators, and steps in research.



Mr. Soundarakumar Masilamani

Mr. Soundarakumar is a 37-years veteran of the Electronics, Instrumentation, and Telecommunications industries. Recently served as Director - Technology and CDOT Board Member of Centre for Development of Telematics (C-DOT), Premier Telecom R&D Centre of Government of India, responsible for Design, Development, Deployment, Product Management, Manufacturing/EMS, IOM, Transfer of Technology(TOT) to multiple Manufacturers, Vendor Management, Business Alliances & Partnerships.

Mr. M. Soundarakumar was instrumental in the evolution of a Telecom Manufacturing Ecosystem based on CDOT's Technology Transfer program to facilitate manufacturers in the large-scale production of high-quality CDOT products and solutions which pushed the country in achieving self-reliance in the Telecom sector, nation-building, and growth of the Indian economy. He also focuses on the Development of Products & Solutions for Telecom Networks in the area of Rural Communications, Radio, Satellite, Optical, IP Core, Access, Wi-Fi,4G LTE-A, 5G.

Mr. Soundarakumar has provided valuable insights on the topic "Latest Telecommunication trends and Research Opportunity in the Telecom area". This talk also included various sub-topics like smart city applications, smart villages, the evolution of 5G technology, Smart education.



Mr. Harish Kumar Chakerwarti

Mr. Harish Kumar Chakerwarti, a Scientist in Terminal Ballistic Research Laboratory (TBRL) Chandigarh. He has been working in Defence research and development organization (DRDO) as a Scientist for the last 17 years (ongoing).

Mr. Harish is working on Missile and Special Warhead Systems. He finished his M. Tech. in Electrical Engineering from the Indian Institute of Technology (IIT) Kanpur, Uttar Pradesh. He has developed various products and initiating systems for missile & special warheads.

Mr. Harish has also developed many products for the applications of the Indian Air Force and Indian Navy. Some of them were already inducted. He has published more than 20 papers in reputed international journals and is a reviewer related to research work /Book /project proposal for several projects.

He is the recipient of the Best Technology Award (2009, 2010), High Energetic Materials Award (2011), Award of Strategic Contributions (2015, 2020), and Laboratory Technology Group Award (2020). Mr. Harish has provided valuable insights on the topic “DRDO contribution in the field of research and development”. This talk also included various sub-topics like missile systems, aeronautical systems, naval systems, Indian supercomputers, and technology transfer.



Students Feedback

Mr. Anto Felix

“Over the last 7 weeks (from May 31, 2021 to July 23, 2021), learning about the various aspects of the research process: the steps involved in writing a research article, publishing the article on a research forum, peer-reviewing an article, checking for plagiarism, etc. along with learning about different research fora, their respective advantages and disadvantages, and the different guest lectures on a wide range of topics from the importance of research to the role played by the DRDO, has really helped me get a grip on the research process, know about the scientific community and learn about different industries and their working.

The biweekly classes along with the tasks assigned at the end of each class ensured a continuous learning process and the feedback provided on the tasks allowed for correct implementation of the aspects of research taught in the prior lectures. The classes taken by Prof. Natarajan Gajendran and Mr. Aalelai Vendhan helped clarify the different parts of the research process shared in the modules. The guest lectures while straying away from the focus of the course, were an insightful look into different aspects of industries from the perspective of experts in the field.

Some simpler parts of the modules could have been clubbed with another part instead of having their own session (for example, objectives and methodology or results and conclusion). Other than that, the course was paced well, with sufficient time in between two classes and assigned tasks. The constant help and support by the course coordinators and the allotted PS-1 faculty helped ensure an enjoyable and informative learning experience while simultaneously not being overwhelming at any point.”



Mr. Atharva Ajit

“My experience with iSEE has been very satisfying. From attending the guest lectures to completing tasks and getting constructive feedback from instructors, I feel lucky to be a part of the organization this summer.

Both the mentors, Prof. Gajendran and Mr. Aalelai were very helpful throughout the summer, they gave positive feedback about the tasks submitted by us, and explained each task very clearly, which helped us in writing our first paper, which otherwise feels like a very daunting task. Writing a research paper is tough but both the mentors made sure that we do not feel overwhelmed by the work and praised us wherever they felt we did good.

I would like to mention that the guest lectures, taken by some of the most eminent personalities in the industry for a long time, were very interesting and intriguing at the same time. I personally learned a lot from them.

Mentors were very considerate as they understood the kind of difficulties students are facing during an online Practice School. I feel that both the mentors focused on churning out ideas from us rather than giving everything by themselves, which encourage students to be more involved in the sessions and be attentive, all the scholars put their best effort into finding the right kind of subject/topic for research and then the mentors added up to the idea of scholar, making it, even more better and efficient.

Overall I feel that interning with iSEE was a great experience and I would definitely try to be in touch with the mentors, and take their guidance wherever required.”



Mr. Harshit Shukla

“**W**riting a research paper is a daunting task and requires a lot of motivation, but with the help of mentors at ISEE, it felt effortless; their stepwise approach and personal attention helped me most. I feel lucky sometimes being part of ISEE this summer; it motivated me to research the topic of my interest, i.e., supply chain management using blockchain technology.

Their feedbacks were very constructive throughout and helped us a lot in writing a good research paper. At the same time, they were very generous and considerable. Also, the guest lecture taken by personalities who had years of experience in the industry was an excellent opportunity for us, students, to learn from them. Their immense knowledge and expertise in their respective fields helped us understand the industry better; I felt blessed sometimes attending their lectures and wish to be a part of more such lectures in the future.

I feel both the instructors were very thoughtful when planning this course; their emphasis was more towards our involvement than they spoon-feeding us, which gave us an excellent opportunity to learn and improve upon our skills; also, they kept presentations interesting so that we remain attentive throughout the lecture, their way of delivery never felt like we are sitting at homes and attending classes, most of the session I attended was very interactive, and everyone participated.

Overall, interning with ISEE was a great learning experience, and I would love to be in touch with mentors who can help me in my research journey ahead.”



Mr. Mohan Teja

“**W**hen I first learned that iSEE was the allotted PS station, I researched about it and learned that it is an NGO, its head is the editor of INDJST. As I have thought then, I have got a pretty extensive, and fully-fledged research experience. Starting from the theory sent to us for each module to hosting talks with esteemed personnel, iSEE has tried its best to make our journey easier and more extensive. The work from my side had some slack, but the coordinators Natarajan Sir, and Aalelai Vendhan have always encouraged me, gave me the time needed to bring out a paper.

I did learn many things throughout this course, the vast area of research, the number of people involved in each and every corner, in each and everything we use trying to make new things, and the old ones better. The talks with the scientists were informative. We got to look inside the working of a nuclear reactor, considering many aspects of an industry, the biggest bugs that proved to be fatal, the contributions of our DRDO, many more – and all of them given by people with decades of experience in their respective fields.

I would like to thank my course coordinators for giving me the opportunity to learn and experience new things. I do hope that iSEE as a whole has a great journey, its very own research forum Scholarly Needs bring in more and more researchers together”.



Ms. Rajoli Sudheshna

“My experience in this PS station is new and very useful. I learned many things like how to read an article and also how to write it. The steps which are to be followed while writing an article are explained clearly by the course coordinators. They have explained each and every step to be followed and gave us some examples of their work. Every assignment we have submitted is been checked and sirs, gave us feedback on the work. They told us where we did mistakes and corrected them and told us what to do to complete the task. They gave some useful tips to upgrade the work we have done. We also had guest lectures from different professors. They explained different topics every week. Even though some are not from our respective branch they gave us new useful information which has to be considered. The course has been going well in this pandemic time and made us occupied by the work.

We have been explained some important topics like citation, referencing, plagiarism which are very important to consider while writing an article. It is important to cite or refer to an article in our article when we are extracting some information out of it. The extracted information has to be written in our own words like from our perspective. The above has to be done so that our work is not considered plagiarized. Discussion and conclusion are also important parts of the article as they tell us the highlights of the topic. It should be done in such a way that states how our research objective and the work we have done are related.

From the time I spent in PS I not only got to know how to write an article but also how to find a research problem. By reading different types of articles I got to know how to explain an issue from different perspectives. I gained a lot of information and experience from the internship at this time. I thank our course coordinators Natarajan sir and Vendhan sir for this experience which is not possible without their help. Thank You.”



Mr. Vaibhav Mehta

“The course was well structured and thoroughly planned. It taught us from the basics of how to choose a Research problem to how to go about writing our own Research paper. Course coordinator Mr. Aalelai Vendhan and Natarajan sir guided us on every step and critically reviewed our work and gave us valuable feedback and how to improve upon our Research work. In this course, we came across many Research fora like Academia.edu and Research gate and learned about their features. We became the registered members of Scholarly needs which is the first kind of research fora in India and gained access to all the features of the fora and introduced us to the community. The lectures by prominent industry experts like Prof. S.E.Kannan, Mr. Krishnamoorthy, Dr. Vaidyanathan, Dr. P. Swaminathan not only taught us about the importance of Research and how to improve upon it but also gave us exposure to the industry life and how can smallest of error bring much harm if we are not careful enough. In the time of pandemics, the course helped us invest our time in something productive. In my view, the course helped me to brush up on some of my concepts and introduced me to some new concepts like peer review and its importance in the field of research. Overall, in my view, it was a wonderful experience to work under the able guidance of Prof. Natarajan who has years of experience in this field, and Mr. Aalelai and to learn from them firsthand.”



Mr. Yash Gondhalekar

“As I look back to myself at the start of the internship with iSEE, I have gained significant exposure to the field of research, its idiosyncrasies, and the process of effective research communication. It has taught me several worthwhile qualities regarding the research methodologies that otherwise are never taught to undergraduate students in their curriculum. Students generally learn how to write a research paper and improve their research skills in an unplanned manner. However, having taken this course, I feel, has undoubtedly given enough initial boost to smooth-sail through research projects that we could be a part of in the future. As part of the internship, we worked on defining our research problems, devising a formal problem statement, reviewing the literature, questioning existing research, devising our methodologies, and peer-reviewing a research paper. This practical experience would assist us in the future. During the internship, we learned many meaningful insights from the special guest lectures held in almost all classes. These learnings would surely help us in some form in the future since they were given by eminent people from academia and industry having the first-hand experience in their fields. The lectures and helpful insights by Professor Natarajan Gajendran and Mr. Aalelai Vendhan provoked and encouraged us to question current affairs and develop innovative solutions. The classes were conducted regularly on time, and details of tasks were shared with us well in advance. Moreover, any doubts/clarifications were handled efficiently. I would sincerely thank Prof. Natarajan Gajendran and Mr. Aalelai Vendhan for their continuous support, guidance, and feedback regarding the tasks during the PS-1 internship.”



Mr. Akshat Shisodia

“The course conducted by the Indian Society for Education and Environment was really useful to me as it helped me learn about the intricacies of writing a research paper as well as the art of communicating any conducted research to the scientific community via research fora. The course instructors, Prof. Natarajan Gajendran and Mr. Aalelai Vendhan were extremely patient with doubts and clear presentations that explained all the topics covered across the duration of the course. At the end of every meeting, they would also go on to address each individual’s assignment individually, providing personalized feedback. They also brought in several experts in the field of research that shared their expertise with us as well as their experiences in their respective fields of research.

The course covered the individual aspects of a research paper, such as the introduction, research question, research methodology, results and discussion, conclusion, and references. We were provided with clear guidelines that made it easy to translate our information into a presentable research paper. We also learned about various research fora and plagiarism, both of which are important to publishing a research paper.

Each topic was followed by a task related to the topic that we were asked to complete, so as to consolidate our understanding of the topic. The tasks were assigned to us with plenty of time to submit before the deadline. The deadlines were also flexible, an extension could be received by mailing the course instructors asking for one in the case of a problem being encountered.

As a Physics major, this course was beneficial to me as the knowledge I have gained on the topic of research and research papers is going to be tremendously useful. I am glad that I was provided the opportunity to participate in this course conducted by iSEE and spend time with Prof. Natarajan Gajendran and Mr. Aalelai Vendhan to further my understanding of research publications.”



Mr. Hardik Goyal

“I am very grateful to iSee for teaching me so much about research papers and everything related to it. I gained a lot of knowledge regarding the topic which I was given.

I got to know-how from a small initiative or a step we can save a lot of water in our households in day to day life. This course taught me a lot about the things which I was completely unaware of. I got to know how to write a research paper, article. The methodology, results, and discussion were all part of a research paper which I learned throughout the course.

I got to know what plagiarism is, which I think everyone should be aware of as it is one of the most important things and we commit this everywhere. Peer review is the process which I found most interesting and difficult at the same time as we have to review someone’s article/research paper and find flaws in it.

The most interesting part of being with iSee is that we had a session every week with our mentor and station coordinator. They were so helpful in every part of our work. The sessions were interactive and full of knowledge. Every week there was an invited guest from an esteemed organization who shared his experience with us and a lot of knowledge which was very helpful for us.

This course couldn’t get any better as I learned a lot of things and everything was new to me. I am sure that it will help me in the future also whenever I will be in need of it. It will be my honor to be with iSee in the future also. I am really thankful to Mr. Aalelai Vendhan and Mr. Natarajan Gajendran for being with us and teaching us all of this.”

I want to thank the faculty-in-charge Mr. R. Raghunathan for his constant support and advice.

Mr. Neerukonda Harsha

“Toward the start of the course, I had negligible information about the stuff to compose a decent what’s more, calculable examination paper. I had the experience of a little report arranged undertaking thus I perceived the course organizer’s vision about perceiving issues around us and bring the change through thinking innovatively with feasible logical intercessions. Be that as it may, my earlier information ended up being tiny when contrasted with the valuable procedures bestowed by both Prof. Gajendran Natarajan what’s more, Mr. Aalelai Vendhan. Their methodology was extremely useful in seeing every single viewpoint of an exploration paper. They separated every little part from issue recognizable proof, writing survey to conversation and ends. Giving sufficient chances to each sub-part just expanded my learning and getting a handle on capacity. On top of sectioned assessment, the course facilitators additionally gave basic criticism for the advancement of our papers and were idealistic in their methodology. To be ready to work close by the makers of India’s first research discussion just enhances the gigantic learning experience. I took in the significance of innovation and references. The various parts of references furthermore, their suggestions whenever fouled up where I was not aware of the citation and other stuff before this course. The research article that I worked on helps me to get involved in writing reviews, referring to furthermore, understanding of information in regards to the issue proclamation. With industry-wide eminent specialists giving exceptional talks each week, I was presented with the sheer unlimited conceivable outcomes of research and advancement in our country. I feel fortunate to have gotten particularly intrigued and connecting with organization resolved to spread the research mentality in our country. As an individual keen on research, I feel appreciative to the association for boosting and backing us with their mentorship and support to speed up my exploration advantage.”



Mr. Pradyut Kumar

“At the beginning of the course, I had minimal knowledge about what it takes to write a respectable and appreciable research paper. I had the experience of a small study-oriented project and so I understood the course coordinator’s vision about recognizing problems around us and how to implement change through scientific interventions. However, my prior knowledge turned out to be infinitesimal as compared to the useful techniques imparted by both Prof. Natarajan Gajendran and Mr. Aalelai Vendhan. Their approach was very helpful in understanding each and every aspect of a research paper. They broke down each little component from problem identification, literature review to discussion and conclusions. Giving ample time to each sub-part only increased my learning and grasping ability. On top of segmented evaluation, the course coordinators also provided critical feedback for the betterment of our papers and were optimistic in their approach. To be able to work alongside the creators of India’s first research forum only amplifies the huge learning experience. I learned the importance of originality and citations. The different aspects of citations and their implications if done wrong were something I was not privy to before this course. The research article that I worked on gave me hands-on experience with literature surveys, referencing, and interpretation of data regarding the problem statement. With industry-wide renowned experts giving special lectures every week, I was exposed to the sheer endless possibilities of research and development in our country. I feel lucky to have received such an interested and engaging organization determined to spread the research mindset in our country. As a person interested in research, I feel grateful to the organization for giving me such mentorship to accelerate my research interests.”



Mr. Golam Wahid

“The course was efficiently planned and well-executed by the course coordinators, complimented by the continuous support of eminent professionals from the industry, and was also a major learning experience during the pandemic. It did not only cover important aspects of the research process, it also taught us how to effectively articulate our findings in the form of a research article, according to all the guidelines and principles. Additionally, we were taught about research forums like Academia and Research Gate, and also given an opportunity to explore Scholarly Needs. We were given guidance and exposure to the research industry by eminent professionals, Prof. Kannan, Dr. Vaidyanathan, Dr. Swaminathan, and Dr. Gajendran. The course taught us from the very fundamentals, slowly covering the entire landscape of the entire academia in general. In the midst of a pandemic, the course enabled us to put our time to good use. The course, in my opinion, assisted me in brushing up on some of my concepts while also introducing me to some new ones, such as peer review and its importance in the field of research. Overall, working under the capable leadership of Prof. Natarajan, who has years of experience in this field, and Mr. Aalelai, and learning from them firsthand was an amazing experience in my opinion.”



Mr. Nadella Dilip Kumar

“First of all, I am grateful to the Indian Society for Education and Environment (ISEE) for recruiting me as a research intern and creating such a nice environment for us to learn about research. I thank my course coordinator Mr. Aaleelai Vendhan and prof. Natarajan Gajendran for teaching every aspect of the research very well and also for giving us time to replicate our work and then again, they studied our work and suggested corrections, and giving us feedback.

In this course, I came to know how to select a research problem and how to analyze it and I came to know how to write references and also, I researched some articles and find a method, and then with the help of our coordinators, they suggested some changes and then they also explained us about how to write conclusions for our report and also how to present our results in a tabular format. And also, in this course, I came to know about various research forums and their uses and also about peer review. They also provided us with an article to do peer review which was very helpful. And finally, the important thing they taught us about plagiarism which is not allowed in any research paper, they gave us reports of ours among ourselves randomly and asked to check plagiarism. Not only just saying about a topic but there is also practical implementation here. So that’s what makes me so happy about this PS station”.



Experts Feedback

Mr. S. Krishnamoorthy

The organization acted in a professional manner in making the lecture happen. I enjoyed every step. Since it is an online class the experience involved in each student's reaction was missing. Otherwise, the arrangements made you have freedom with comfort to express your viewpoint for the benefit of students.

Dr. G. Vaidyanathan

The mini-course is important for students to know what the job world is expecting them to do. Some may go towards Management, some to research, and many would go for IT jobs. It is essential for them to know real-life situations.

In this connection I have the following observations on the sequence of lectures :

- Technology Management- the need for R&D -Lecture 1
- Software bugs, validation, testing -Lecture 2
- Trends in Information Technology Lecture 3
- Adaptation to Company atmosphere Lecture 4
- Identification of Project for Final Year, Simulation, Need for good Mathematics Background, Application in Higher Technologies- Lecture 5,6
- Communicating Research to Journals, Conferences, Plagiarism – Lecture 7

Such a course is best given at the beginning of the 5th semester or the end of the 4th semester. The students must be asked to prepare a brief essay on what they learned in every lecture, and these must be assessed.

Mr. Harish Kumar

It is a wonderful course arranged by Mr. Vendhan and his team. I am happy to be part of the course. Lecture arrangement from various milestone establishments was very effective and useful to young students. I congratulate and wish a lot of success to the organizers. Keep it up.



Prof. S. E. Kannan

For more than a year since 2020, the COVID-19 pandemic spread all over the world including India, educational institutions remain closed, affecting those who are yet to complete their courses/ research projects. At this juncture, there is a need for rejuvenation of youth power to bring out the best in them. Global onlookers are keenly watching how an emerging country like India is coping up with the situation, by imparting knowledge to the talented youth coming out of educational institutions and creating more jobs for them towards the revitalization of the global economy. In a situation like this, I appreciate the initiative taken by the Indian Society of Education and Environment (iSee), an NGO, by organizing a program of this kind for the promising youths, pursuing tertiary education in an esteemed institution like BITS Pilani. I readily agreed to support iSEE in its efforts as a Resource Person for this noble cause.

As an invited expert, I have been closely observing for the last 2 months and I am glad to see that the course has metamorphosed the thinking of scholars from the day of starting the course to its end, during the pandemic lockdown. The Coordinators maintained strict schedules and the students were engrossed with the assignments and Lectures and Tasks provided to them, as reflected in the feedback of the students. I noted that the students were passionate, were meticulously attending to their tasks. There were good interactions among the peer group of students, with experts, and with Coordinators from both sides. I was impressed with the fact that there were hardly any latecomers to online participation or absenteeism. As readers can understand from the course report or the participants' feedback and their performance, I definitely vouchsafe that such a course organized for other Indian Universities as well as Deemed-to-be Universities during lockdown times like those we have gone through can immensely benefit many students/ Research Scholars all over the country. I take this opportunity to congratulate BITS-Pilani PS-I Coordinators Dr.Raghunathan & Dr. Hussain Yaganti and the course Coordinator Mr.Aalelai Vendhan from Scholarly Needs and the course Mentor Prof.Natarajan Gajendran from Indian Journal of Science and Technology, for the successful organization of the course. I am sure that this would pave the way for many more such fruitful interactions between BITS Pilani, and iSEE in the future. I wish all the students/research scholars of BITS Pilani the very best and a bright future.

Dr. Swaminathan

More than the COVID Pandemic havoc, the potential danger of slackening of intellectual building among our youths will be of irreparable loss to the world, particularly to our Nation. Youth power is most precious that is why all other countries have an eye on India. Certainly, we should grab the Pandemic Challenge as an opportunity for Preparing and equipping our youths intellectually sound and skilled for social problem-solving. Taking a cue from Our Hon'ble Prime Minister's emphasis on "Skill India", it is time to prepare our students, especially at the college/university level to get the needed guidance continuously from all possible quarters even from their hometown during such a pandemic and lockdown situation.

I appreciate the Indian Society for Education and Environment, an NGO that publishes an open-access journal (Indian Journal of Science and Technology) came forward to offer a short-term course in tie-up with BITS-Pilani as a PS-I training course for about 7 weeks.

I feel happy myself to be one of the resource persons who retired as a scientist from a premier research organization and also as Vice-Chancellor of a Deemed University, able to reinvent the happiness when I shared my experience with the young minds during the course. In a series of lectures and interactions, I found that there was a meticulous transformation towards neutral thoughts to inculcating a Social problem-solving attitude among the participants. It is quite reflected from the feedback section from the students and their performance through the course work.

Attaching special interest to the course, I addressed through series of lectures and observed the students closely till the day of the Valedictory event; the students exhibited an interest in such a course and they are ready to recommend it to fellow students and even suggested for improvement so that it can be offered to them again at a higher level.

I also take this opportunity to reiterate the point that the present form of the course can be improved to a formal course that can be offered to research motivated students in a fast track manner; In a given University or institution, fast learners can be identified and recruited for such special skill/research aptitude development; it may include reorientation of the present course to longer duration (and credit),

buttressed with needed software/ laboratory skill development which may serve as a prerequisite for further research or employability. Such add-on course may enable the fast-track learners to learn Bachelor of honors compare to their counterparts who earn BE, BTech, or BSc. The fast-track learners able to imbibe the fruit of add-on course for aptitude and skill in research fields when compared to their other counterparts.

To provide further improvement, the following suggestions I make:

It can be offered under “Value-based add-on Course”* to encourage fast learners with 2 credits and 30 hours as; Introduction to Research Productivity and Research communication.

The following topics can be covered:

I. Identifying Research Problem for Project work (addressing social problem solving)

- 1) Simulation and Modeling
- 2) Emerging areas of research in Basic Sciences, Life Sciences, Engineering

II. Research Communication

- 1) Literature survey
- 2) Research tools (Matlab / Skylab)
- 3) Free/Open databases
- 4) Title of a research article
- 5) Author list
- 6) References
- 7) Abstract and Keywords
- 8) Plagiarism tools
- 9) Clone journals / Fake journals
- 10) Indexing of Journals
- 11) Impact Factor, SNIP, SJR
- 12) Citation index
- 13) H-Index
- 14) Patent laws / Procedure for obtaining Indian- and- International-patent.

* can be considered as ‘Best Practices’ and also as ‘Student Support & Progression’ under NAAC guidelines.



Mr. Soundarakumar Masilamani

Letter of Appreciation

'Research aptitude' during the COVID-19 pandemic and challenges in the teaching and learning process has been well utilized by young scholars having thirst for research. The participants have shown interest to develop knowledge/skills in conceiving research problems and develop theoretical and practical knowledge from research experts to get imbibe valuable expertise in the research communication field.

The pandemic period has been very well utilized by conducting successfully the joint program by the Indian Society for Education and Environment and Scholarly Needs intended to improve Research Aptitude and Research Communication Skill by linking the scholars and mentors and prepared the motivated scholars by strengthening their research aptitude.

May I congratulate Prof. Dr. Natarajan Gajendran, Indian Society for Education and Environment for conducting an internship for undergrad students of BITS Pilani in an Excellent manner and also congratulate Mr. Aalelai Vendhan, CTO Scholarly Needs for the wonderful Coordination efforts.

I wish them all the Best to ignite many more young minds to build the Technologically advanced Nation.

JAI HIND !!!

(Soundarakumar Masilamani)

Former Director-CDOT



BITS PS-I Coordinators Feedbacks

Dr. R. Raghunathan

Internship (Practice School-1) offered at the Indian Society for Education and Environment (iSEE) is a well-structured program that promotes research aptitude among graduates. The internship facilitates each intern to identify a social problem of his/her interest and ending with developing a meaningful, appropriate, and feasible solution. This entire journey is enabled by training the interns in the areas of research methodology, data analysis, report writing, developing the content into a suitable research paper, and so on. iSEE imparts knowledge by using expertise within and from across industries in the form of guest speakers and mentoring. Individual attention given to each intern is commendable. Untiring efforts of Prof. Natarajan Gajendran and Aalelai Vendhan in promoting “Research Thinking” among the young talents are laudable.

Dr. Hussain Yaganti

During this pandemic period, iSEE has made wonderful guest lectures to promote research aptitude to BITS Pilani students, and it is really useful for students to develop research thoughts.



Valedictory Note
by
Prof. Dr. Natarajan Gajendran

“Respected Chief Guests:

Prof. Shri. S.E. Kannan &
Prof. Dr. Swaminathan,

Our BITS-Pilani Counterpart:

Dr. Srinivasa Prakash Regalla,
Dean, Practice School Division, BITS Pilani

The PS-I Coordinators:

Prof. Dr. Raghunathan &
Prof. Dr. Hussain Yaganti

Course coordinator:

Mr. Aalelai Vendhan,
CTO - Scholarly Needs

and my **Dear Course participants.**

I feel fortunate to stand before you and say Good Morning to everyone.

On behalf of iSee (Indian Society for Education and Environment), I take pleasure in welcoming you all to this Morning Valedictory event on 23rd July 2021 at 10:15 AM.

Today's event sets as **Red-Lettered Day**.

This event marks the 7 week long uninterrupted journey of learning that has begun on 31 May 2021.

The intensive program is a **joint initiative of iSEE** which provides an open access journal platform including 14 years of old **Indian Journal of Science and Technology**. And the **Scholarly Needs**- a Free interactive portal for scholars.

When everyone experienced “fish out of water” due to COVID-19 pandemic Lockdown, iSee & SN looked at the situation differently and initiated the “**Special Drive of Learning for the Young Minds**”. The result is what we have today the



successful scholars enrolled under PS-I, BITS-Pilani program who are able to complete the high-end task here with passion and perseverance.

iSee is honored to part the certificates to the Budding Scientists as the mark of Gate pass towards their further Research exploration.

Certainly, the invited Chief Guests are the doyens in their own fields adding glory to the whole event of today.

Our chief guests already presented series of lectures and are very much familiar to the participants and thus iSEE and SN will continue to catalyst such interaction between scholars and experts in the future too through SN interactive forum.

But, for the sake of Outside viewers, who may be interested in today's event, I would like to add few words about our Chief Guests:

Prof.Shri S.E. Kannan is a

Former Director, AERB- SRI, Kalpakkam &

Former Professor in VelTech University

Prof.Dr.Swaminathan is a

Former Chairman NAAC Peer Team,

Former Vice-Chancellor, Vels University, &

Former Director, Elect. & Instr. Group, IGCAR, Kalpakkam.

May I seek your permission sirs to allow me humbly present the gist of the whole program:

Sirs, systematic planning, and execution have kept the program spellbound throughout the course and yielded the expected outcome as evinced from the students' feedback.

The course has touched upon many nodal areas that young researchers need to know.

The course has completely metamorphosed the very thought process of the scholars from identifying a topic for a project into Choosing of social problem-solving research mindset.

Throughout the course, they were able to fine-tune their understanding at different stages of learning. It encompassed:

- To develop a better understanding of how to “title” their work:- its significance
- What ‘Authorship’ means; the catastrophe of fake and ghost authorship;
- The hierarchy and contribution of work learned from the authorship
- How affiliation helps the readers
- The importance of the corresponding authorship
- How a scholar can prepare the abstract “Smart” and its vital components
- How much the ‘keywords’ matter to Men and machines

They also learned:

- How & where to look for past research work in the form of literature survey;
- How to use keywords for search;
- How to initiate the search from recent to past.

They were also provided an opportunity to glean through nearly 14000 research articles of iSee under its archives;

They also understood the importance of open access research documents.

They also become experts on how to make citations and List ‘References’

The course also provided them enough orientation on how to crystallize ‘Objectives’ which is vital for any research initiation.

Coming to INTRODUCTION part in Research communication,

- They experienced on How to “Introduce their research to the readers”.
- The importance of highlighting existing works from recent to past;
- Keenly look for the major mile-stone works and scrutinize for their gaps and justifying the problem chosen.
- They also learned different forms of citations in the process.

They gained a better understanding of how to choose appropriate METHODS in line with the objectives:

- To look for feasibility of execution
- Economic
- Simple and docile
- Locally available
- If need be, to modify to suit their objectives
- Finally, to care for repeatability, sensitivity and reliability, and specificity

Students were asked to come with their own research problems and make objectives and were asked to frame suitable methodology on their own.

Certainly, such experience added the needed confidence and strength for planning their future research.

Regarding the documentation of the EXPERIMENTAL RESULTS;

- They learned the DOs and DO NOTs.
- They understood how wrong to duplicate the same data in Tables and Figures as well as Texts.
- They developed skills to make choices of representing data in the right form for better understanding.

Coming to the DISCUSSION part;

- They understood the importance of putting their data under acid test by comparing their results with previous reports on how it fares.
- In the process, they also understood how to give due credit to their predecessors.

They also become familiar by now, how to make a logical CONCLUSION;

- Connecting the objectives with the novelty achieved;
- The importance of providing the Limitations and
- Future scope for the current study.

Lastly, but Not least, they were able to place those fitting remarks under “ACKNOWLEDGEMENT”.

- They understood to exclude the names of the person who are co-authoring
- To exclude friends and relatives who do not play direct & specific roles in the piece of work.
- To include Funding agencies, biological/ software providers, instrumentation facility providers and specify skilled manpower/ study sample providers for the experiments and the Institutional support to carry out such a research.

Students were provided with learning resources/ links/ and proved to field a query towards learning which was always buttressed with discussions and clarifications.

Students got the opportunity to interact with their peers and with internal and external experts and coordinators.

Students’ course was segmented into different tasks coupled with homework & assignments which made them embed their own ideas and pose questions and to seek the answer to them.

The course program was star-studded with SIX (6) Eminent Scientists from Premier National Research Institutes and Leading Companies.



The whole program was preceded by a psychometric test and ended with an analysis of the Google Feed-Back form answered by the participants over 100 questions.

Finally, I am confident by comparing the psychometric analysis at the beginning and their feedback response analysis, the Participants OWN ONE BIG STEP Forward in developing a key mindset to serve society through research and the ART of doing Research Communication.

With this note, I end the summing up of the past, and begin today's event, by requesting Prof. Swaminathan, Our honorable Chief Guest to address the audience and to issue the Course Completion Certificates" to all our participants.

.....The Certificates have been issued by our Chief Guest; Thank you, Sir.

Now, this is the time we are going to witness another Interesting moment:

Declaring the Names of Winners, the "Master Minds"

The Certificate of Excellence will be declared by Honourable Chief Guest, Prof. S.E. Kannan

(From the order of Higher to Highest Score).

I request Kannan sir, to make few words before declaring the winners.

Three of the participants have received their 'Certificates of Awards' who Topped the overall score in the order of 'High'; 'Higher' and 'Highest'.

iSEE and SN convey heartfelt thanks to Our Chief Guests for sparing their valuable time and motivating the participants once again and Making the whole program successful.

Thanks and congrats to our participants

Now I am handing over the podium to Mr. Aalelai Vendhan, the course coordinator to make the vote of thanks."



Vote of Thanks

by

Mr. Aalelai Vendhan

The course was conceived in short time disposal and different research experts readily came forward at the shortest notice. iSEE and Scholarly Needs takes this opportunity to profusely thank the following research experts Prof. S.E Kannan, Prof. Dr. Swaminathan, Shri. Krishnamoorthy, Dr. Vaidyanathan, Shri. Soundarakumar Masilamani, Shri. Harish Kumar Chakerwanti.

The course has been successful because of the enthusiastic and punctual intern scholars. iSEE and SN thanks them all. We thank the BITS Pilani Practice School (PS) Division for extending this opportunity to conduct the internship. We also thank the BITS Pilani PS-1 coordinators Dr. R. Raghunathan and Dr. Hussain Yaganti for their continuous support during the entire internship. We extend our thanks to Prof. Srinivasa Prakash Regalla (Dean, Practice School Division, BITS Pilani) and Prof. Annapoorna Gopal (Associate Dean, Planning, Practice School Division, BITS Pilani). Last but not the least, we are indebted to Shri. Pawan Sharma (Faculty Member, BITS Pilani) for initiating this internship.



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Minds Speaking

The course was paced well, with sufficient time in between two classes and assigned tasks.

- Mr. Anto Felix

I feel that both the mentors focused on churning out ideas from us rather than giving everything by themselves.

- Mr. Atharva Ajit

I feel both the instructors were very thoughtful when planning this course; their emphasis was more towards our involvement than they spoon-feeding us.

- Mr. Harshit

Starting from the theory sent to us for each module to hosting talks with esteemed personnel, iSEE has tried its best to make our journey easier and more extensive.

- Mr. Mohan Teja

The steps which are to be followed while writing an article are explained clearly by the course coordinators.

- Ms. Rajoli

We became the registered members of Scholarly needs which is the first kind of research fora in India and gained access to all the features of the fora.

- Mr. Vaibhav Mehta

The classes were conducted regularly on time, and details of tasks were shared with us well in advance.

- Mr. Yash

Each topic was followed by a task related to the topic that we were asked to complete, so as to consolidate our understanding of the topic.

- Mr. Akshat

The most interesting part of being with iSee is that we had a session every week with our mentor and station coordinator.

- Mr. Hardik

With industry-wide eminent specialists giving exceptional talks each week, I was presented with the sheer unlimited conceivable outcomes of research and advancement in our country.

- Mr. Harsha

I understood the course coordinator's vision about recognizing problems around us and how to implement change through scientific interventions.

- Mr. Pradyut

It did not only cover important aspects of the research process, it also taught us how to effectively articulate our findings in the form of a research article.

- Mr. Golam Wahid

Not only just saying about a topic but there is also practical implementation here. So that's what makes me so happy about this PS station.

- Mr. Nadella Dilip



Indian Journal of Science & Technology (<https://www.indjst.org>)

Indian Journal of Science and Technology (INDJST) is a FREE journal that archives over 14000 research articles since its inception in 2007. The journal is now being published weekly and making scientific content accessible to everyone at FREE of cost, oppose to PAID journals who make a profit with greed by exploiting the Intellectual research output of our scholars who intern shell out 38-40 USD for every access.

The journal is published by the Indian Society for Education and Environment (iSEE) on a non-profitable basis that follows APC based model. The society was founded by Scientists, educationalists, and Healthcare personnel to promote Education, Health, and Clean Environment. Of these, INDJST fulfills its objective of making scientific content free to everyone and maintains its full content digital to facilitate easy access and also protecting our trees.

INDJST is being Indexed/ Abstracted/ Listed in:

Web of Science (Zoological Record); CNKi, CrossRef, Google Scholar, Chemical Abstracts Services (CAS); J-Gate Plus; Dimensions, Research Bible; EBSCO Publishing's Electronic Databases, USA; Ulrich's Periodical Directory, USA; Indian Science Abstracts, India; Index Copernicus, Poland, Semantic Scholar, Microsoft Academic, Scope, ISI, etc.

Scholarly Needs (www.scholarlyneeds.com)

Scholarly Needs is an exclusive professional research forum. The free online learning forum bridges budding Research scholars with subject experts.

- SN digital platform is selective wherein the focused groups indulge in exchanging ideas and clearing their doubts in order to bridge the knowledge gap in chosen research.
- SN is unique and designed to outperform the existing fora.
- SN helps to identify and network project investigators, internationally.
- SN digital web ignites young research minds to congregate globally.
- It smoothens the free flow of knowledge from research experts to freshers.
- The freshers pose research questions and seek answers; similarly, the inspired minds provide solutions to arious industrial problems.
- SN exclusive digital connect keeps young researchers and doyens vibrant.
- SN promotes the researchers to update their research talents continuously to attain the best in their research careers.
- SN strength lies in its powerful and impeccable Ranking, Connecting the right people, Accounting for various research activities for meaningful learning outcomes.
- SN was founded with a strong intellectual formula where the intensity of the knowledge streaming from participating minds can be metered and growth ranked.
- SN showcases the research mileages gained by researchers in real-time and is freely accessible as a digital CV.
- The SN metrics will be meaningful for industries to recruit the right candidate for their jobs/ internships.
- Universities/ overseas Organizations can reach out for fellowship or projects to the right candidates as their real-time performance is identified.
- SN intends to groom researchers with equal learning opportunities irrespective of their campus standings, by connecting Research resource persons any time & anywhere.
- SN breaks the learning barriers (paucity of research mentors, space & time) and prepares the researchers intellectually sound!
- SN is launched in Right Time to enable 'Research Learning Easier' even in COVID-19 pandemic Lockdown.
- Scholarly Needs is launched with the motto "Make India" by means of globally competitive & Inspired Research scholars.

Join with SN! Connect with leading scientists! Bridge your talent with Industries!



Scholarly Needs

iSee Announcement for Award of

'Post-Graduate Fellowship in Research Communication'

Indian Society for Education and Environment (iSee) strives for Research Freedom of scholars by means of open access to Research publications. With its number of journal outlets, iSee is able to showcase >14000 research articles, since 2007.

The present announcement is to identify, motivate and encourage young research minds to set further milestones in creativity especially in the art of Research Communication. They will be encouraged to gain experience in every step of the research publication process, and be able to ignite interaction among scholars and get exposed in the areas of Indexing of research materials and involve in research dissemination through working with social Networking platforms.

Expectations: Self-motivated Learner with Postgraduate degree of any stream with proven research skill and digital communication; Sufficient knowledge in web and blog management and social-network communication will be ideal.

Fellowship: The **monthly** fellowship would be maximum of **30000 INR** for 6 months and extendable to another 6 months based on the performance; The deserving candidates may further continue in different project assignments in due course of time.

Interested candidate can email their biodata to: indjst@gmail.com; the last date of submission: 30th September 2021 or can be extended till the vacancy is filled.

Number of Fellowship: **One**

Also Contact: Prof. Natarajan Gajendran (+91-9940444695) by whatsapp.