



Goa University

Discipline of Mathematics, School of Physical and Applied Sciences

Report on

Invited Lecture by Dr. Ravindra Pawar

1. Title of the Event/Activity/program	Invited Lecture Titled: Matching Minors: a sequel to the results of Lovsz and Plummer
2. Date and Time	July 03, 2026 from 4:00 pm - 5:00 pm
3. Mode of conduct (Physical/Online)	Physical Mode
4. School	School of Physical and Applied Sciences
5. Collaborating Agency/School/Directorate	NIL
6. Detail of the Resource Person (Brief biodata)	Dr. Ravindra Pawar Post Doctoral Fellow at the Indian Institute of Technology Madras (IIT Madras)
7. Number of Faculty attended/participated	07
8. Number of Student attended / participated	33
9. No. of external students/faculty/other participants	Nil
10. The objectives of the Program/activity/event	The expert talk aimed to introduce participants to recent advances in matching theory, with a focus on matching minors and their connection to the work of Lovász and Plummer. It also sought to expose M.Sc. Mathematics students to contemporary research in graph theory, encourage them to undertake research projects in the area, and promote interaction with an active researcher in the field.
11. Description of the Program/activity/event	The Mathematics Discipline, School of Physical and Applied Sciences, Goa University, organized an Expert Talk on " Matching Minors: A Sequel to the Results of Lovász and Plummer " by Dr. Ravindra Pawar , Postdoctoral Fellow, Indian Institute of Technology Madras. The talk was attended by M.Sc. Mathematics students and

	faculty members. The session introduced participants to recent developments in matching theory and structural graph theory, highlighting current research directions and open problems. The interactive discussion encouraged students, particularly those interested in graph theory, to explore research and project opportunities in the field.
12. Benefit/Key outcomes of the Program/activity/event	· Participants gained an understanding of recent developments in matching theory and structural graph theory. · Students were introduced to current research problems and emerging directions in graph theory. · The programme motivated M.Sc. Mathematics students to consider graph theory as a potential area for project work and research. · Faculty members and students benefited from interaction with an expert actively engaged in research at a premier institute. · The session promoted analytical thinking and strengthened participants' interest in advanced mathematical research and its interdisciplinary applications.
13. Enclosures with report	Brochure, Geo-tag photos, Attendance of participants, Bio Data of resource person.

Signature:



Name of Coordinator:

Dr. Jessica Fernandes e Pereira

Designation: **Assistant Professor**

Signature:



Dean:

School of Physical and Applied Sciences

Seal of the
School/Directorate/University



Mathematics Discipline, School of Physical and Applied Sciences

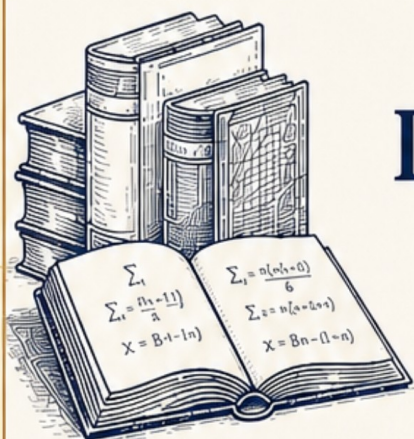
INVITED TALK

Matching Minors: *a sequel to the results of Lovász and Plummer*

by

Dr. Ravindra Pawar

*Post-doctoral Fellow,
IIT Madras*



$$G \rightarrow H$$
$$|V(G)| = n$$
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03/07/2026
(Friday)



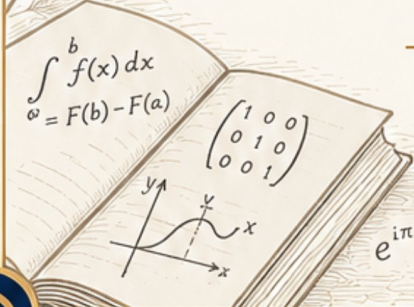
4.00 pm to
5.00 pm



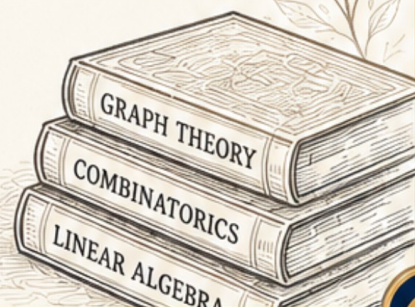
HS-04, Block - H,
School of Physical and
Applied Sciences,
Goa University



All are cordially invited

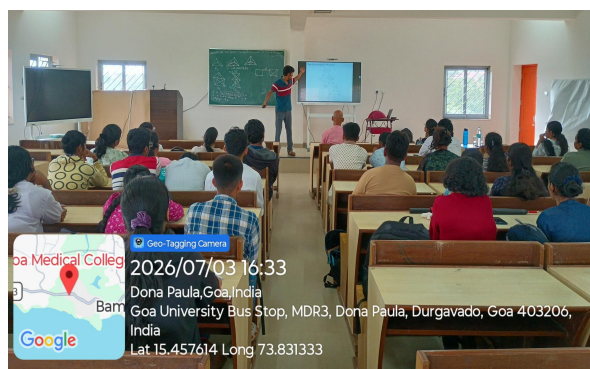


$$e^{i\pi} + 1 = 0$$





Introduction of Speaker



The Invited Lecture



The Attendees



The Invited Lecture



The Invited Lecture



The Vote of Thanks

ATTENDANCE FOR INVITED LECTURE BY DR. PAWAR

July 03, 2026

Mathematics Discipline

School of Physical and Applied Sciences (SPAS)

GOA UNIVERSITY

GOA-INDIA.

Sr. No.	Full Name	Signature
1.	Mridini M. Gawar	<u>Pawar</u>
2.	Trenisha Valanka N'Costa	<u>Costa</u>
3.	Elony Esther Barretto	<u>Barretto</u>
4.	Arisha Velip	<u>Velip</u>
5.	Samrudhi G. Gaonkar.	<u>Gaonkar</u>
6.	Apurva V. Shetye	<u>Shetye</u>
7.	Gopika Tanaji Kadam	<u>Kadam</u>
8.	Smita Govind Bhosle	<u>Bhosle</u>
9.	Shreya Sainath Naik	<u>Naik</u>
10.	Vishant Ramchandra Borkar	<u>Borkar</u>
11.	Saisha Gawar	<u>Gawar</u>
12.	Aastha Naik	<u>Naik</u>
13.	Terina Xavier	<u>Xavier</u>
14.	Vinisha Vivek Divkar	<u>Divkar</u>
15.	Navjyot Santosh Naik	<u>Naik</u>
16.	Janardan Dnyaneshwar Naik	<u>Naik</u>
17.	Daniel Pinto Abreu	<u>Abreu</u>
18.	Brandon Fernandes	<u>Fernandes</u>
19.	Breshma Raut Dessai	<u>Dessai</u>
20.	Muriel Cassey Gomes	<u>Gomes</u>
21.	Riddhi Praaveej Naik	<u>Naik</u>
22.	Alena Mariana Fernandes	<u>Fernandes</u>
23.	Riya Sugunan Naik	<u>Naik</u>
24.	Analiene Jean Fernandes	<u>Fernandes</u>
25.	Ryffka Rodrigues	<u>Rodrigues</u>

Sr. No.	Full Name	Signature
26	Jason Victor Couto	J Couto
27	Gulshan Nishad	Gulshan
28	Utkarsh Mamikar Desai	Utkarsh
29	Vorun Venayak Parab	Vorun
30	J. Esther Stella	J. Esther
31	Maria Fernandes	Maria
32	Pranjal L Fadte	Pranjal
33	Bianca Steffi Fernandes	Bianca
34	Vardha V. Gaonkar Desai	Vardha
35	Vaishali Maddalingappa Pattilhal	Vaishali
36	Yuga Yoguish Sambary	Yuga
37	Chitra Moketh	Chitra
38	Mudraj Pagi	Mudraj
39	A. Kunhaman dan	A. Kunhaman
40	Jessica Fernandes e. Pereira	Jessica
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Ravindra Pawar

Contact Information

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Website <https://sites.google.com/view/ravi-pawar>

Post Ph.D. Experience

- Post Doctoral Fellow, [Indian Institute of Technology Madras, Chennai](#) (Jan 2026 to till date)
- Post Doctoral Fellow, [The Institute of Mathematical Sciences, Chennai, India](#) (Jan 2025 to Dec 2025)
- Visiting Student, [The Institute of Mathematical Sciences, Chennai, India](#) (Nov 2024 to Dec 2024).

Education

- Ph.D. in Mathematics (Graph Theory), Department of Mathematics, [BITS Pilani K K Birla Goa Campus, Goa](#), (Oct 2020 to Oct 2024).
- M.Sc. in Mathematics, Savitribai Phule Pune University, Pune, 2016.
- B.Sc. in Mathematics, Savitribai Phule Pune University, Pune, 2014.

Research Areas

- Structural Graph Theory
- Graph Labeling Problems
- Graph Algorithms

Research Articles

1. [Distance Magic Labeling of Generalized Mycielskian Graphs](#), Proceedings of Jangjeon Mathematical Society , **29** (2026), 269–286.
with Tarkeshwar Singh
2. [A Complete Characterization of Magic Constants Arising from Distance Magic Graphs](#), Journal of Combinatorial Mathematics and Combinatorial Computing, **123** (2024), 287–302.
with Tarkeshwar Singh, Himadri Mukherjee and Jay Bagga ([arXiv](#))
3. [Distance Magic Labeling of Mycielski Graphs](#), Electronics Journal of Graph Theory and Applications, **12**(1) 2024, 75–88
with Tarkeshwar Singh
4. [Super Total Local Antimagic Coloring of Graphs](#), Bulletin of Institute of Combinatorics and Applications, **103** (2024) 82–113.
with Tarkeshwar Singh and Jay Bagga ([arXiv](#))
5. [Local Antimagic Coloring of Some Graphs](#), South East Asian Journal of Mathematics and Mathematical Sciences, **20**(2), 2024, 1–14.
with Tarkeshwar Singh, Adarsh Handa and Aloysius Godinho ([arXiv](#))
6. *On structural and spectral properties of distance magic graphs*, (submitted) 2024
with Himadri Mukherjee and Tarkeshwar Singh ([arXiv](#))

Teaching Experience

- As a Teaching Assistant at BITS Pilani KK Birla Goa Campus, Goa
 1. Fall 2023, Spring 2022, Fall 2022: Probability and Statistics
 2. Spring 2021: Math-II (Linear Algebra, Complex Analysis)

3. Fall 2021: Math-I (Sequence, Series of Real Numbers, Calculus of Multi variables)
 4. Spring 2020: Math-II (Linear Algebra, Complex Analysis)
 5. Fall 2020: Math-I (Sequence, Series of Real Numbers, Calculus of Multi variables)
- As an Asst. Prof. at Vidya Pratishthan's Arts Science and Commerce College, Baramati, Maharashtra
 1. Spring 2019: Ring Theory
 2. Fall 2019: Number Theory
 3. Fall 2019: Group Theory
 4. Fall 2019: Real Analysis
 5. Spring 2018 Discrete Mathematics
 6. Spring 2018: Numerical Analysis
 7. Spring 2018: Ring Theory
 8. Fall 2018: Calculus of One Variable
 9. Fall 2018: Number Theory
 10. Fall 2018: Metric Spaces
 11. Spring 2017: Labesgue Integration
 12. Spring 2017: Ordinary Differential Equations
 13. Fall 2017: Real Analysis
 14. Fall 2017: Group Theory
 15. Fall 2017: Calculus of One Variable

Invited Talks

1. Matching Minors: a sequel to the results of Lovász and Plummer, MERU Fourth Combinatorics Conference, IIT Bhilai, June 2026.
2. *Distance Magic Graphs: Characterization Challenge* at IIT Madras, 2024.
3. *Magic Constants* at Christ University, Bangalore, 2023.

Conferences and Workshops

1. 10th Annual International Conference on Algorithms and Discrete Applied Mathematics (CAL-DAM), IIT-Bhilai, February 15–17, 2024.
2. Indo-Slovenia Pre-conference School on Algorithms and Combinatorics, IIT-Bhilai, February 12 – 13, 2024.
3. International Conference on Discrete Mathematics and Combinatorics, jointly organised by MIT Bangaluru (MAHE), India and Jangjeon Mathematical Society, South Korea, December 20 – 22, 2023.
4. International Conference in Graph Theory and Applications, organised by Christ University, Bangalore, 30 November – 02 December, 2023.
5. Advanced Instructional School on Algorithmic Graph Theory (AIS-AGT), hosted by IIT Indore, 25 June – 15 July, 2023.
6. Workshop on Line graphs and Labeling of Graphs, organised by BITS Pilani KK Birla Goa Campus, Goa, January 18–19, 2023.
7. International Conference on Graphs, Networks and Combinatorics, organised by Ramanujan College, Delhi, January 10–12, 2023.
8. 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on Graph Theory and Applications, organised by SPAS Goa University, Goa, October 26-28, 2021.

9. International Conference on Graph Labelling and Applications ICGLA-2020, organised by Department of Mathematics, Goa University, Goa, September 17–19, 2020.
10. Workshop on Recent Trends in Domination and Graph Labelling RTGDL 2021, jointly organised by Ramanujan College, Delhi and Academy of Discrete Mathematics and Applications (ADMA), May 27–31, 2021.
11. Virtual Conference on Discrete Mathematics- 2020, organised by Academy of Discrete Mathematics and Applications (ADMA), February 08–10, 2021.

References

Available upon request.

- **Prof. Tarkeshwar Singh**
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- **Prof. Saket Saurabh**
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- **Prof. Jay Bagga**
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