

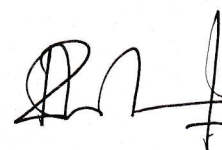
Report on Graph Theory and Applications (GTA)

Title of the event	27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on "Graph Theory and Applications (GTA)"
Date and time	October 26-28, 2021
Mode	Online
Department/School/Directorate/Section	School of Physical and Applied Sciences (SPAS), Goa University, Goa
Collaborating Agency	International Academy of Physical Sciences (IAPS), Prayagraj, India.
Participants	239
Resource Person/s	Foreign Speakers Prof. Thomas Zaslavsky Binghamton University, New York, USA Prof. Dafik The University of Jember, Indonesia Prof. Ayman Badawi American University of Sharjah, UAE Prof. Daphne Der-Fin Liu California State University, Los Angeles Prof. Ismail Naci Cangul Bursa Uludag University, Bursa/Turkey Prof. Bryan Freyberg University of Minnesota Duluth, USA Indian Speakers Prof. S. Arumugam Amrita Vishwa Vidyapeetham, Coimbatore Prof. S.M. Hegde NITK Surathkal, Karnataka Prof. Deepa Sinha South Asian University, New Delhi Prof. Krishnendra Shekhawat BITS Pilani, Pilani Campus, Rajasthan, India Prof. Saket Saurabh The Institute of Mathematical Sciences, Chennai, India Prof. B.S. Panda IIT Delhi, India Prof. B.N. Waphare Savitribai Phule, Pune University, Pune, India Prof. V. Loksha Vijayanagara Sri Krishnadevaraya University, Karnataka, India Prof. Tarkeshwar Singh BITS Pilani K K Birla Goa Campus, Goa
Faculty attended	Convenor Dr. Jessica Fernandes e Pereira (Assistant Professor, Goa University) Coordinators Dr. M. Tamba (Assistant Professor, SPAS, Goa University) Dr. M. Kunhanandan (Assistant Professor, SPAS, Goa University) Dr. Reshma Raut Dessai (Assistant Professor, SPAS, Goa University) Dr. Elaine T. Dias (Assistant Professor, SPAS, Goa University) Dr. Narayan T. Vetrekar (Assistant Professor, SPAS, Goa University)
The objectives / description of the activity (50 words)	The "27th International Conference of the International Academy of Physical Sciences on Graph Theory and Applications" (CONIAPS-XXVII-GTA-2021) was organized jointly by the School of Physical and Applied Sciences of Goa University, Goa-India and the International Academy of Physical Sciences (IAPS) Prayagraj, India, through Google Meet from October 26-28, 2021. The aim of the Conference was to bring pioneering and upcoming researchers to a common platform to discuss the pressing issues on Graph Theory

	<p>and its Applications with the help of recent developments in the field. The Conference focused on recent research, related to any sub-branch of Graph Theory such as Spectral Graph Theory, Graph Labeling, Graph Coloring, Algorithms, Networks, Network Theory, Hypergraphs, Extremal Graph Theory etc. The goal of CONIAPS-XXVII-GTA 2021 was to give an opportunity to Graph theorists from different parts of the world to interact with each other and exchange their ideas. CONIAPS serves as an excellent platform to inculcate research interest among young minds on recent applications of Pure and Applied Mathematics. Young researchers were encouraged to give oral presentations related to all traditional as well as modern areas of Graph Theory and its Application in various fields, during the Conference.</p> <p>The CONIAPS-XXVII-GTA 2021 featured fourteen Invited Talks by eminent national and international speakers, and seven oral paper presentation sessions. 239 Research Scholars and Professors had registered for the Conference and 54 Research Paper abstracts were received of which 40 were shortlisted for oral Paper Presentations and finally 32 papers were presented on 26th and 27th October 2021.</p>
Benefit/Key outcome of the event in terms of learning/skills/knowledge	<p>CONIAPS-XXVII-GTA-2021 saw a whole range of 14 varied topics and discussions on Graph Theory and Applications unfold during the course of these 3 days. On Day one of the Conference, Prof. Bryan Freyberg spoke on "Connections among Magic-Type Graph Labelings", Prof. S. Arumugam explained the importance of "Certified Domination in Graphs", Prof. Ismail Naci Cangul delivered a session on "Omega Invariant and Graphs". The evening session included 3 parallel oral paper presentation sessions and also an oral paper presentation session for the shortlisting of candidate for the Young Scientist Award (YSA), followed by a talk on "Ringel's Conjecture" by Prof. S. M. Hegde and the day ended with a session on "Topological Indices and it's Elegance" by Prof. V. Lokesha. Day 2 had the participants involve themselves in the results and research problems on the topic of "Vectors for the Edges of a Graph", by Prof. Thomas Zaslavsky, "Hole-Free Polygonal Representation of Graphs" by Prof. Krishnendra Shekhawat, "On Graphs arising from Number Theory", by Prof. Ayman Badawi and Prof. B.N. Waphare spoke on "Order Structure of Good Sets in Hypercubes". The post lunch sessions included 3 parallel sessions of oral paper presentations followed by invited lecture by Prof. Deepa Sinha on "Sign-Regular Signed Graphs and its Embedding". The Final Day began with a lecture on "Graph Labelings Motivated by the Channel Assignment Problem" by Prof. Daphne Liu, Prof. Saket Saurabh delivered a session on "The Number of Things in Things", Prof.</p>

Tarkeshwar Singh provided the results on “On Distance Magic Index of Graphs” followed by lunch break and a session by Prof. Dafik “On Rainbow Antimagic Coloring of Graphs “

The Conference has successfully brought together leading researchers and discussed the latest advances in Graph Theory and Applications, which helped Young Scientist gain a new perspective. Finally, the 3 best oral presentations and the shortlisted candidate for YSA were conferred the Best Paper Presentation Award.



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