

National Conference on "The Role of Sciences & Technology for Sustainable Development"

Introducing the Conference:

Department of Sciences Organized a one-day National Conference on “The Role of Science & Technology for Sustainable Development” in collaboration with “The Institute of Electronics & Telecommunications Engineers (IETE)” on 9th February 2018. Our Conference brings together academicians, researchers, scientists, software architects, and industry professionals to get to involve in three different Cross-sectoral areas of sciences – Mathematics & Statistics, Physics & Electronics & Computer Science with innovative and diverse topics on mobilizing capacity building and sharing knowledge for the next generation Information & Technological Sciences.

The Conference developed a true spirit of scientific temperament among the young students and participants in three platforms (Mathematics, Physics & Electronics, Computer Science) pointing to the main areas of necessary research attention, thus making them more substantial for the public. The outcome is truly a remarkable achievement. It is the participants who have made the conference a success.



A fair number of attendees, paper presenters, keynote speakers, participants and students have benefited in many ways from this conference. Altogether 78 papers were presented and published by authors from different places. Invited Keynote Speakers, paper presentation panel members from different Organizations addressed the audience and shared knowledge and rich experience of application of technology in field of Sciences. The management was pleased to host this Conference. We thank all participants for their hard work and commitment and the true spirit of co-operation.

About the College:

St. Joseph's Degree & PG college, an Autonomous College – affiliated to Osmania University was established by Hyderabad Archdiocese Society(HAES) in the year 1997. The College which is marching ahead on the path of excellence under the visionary leadership of our Chairman Most Rev.ThummaBalaD.D Archbishop of Hyderabad and Principal Rev.Fr.Vincent Arokiadas, St. Joseph's Degree & PG college.

The College has a leading name in the field of higher education and has earned several top prestigious ranking by reputed magazines like India Today, The week, CSR etc. The college is Re-accredited by NAAC with 'A' grade for its "Distinctive Education Environment", focusing on developing social and ethical values among the students, while equipping them with right knowledge and skills to meet the dynamics of the global markets.

About Science Department:

Department of Science was established since the inception of the college in 1997 with a vision to strive for excellence in Mathematical Sciences that ignite students for interdisciplinary domains. The Department offers UG Programmes in Mathematical Sciences which are innovatively designed and updated to keep pace with Emerging Global Trends in Academics and Industry. The Department emphasizes on experiential learning through various innovative Programmes which include industrial visits, seminars/workshops/guest lectures, exhibitions, mini projects for the holistic development of the students. St. Joseph's college is consistently ranked among the top 10 Science Colleges in the twin cities of Hyderabad.

About the Seminar:

The last decade has witnessed the emergence of an array of increasingly vibrant movements to harness Science and Technology (S&T) in the quest for a transition toward sustainability. In seeking to help meet this sustainability challenge to shape the society, multiple movements to bind science and technology for sustainable development have cropped up. In this context, our college is organizing a one day National Conference on "The Role of Science & Technology for Sustainable Development" in the areas of Mathematics, Statistics, Computer Science, Physics & Electronics.

Objectives of the Seminar:

- This Seminar offers Researchers, Academia, Industry and Students a platform for proactive expert interaction on insights into emerging trends/challenges/concerns related to the global issues in various fields.
- This seminar would be an enriching experience for all the participants as it aims to gather multiple perspectives of eminent academia and industry on the dynamics of growth, challenges and sustainability for reshaping the global future.

Core Committee of the Conference:

Chairman

Rev.Fr.Dr.VincentArokiadas, Principal
St. Joseph's Degree & PG College, Hyderabad

Convener

Mrs. M. Kiran Jyothi, Head
Computer Science

Co-Convenor

Mrs. T. Esther Ratna, Dean – Student Affairs

Conference Secretary

Mr. M.L.N. Rao, Senior Faculty

Organizing Committee

Mr. D. Srinivas Reddy, Senior Faculty
Mr. Sravan Kumar, Senior Faculty
Mr. Ashok, Senior Faculty
Mrs. P. Madhuri Paul, Assistant Professor
Ms. S. Vijayalaxmi, Assistant Professor
Mrs. V. Shailaja, Assistant Professor
Mrs. Nampally Lakshmi, Assistant Professor

Details of the Papers received:

□ Total No. of Participants registered	:	132
□ Total No. of Abstracts received	:	148
□ Total No. of Full Papers received	:	78
○ No of International Papers	:	01 (Saudi Arabia: 1)
○ No of National Papers	:	05
□ Kochin	:	01
□ Sehore (UP)	:	01
□ Sholapur	:	01
□ AP	:	02
○ No. of Papers from Telangana	:	78
□ Total No. of Papers Presented	:	49



Inaugural Session:

- **Chief Guest:**
Dr. M. Lakshmi Narayana Rao, Scientist – H,
Associate Director, DLRL (Retd) & Chairman IEEE – Hyderabad.
- **Guests of Honour:**
Prof. Kannan Srinathan, IIT, Hyderabad
- **Time:** 10:05AM – 11:00AM

The Inaugural session of the National Conference commenced at 10.00 am in Jubilee Hall amid cheer and applause. Mrs.P. Madhuri Paul, Faculty of Computer Science lead the Inaugural Session as MC of the programme. The Dignitaries were **Dr. M. Lakshmi Narayana Rao**, Chief Guest; **Prof. Kannan Srinathan**, Guests of Honour; Rev.Fr.Dr.Vincent Arokiadas, Principal & Chariman of the Conference; Rev.Fr.Thumma Solomon, Secretary & Correspondent and Prof.P.L.Vishweshwar Rao, Director.

The Inaugural Session began by invoking God's blessings with a prayer song by the college Choir 'Anna Domini'. Mrs. M. Kiran briefed the delegates about the History of the College, achievements of the Science Department and objectives of the Conference. The dignitaries were welcomed and invited on to the dais for lighting of the lamp. Our beloved Principal Rev. Fr. Vincent Arokaiadas welcomed the Chief Guest and Guests of Honour and placed on record, the kind of contribution and efforts they have put in to take Science to great heights.

The Chief Guest of the National Conference, Mr. M. Lakshmi Narayana, Scientist – H, DRDL (Retd) & Chairman – IEEE, Hyderabad addressed the gathering by quoting “It's the Science & Technology that made the living style of human mankind to be easy and comfortable in all means”. Being a part of acknowledging developments in



sciences he said Science is a blessing to human beings.

National Conference Proceeding Book was released by all the dignitaries on the dais. The Inaugural session concluded with Formal vote of thanks proposed by Mrs. T. Esther Ratna, Dean, Student Affairs and Co-Convenor of the Conference followed by felicitation of the dignitaries with shawl and mementos by our beloved Principal and Correspondent.





Technical Session – I:

□ **Resource Person:**
Prof. Kannan Srinathan, IIT, Hyderabad

□ **Topic: Mathematical & Algorithmic Challenges**

□ **Time: 10:35AM – 11:40AM**

Prof. Kannan Srinathan began to project his views in Mathematics with Science & Technology Advancements in developing the Systems with algorithmic base that to with mathematics. He explained few examples based on Quantum Algorithm with programming & protocols. He explained about Qubith, which is the super position of 10. and Quantum Mechanics with an example algorithm. He also emphasised the difference between mathematics and computing on the other side he highlighted the difference between physics and algorithm in turn mathematics stands where every in science advancements and developments.

The technical session concluded with vote of thanks proposed by Formal Vote of Thanks, Mr. D. Srinivas Reddy, Senior Faculty in Mathematics followed by felicitation of the Resource Person with shawl and memento by Mrs. M. Kiran Jyothi, HoD & Convenor of the Conference.



Technical Session – II:

□ **Resource Person:**

Prof. Vipin Srivasthava, Pro-Vice Chancellor, HCU, Hyderabad

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Topic: Condensed Matter Physics beyond Textbooks

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Time: 11:45AM – 1:30PM

Prof. Vipin Srivasthava highlighted the importance of Quantum Hall Effect and Quantum percolations theory, Neuro science and its implications in the study of brain mapping & functioning, magnetic material properties and physical characterisation, nano scale physical parameters and MOSFET areas. The technical session-2 concluded with formal Vote of Thanks proposed by Mr. Sravan Kumar, Senior Faculty in Physics followed by felicitation of the Resource Person with shawl and memento by Mrs. M. Kiran Jyothi, HoD & Convenor of the Conference.



Technical Session – III:



Resource Person:

**Dr. T.V. Rajinikanth, Professor in Computer Science & Engineering
Srinidhi Institute of Science & Technology, Hyderabad**



Topic: Bigdata Analytics



Time: 3:40PM – 4:30PM

Dr.T.V.Rajinikanth, is a seasoned scholar and good academician who was awarded as “Best Faculty” by Computer Society of India (CSI) for the academic year 2017-18. He highlighted the importance of Bigdata, components of bigdata, Webdata, E-Commerce. He even gave his insights on Amazon’s data hidden patterns, Data mining techniques and Google’s process. He also emphasised on Data warehousing, Bigdata analytics and role of sustainable development in Computer Science. The technical session-3 concluded with formal Vote of Thanks proposed by Mrs. M. Sunitha, Faculty in Computer Science followed by felicitation of the Resource Person with memento by Mrs. M. Kiran Jyothi, HoD & Convenor of the Conference.



Paper Presentations – Mathematics & Statistics:



Panel Members:

1. Dr. K. Sreeram Reddy, Dept. of Mathematics, Osmania University
2. Mr. Bhasker Reddy, Data Analyst, Tata Consultancy Services



Venue: Board Room



Time: 2:00PM – 4:00PM

Ms. Vijaya Lakshmi, Faculty in Statistics and Mrs. Pavani Janapaty, Faculty in Mathematics organized the session for Papers Presentations in Mathematics & Statistics domain. There were 7 papers submitted to the conference proceedings from this track, wherein 5 papers were presented by different authors in the session. The major topics presented in this track were Mathematical Sustainability, Sciences in Scriptures, Statistical Analysis and Optimization problems.

Dr. K. Sreeram Reddy given his insights in the session that – “Statistics and Mathematics are highly potential areas for Sustainable Development”. The session concluded with a fruitful discussion on paper presentations in terms of Mathematics & Statistics existence in developing Sciences. Panel members were felicitated by organizers with mementos.



Paper Presentations – Physics & Electronics:



Panel Members:

1. Prof. D. Srinivasu, Dept of Physics, University College for Women, Koti
2. Mr. Chandrasekhar, Industry Representative



Venue: Mass Communication Studio



Time: 2:00PM – 4:00PM

Mr. M.L.N. Rao, Mr. Ashok and Mr. Sravan Kumar, Faculty in Physics & Electronics organized the session for Papers Presentations in Physics & Electronics domain. There were 20 papers submitted to the conference proceedings from this track, wherein 10 papers were presented by different authors in the session. The major topics presented in this track were Embedded Systems, E-Waste and preparation of glass with different combination of dielectric materials.

Prof. D. Srinivasu insisted the paper presented to work more on research oriented papers. He even suggested the young research scholars to concentrate much on application oriented research as well as the research to be made in depth. As a result of that research should serve the society. The session concluded by panel members giving with few tips on research methodology to all the paper presenters. Panel members were felicitated by organizers with mementos.





Paper Presentations – Computer Science:



Resource Person:

1. **Dr. T.V. Rajinikanth, Professor in CSE,
Srinidhi Institute of Science & Technology, Hyderabad**
2. **Mrs. T. Beulah Ashwini, Scientist,
ANURAG, DRDO, Hyderabad**



Venue: Jubilee Hall



Time: 2:00PM – 4:00PM

Mrs.M. Sunitha, Mrs. V. Shailaja and Mrs.P.Madhuri Paul, Faculty in Computer Science organized the session for Papers Presentations in Computer Science domain. There were 64 papers submitted to the conference proceedings from this track, wherein 15 papers were presented by different authors in the session. The major topics presented in this track were Bigdata analytics, Bitcoin, Data warehousing and meta-modelling, Artificial Intelligence, Data Encryption models, Information security and m-governance.

Dr.T.V.Rajinikanth and Mrs. Beulah Ashwini served as panel members for the computer Science track. Dr.T.V.Rajinikanth advised all the presenters to be more enthusiastic and get updated with current trend of technology aspects. He suggested all the paper presenters - “As beginners in presenting papers do not rush to put lots of contents and presentation to be in proper order”. Mrs. Beulah Ashwini congratulated all paper presenters and suggested to concentrate more on research which would let India to be always top in R&D



Valedictory Session:

- **Chief Guest:**
Dr. G. Lakshmi Narayana, Chairman, IETE, Hyderabad
- **Guests of Honour:**
Prof. G. Prasad, Dept. of Physics, Osmania University, Hyderabad
- **Time: 4:35PM – 5:40PM**

The Valedictory session of the National Conference started at 4.35PM in Jubilee Hall amidst of dignitaries, delegates, paper presenters, faculty, supporting staff and student volunteers. Ms.Nampally Lakshmi, Faculty in Mathematics lead the Valedictory Session as MC of the programme. The Dignitaries were invited on the dias - Dr. G. Lakshmi Narayana, Chief Guest; Prof.G.Prasad, Guests of Honour; Rev.Fr.Dr.Vincent Arokiadas, Principal & Chariman of the Conference; Prof.P.L.Vishweshwar Rao, Director; Mrs. M. Kiran Jyothi, HoD & Convenor.

The Valedictory Session began by presenting a Rapporteur Report of the Conference by Mrs. M. Kiran Jyothi, Convenor of the Conference. She briefed all the activities done for the day. Our young & dynamic Principal Rev. Fr. Vincent Arokaiadas greeted the Chief Guest and Guests of Honour and congratulated the Department of Science for organizing this National Conference which has been a great success. Mr. S. Srikanth and Mr. R. Ashok Kumar read the profiles of the Chief Guest and Guest of Honour respectively.

The Chief Guest of the Valedictory Session, Mr. G. Lakshmi Narayana, Chairman – IETE, Hyderabad and Guest of Honour, Prof. G. Prasad addressed the gathering. They congratulated the Management and the Department for organizing such a Conference. The dignitaries on the dias released National Conference Proceeding CDs.

Participants and paper presenters were awarded the certificates by the dignitaries. The Valedictory Session concluded with Formal vote of thanks proposed by Mr. M.L.N.Rao, Senior Faculty and Secretary of the Conference followed by felicitation of the dignitaries with shawl and mementos by our beloved Principal and Correspondent. The programme ended up by National Anthem and a Group Photograph.





