

DEPARTMENT OF MATHEMATICS

A Special Lecture on Labeling and Coloring in Graphs

17.08.2021

❖ INVITATION



St. Mary's College (Autonomous), Thoothukudi
(Re-accredited with 'A+' Grade by NAAC)

ST. MARY'S MATHEMATICS RESEARCH FORUM
Organizes

A Special Lecture on 'Labeling and Coloring in Graphs'



Best Wishes From

Rev.Sr. Flora Mary
Secretary

Rev.Dr.Sr. A.S.J. Lucia Rose
Principal

Rev.Sr. Josephine Jeyarani
Director of SSC

RESOURCE PERSON

Dr. Indra Rajasingh

Dean and Professor of Mathematics
Vellore Institute of Technology,
Chennai





Tuesday / Aug 17
6.00 P.m.

For Registration
[Click here](#)

Join Zoom Meeting
[Click here](#)

Meeting ID: 897 9653 1238 Password: math@smc

About St. Mary's Mathematics Research Forum

St. Mary's Mathematics Research Forum was inaugurated on 07th July 2021. The Forum is the first of its kind in Thoothukudi to mark the Platinum Jubilee of the Mathematics Department and is the bridge between the researchers and the Resource persons. The Forum provides venue for the faculty and the research scholars to present their scholarly efforts and to which the campus celebrates the wealth of research across all fields of Mathematics carried out by the dedicated faculty and researchers across the nation. The Forum contributes to the continuing professional development of the faculty in all contemporary fields and areas of research in Mathematics by bringing the faculty together with scholars working in closely allied fields and providing a formal structure for their interaction. The aim of the Forum is to explore the purpose of the research work among researchers and to help them understand what should not be done in Research.

Advisory Committee

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| <p>Dr. Paul Manuel Professor of Information Science Kannur University Kannur</p> | <p>Dr. M. Leelis Thivagar Professor and Head Department of Mathematics Madurai Kamaraj University Madurai</p> |
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Local Body Committee Members

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| <p>Dr. R. Kala Professor and Head Department of Mathematics Marudamangalam Government College Tiruvallur</p> | <p>Dr. K. Palani Head and Associate Professor Department of Mathematics A.P.J. Abdul Kalam College for Women Tiruvallur</p> |
| <p>Dr. S. Pious Missier Head and principal Department of Mathematics Dowd College of Arts and Science, Kodaikal</p> | <p>Dr. S. Syed Ali Fathima Head and Associate Professor Department of Mathematics Nadabathalam Appa College, Tiruvallur</p> |
| <p>Dr. A. Lourdasamy RJM, Director and Associate Professor Department of Mathematics St. Xavier's College (Autonomous) Palayamkottai</p> | |
| <p>Dr. S. Pasunkilpandian Head and Associate professor Department of Mathematics Acharya College of Arts and Science Tiruvallur</p> | |

Convener

Dr. V.L. Stella Arputha Mary
Head of the Department

Organising Secretary

Dr. Sr. S. Kulandai Therese

Coordinators

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|---|---|
| <p>Dr. A. Punitha Tharani Dr. J. Arul Jothi Dr. G. Priscilla Pacifica Dr. C. Reena Dr. P. Ambarasi Rodrigo</p> | <p>Ms. M. Kanaga Ms. A. Ferdina Dr. R. Maria Inudhaya Aspin Chitra Ms. P. Sugalya</p> |
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We cordially invite you all to join us


❖ SCREENSHOTS

Proper Coloring & Chromatic Number

- **Vertex coloring** of a graph G is an assignment of k colors $1, 2, \dots, k$ to the vertices of G . The coloring is **proper** if **no two adjacent vertices have the same color**.
- Minimum number of colors used for a proper vertex coloring of a graph G is called the **chromatic number** of G and is denoted by $\chi(G)$.



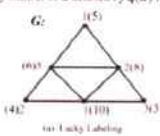
G :
Proper coloring using 4 colors



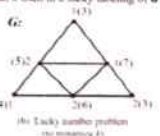
G :
Proper coloring using 3 colors (minimum)

Lucky Labeling

- A mapping $f: V(G) \rightarrow \{1, 2, \dots, k\}$ is called a **Lucky labeling** or **vertex labeling by sum** if for every two adjacent vertices u and v of G , $\sum_{w \sim u} f(w) \neq \sum_{w \sim v} f(w)$. The **lucky number** of G denoted by $\eta(G)$ is the minimum k used in a lucky labeling of G .



G :
(a) Lucky Labeling





G :
(b) Lucky number problem (the minimum k)

S. Choudhury, J. Choudhury, V. Zakhary, Lucky Labeling of graphs, Information Processing Letters, Volume 106, Issue 10, 2009



❖ CERTIFICATE

ST.MARY'S COLLEGE (AUTONOMOUS), THOOTHUKUDI
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Certificate

This is to certify that **S. Lourdu Elqueen**, Research scholar, **St. Mary's College (Autonomous)** has actively participated in **"A Special Lecture on Labeling and Coloring in Graphs"** organised by the **St.Mary's Mathematics Research Forum** on 17th August 2021.

V.L. Stella
Dr.M.L.Stella Arputha Mary
Convenor & Head of the Department

Lucia Rose
Dr.Sr.A.S.J.Lucia Rose
Principal

❖ **REPORT**

St. Mary's Mathematics Research Forum organised a special lecture on "Labeling and Coloring in Graphs" through online platform on 17th August 2021 at 6 p.m. Dr. Indra Raja singh, Dean and Professor of Mathematics, Vellore Institute of Technology, Chennai delivered lecture on Labeling and Coloring in Graphs. 121 research scholars and faculty members around India benefitted from the lecture.

V.L. Stella Arputha Mary
Head of the Department

IQAC Coordinator

Lucia Rose
Principal

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