



### Personal Details

Name : **Dr Indulal G**  
Department : Mathematics  
Designation : Associate Professor  
Educational Qualification : M.Sc, M.Phil, Ph.D  
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### Career Profile

S. No.	Institution/ Organization	Designation	Period
1.	St Aloysius College, Edathua	Lecturer	3.9.1996 -2.9.2001
2.	St Aloysius College, Edathua	Lecturer Senior Scale	3.9.2001 -2.9.2006
3.	St Aloysius College, Edathua	Lecturer Selection Grade	3.9.2006 -2.9.2009
4.	St Aloysius College, Edathua	Associate Professor	3.9.2009 to till date

### Positions Held or Holding if any

S. No.	Position	Period
1.	NAAC	Coordinator from 2018 onwards
2.	IQAC	Coordinator 2013-2016
3	PG Board of studies, M.G. University	Member, 2017-2019
4	Academic Council, SB College, Changanachery	Member 2016-
5	Doctoral Committee, APJ Abdul Kalam Technological University, Kerala	Member 2016-
6	Reviewer for the American Mathematical Society (AMS)	2009-
7	Member of Kerala Mathematical Society	Lifelong
8	Referee for various international journals	
9	Subject expert in various academic forums	

### Research Publications

S. No.	Publication
1.	G. Indulal and A. Vijayakumar, On a Pair of Equienergetic Graphs, Comm. Math.

	Comput. Chem. (MATCH) 55 (2006), 83 - 90
2.	G. Indulal, A. Vijayakumar, <i>Energies of some non-regular graphs</i> , J. Math. Chem. <b>42</b> (2007), 377 - 386.
3.	G. Indulal, A. Vijayakumar, <i>Equienergetic self-complementary graphs</i> , Czechoslovak Math J.,58 (2008) 911–919.
4.	G. Indulal, A. Vijayakumar, <i>Some new integral graphs</i> , Applicable Analysis and Discrete Mathematics, <b>1</b> (2007), 420 - 426.
5	G. Indulal, A. Vijayakumar, <i>Classes of Türker equivalent graphs</i> , Graph Theory Notes of New York, <b>L III</b> , 30 - 36 (2007).
6	G. Indulal, A. Vijayakumar, <i>A note on energy of some graphs</i> , MATCH Commun. Math. Comput. Chem. <b>59</b> (2008), 269-274.
7	G. Indulal, I. Gutman, A. Vijayakumar, <i>On distance energy of graphs</i> , MATCH Commun. Math. Comput. Chem. <b>60</b> (2008),461–472.
8	G. Indulal, I. Gutman, <i>On the distance spectra of some graphs</i> , Math. Commun. <b>13</b> (2008), 123 -131.
9	I. Gutman, G. Indulal, and R. Todeschini, <i>Generalizing the McClelland Bounds for Total <math>\pi</math>- Electron Energy</i> Z. Naturforsch. 63a, 1 - 3 (2008) G.Indulal , <i>Sharp bounds on the distance spectral radius and the distance energy of graphs</i> , Lin. Algebra Appl. <b>430</b> (2009), 106–113.
10	Indulal, G., <i>The distance spectrum of graph compositions</i> , Ars. Mathematica Contemporanea <b>2</b> (2009), 93 – 100.
11	Stevanović, D. and Indulal, G., <i>The distance spectrum and energy of the compositions of regular graphs</i> , Appl. Math. Lett. <b>22</b> (2009), 136 – 1140.
12	Indulal, G. and Gutman, I., <i>D- equienergetic self - complementary graphs</i> , Kragujevac. J. Math. (2009), 123 - 131
13	Indulal, G., <i>The spectrum of neighborhood corona of graphs</i> . , Kragujevac J. Math. 35, No. 3, 493 - 500 (2011)
14	Indulal, G. <i>Spectrum of two new joins of graphs and infinite families of integral graphs</i> . , Kragujevac J. Math. 36, No. 1, 133 - 139 (2012).
15	G. Indulal , R. Balakrishnan, A. Anuradha, <i>Some new families of integral graphs</i> , Indian J. of Pure and Appl Maths, 805–817(2014)
16	G. Indulal , Stevanović, D., <i>The distance spectrum of Corona and cluster of two graphs</i> ,AKCE Journal of Graphs and Combinatorics,12 (2015) 186192
17	G.Indulal , A.Vijayakumar , <i>Reciprocal Graphs</i> , Malaya J. Mat. 4(3)(2016) 380387
18	G.Indulal , <i>New families of integral graphs</i> ,Discrete Mathematics, Algorithms and Applications Vol. 8, No. 4 (2016) 1650063 1-9.
19	G.Indulal , <i>The distance spectrum and energy of the median and total graph of a cycle</i> ,Kragujevac J. Math. 40, No. 2, 298-305 (2016)
20	G. Indulal, R. Balakrishnan, <i>The distance spectrum of Indu-Bala Product of graphs</i> AKCE International Journal of Graphs and Combinatorics 13 (2016) 230234

21	G.Indulal , Mary George, The wiener index of some derived graphs , Journal of Applied Mathematics and Applications, Volume 6, Number 1, February 2017, pp. 3-6(4)
22	G.Indulal , The wiener index of some graphs , Kerala Mathematical Bulletin, Dec 2017
23	G.Indulal , $D$ - spectrum and $D$ - energy of the complements of iterated line graphs of regular graphs , Algebraic Structures and its Applications, Article 5, Volume 4, Issue 1, Summer and Autumn 2017, Page 51-56
24	G.Indulal, Deena C Scaria, X.Liu , The distance spectrum of the subdivision vertex join and subdivision edge join of two regular graphs, Discrete Math. Lett. 1 (2019) 36-41
25	Deena C Scaria, G.Indulal, The Distance Laplacian and Distance Signless Laplacian Spectrum of the subdivision vertex join and subdivision edge join of two regular graphs, Discrete Math. Algorithms and Applications. 1 (2019)1950053-1-11
26	Palathingal, J.J., Indulal, G., Lakshmanan, S.A. Spectrum of Gallai Graph of Some Graphs. Indian J Pure Appl Math 51, 18291841 (2020)
27	Deena C Scaria, Indulal G , The spectrum of some generalised graphs related to cycles, Indian Journal of Pure and Applied mathematics ( 2020)
28	Liju Alex, G .Indulal , Some degree based topological indices of a generalised F sums of graphs, Electronic Journal of Mathematical Analysis and Applications(2021), 91-111
29	Jeepamol P, Indulal G, Aparna L, The spectrum of the Anti-Gallai Graphs of some graphs, Indian Journal of Pure and Applied mathematics (Accepted in 2020) In Press
30	Jinu Mary Jameson , Gopalapilla Indulal, On the normalized (distance) Laplacian spectrum of linear dependence graph of a finite-dimensional vector space, Discrete Math. Lett. 5 (2021) 49-55
31	G Indulal, Liju Alex, I.Gutman , On Graphs preserving PI index upon edge removal. Journal of Math.Chem,2021,Published online, <a href="https://doi.org/10.1007/s10910-021-01255-">https://doi.org/10.1007/s10910-021-01255-</a>
32	Indulal Gopalapillai, Deena C Scaria, The Distance related spectra of some subdivision related graphs, Journal of Computer Science and Applied Mathematics Vol. 3, no.1, (2021), 23-36
33	Liju Alex, Indulal Gopalapillai, Wiener index of $FH$ sums of graphs, Journal of Computer Science and Applied Mathematics( Accepted)

## Books Published

S. No.	Book Details
1.	'The studies on the spectrum and energy of graphs' was published by Lambert Academic Publishing, Omni Scriptum, Germany with ISBN: 978-3-659-88005-6

## Invited Lectures/ Paper Presentations in Conferences

S. No.	Conference & Presentation Details
1.	Delivered a talk on 'Spectral graph theory' in the international seminar at Catholicate College, Pathanamthitta on 30 - 9 - 2007.
2	Delivered a talk on 'Mathematical Chemistry' in the National seminar sponsored by UGC at S B College, Changanacherry on 15 - 3 - 2008.
3	Delivered a talk on 'Spectral theory of distance matrices and some chemical applications' in the National seminar sponsored by UGC at St.Pauls College, Kalamasserry on 08 - 08 - 2008 .
4	On Graphical Matrices and its Spectral Facts at M.E.S.College, Mannarkkad in the UGC sponsored National Seminar on 17 - 02 - 2009 .
5	On Spectra of Graphs at U.C.College, Aluva in the UGC sponsored National Seminar on 20-11 – 2009
6	Delivered a talk on "Mathematics Treat it carefully" at S.D.College, Kanjirappilly while inaugurating the Mathematics Association on 25.3.2010
7	Delivered a talk on "Fallacies in Mathematics and their Treatment" at Assumption College, Changanacherry while inaugurating the Mathematics Association on 16.7.2010
8	Delivered an invited talk on "Interdisciplinary Applications of mathematics" in the regional seminar at St Aloysius College, Edathua on 15.11.2010
9	Delivered a talk on "Indian Contribution of mathematics" at TKM College, Nangiarkulangara while inaugurating the Mathematics Association on 20.7.2010
10	Delivered an invited talk on " Further possible research areas in Spectral Graph Theory" at the Second Indo-Taiwan International Conference on Discrete Mathematics at Amritha ViswaVidyalaya, Coimbatore on 20.9.2011
11	Delivered an invited talk on "Matrices and their spectra associated with graphs" in the International Conference on Graph theory at Christ Deemed University, Bangalore on 11.2.2011
12	Delivered an invited talk in the UGC sponsored National Seminar at St Thomas College, Kozhencherry on 13.8.2011
13	Delivered a lecture on " Spectra of Graphs" for the M.Sc and M.Phil students and Research Scholars of the Department of Mathematics, Bharatidasan University, Trichy on 15.4.2011
14	Delivered a talk on "The interesting side of Mathematics" at D.B College, Parumala while inaugurating the Mathematics Association on 19.11.2011

15	Delivered an invited talk on "Recent results on the Distance spectrum of Graphs" in the International Seminar Advances in Applied Probability, Graph Theory and Fuzzy Mathematics (ICAPGF-2014) At St.Peter's College Kolencherry on 13.1.2014
16	Delivered an invited talk on "Applications of Graph Theory" in the UGC sponsored National Seminar on Graph Theory and Modelling At SB College Changanacherry on 26.9.2013.
17	Delivered an invited talk on "Graph theory and Group Theory" in the UGC Sponsored National seminar on Graph Theory and its Applications at St. Xavier's College for Women, Aluva on 7.8.2014
18	Delivered an invited talk on "The distance spectrum of graphs" at the Fifth Indo-Taiwan International Conference on Discrete Mathematics ITCDM 2017 at Tamkang University, Taipei, Taiwan on 19.07.2017
19	Delivered an invited lecture on "The spectra of graphs and its applications" in the International seminar at St.Xaviers College, Aluva on 31.10.2017
20	Delivered an invited talk on "The distance spectrum of Graphs" in the International Conference on Discrete Mathematics - ICDM 2018 at Periyar University, Salem on 06.01.2018
21	Delivered an invited talk "The distance spectra of some families of graphs" in the International Conference on Discrete Mathematics - ICDM at National College, Trichy on 15.12.2018
22	Delivered an invited talk on "Spectral Graph Theory" in the National seminar at Bharathmatha College, Thrikkaakkara on 17.01.2018
23	Delivered an invited talk on "Algebraic Graph Theory" in the National seminar at B.C.M College, Kottayam on 24.01.2018
24	Delivered a lecture on "Basics in Spectral Graph Theory" in the National workshop on Algebraic Graph Theory at Central University, Pondichery on 06.03.2018
25	Delivered a lecture on "Spectrum of regular graphs" in the National workshop on Algebraic Graph Theory at Central University, Pondichery on 07.03.2018
26	Delivered a lecture on "Rayleigh Principle, Perron-Frobenius Theorem and Interlacing" in the National workshop on Algebraic Graph Theory at Central University, Pondichery on 08.03.2018
27	Delivered a lecture on "Indian Contribution to Mathematics" on the National Mathematical day at Marthoma College, Thiruvalla on 09.08.2018, sponsored by KSCSTE.
28	Delivered an invited lecture on "Linear Algebra in Graph Theory" in the National workshop on Discrete Mathematics - at Kerala Univeristy, Kariavattom Campus on 19.12.2018
29	Delivered a lecture on "Properties of symmetric Matrices" for a group of college teachers at St.Aloysius College, Edathua on 04.04.2018
30	Delivered a lecture on "Spectrum of some graphs" for a group of college teachers at St.Aloysius College, Edathua on 12.04.2018
31	Delivered a lecture on "Rayleigh Principle, Perron-Frobenius Theorem and Interlacing" for a group of college teachers at St.Aloysius College, Edathua on 8.05.2018
32	Delivered an invited lecture on "Some basic topics of spectral graph theory" in the KSCSTE sponsored National seminar on Algebra and Graph Theory - at St Berchmans College, Changanacherry on 19.1.2019

33	Delivered an invited lecture on "Elementary Matrix theory useful to spectral graph theory Part I" in the Research workshop series in Graph Theory at Cochin University of Science and Technology on 11.5.2019
34	Delivered an invited lecture on "Elementary Matrix theory useful to spectral graph theory Part II" in the Research workshop series in Graph Theory at Cochin University of Science and Technology on 1.6.2019
35	Delivered an orientation lecture on "UGC Regulations 2018 and UGC Pay Fixation Procedures" in the State Level workshop conducted by the IQAC of St Pauls College, Kalamassery on 26.10.2019
36	Delivered an invited talk "Equienergetic graphs" in the International Webinar on Graph Connections at BCM College, Kottayam on 08.08.2020
37	Delivered an invited lecture on "Applications of Graph Theory" in the National Seminar on 'Discrete Mathematics and its Applications' held at Assumption College, Changanachery on 10.01.2020
38	Delivered an invited lecture on "A Journey through Spectral Graph Theory" in the National Seminar on 'Graph Theory and its Applications' held at Government College, Chitur, Palghat sponsored by department of Collegiate Education, Government of Kerala on 24.01.2020
39	Delivered an e-lecture on "Spectral Graph Theory" in the Student - Teacher Enrichment programme (STEP) organised by the Department of Mathematics and Centre for Topology and Applications, Rajagiri School of Engineering and Technology on 30.09.2020
40	Delivered an e-lecture on "Basics of Spectral Graph Theory" in the CT John Memorial Research Lecture Series organised by Marthoma College, Thiruvalla on 05.10.2020
41	Delivered an e-lecture on "Rayleigh Quotient and some characterisations" in the CT John Memorial Research Lecture Series organised by Marthoma College, Thiruvalla on 17.10.2020
42	Delivered an e-lecture on "Distance Equienergetic Graphs" in the weekly Lecture Series organised by IIT Kharagpur on 23.10.2020
43	Delivered Prof.K.M.Joseph Endowment Lecture on "Mathematics in Real Life" conducted by the Department of mathematics of St Stephan's College, Uzhavoor on 01.02.2020
44	Delivered an e-lecture on "Applications of Mathematics" in connection with the inauguration of mathematics association St Pauls College, Kalamassery on 26.08.2020
45	Delivered an e-lecture on "Mathematics of Google Search" in connection with the Mathematics popularisation Lecture Series organised by S.V.R.N.S.S College, Vazhoor on 12.10.2020
46	Delivered an e-lecture on "Mathematics in practical life" in connection with the inauguration of mathematics association St Peters College, Kolenchery on 13.11.2020
47	Delivered an e-lecture on "The Legacy of Srinivasa Ramanujan" in connection with the National Mathematics day at B.C.M College, Kottayam on 22.12.2020
48	Delivered an e-lecture on "The life and Mathematics of Srinivasa Ramanujan" in connection with the National Mathematics day at St Marys College, Trichur on 30.12.2020
49	Delivered an e-lecture on "Some elementary Problems posed by Srinivasa Ramanujan" in connection with the National Mathematics day at Christ College, Irinjalakkuda on 06.01.2021



50	Delivered an e-lecture on "The role of Mathematics behind Google search" in the seminar series organised by MES Kalladi College, Mannarkkad, Palghat on 11.09.2021
51	Delivered a lecture on 'Reflection on Art and Creative writing' organised by the PG Department of English, St Aloysius College, Edathua on 15.12.2021.
52	Delivered a lecture on 'Basics of Spectral Graph Theory' in the Enrichment programme to PG students organised by the Department of Mathematics, Cochin University of Science and Technology on 22.12.2021
53	Delivered a lecture on 'Energy of Graphs' in the Prof N Dharmambal Memorial Lecture Series organised by the Department of Mathematics, St Therasas College, Eranakulam on 11.01.2022

### Research Projects

S. No.	Title of the Project	Funding Agency	Amount	Period
1.	Studies on the distance spectrum of graphs	UGC	80000	2009-2011

### Seminar/ Workshops Organized

S. No.	Title of the Seminar/ Workshop	Funding Agency	Amount	Date
1	Recent Trends in Graph Theory, Fuzzy Mathematics, Mathematical Chemistry and Biology	UGC	120000	August 12-14,2009
1.	National Seminar on EMERGING TRENDS IN GRAPH THEORY AND ITS APPLICATIONS	UGC	130000	JANUARY 21- 23, 2015

### Membership in Scientific/ Professional Societies

S. No.	Name of the Society	Nature of Membership
1.	Kerala Mathematical Association	Life Long

### Doctoral Research Supervision

S. No.	Scholar's Name	Title	Year of Registration	University	Status
1.	Deena C Scaria	A study on the spectrum and spectral related parameters of graphs	2018	M G University	Ongoing

2.	Liju Alex	A study on the topological indices of some classes of graphs	2018	M G University	Ongoing
3.	Sreeraj K S	A study on the spectra of graphs associated with finite groups	2018	M G University	Ongoing
4	Jinu Mary Jameson	A study on the Normalised Laplacian spectra of graphs	2018	M G University	Ongoing
5	Jiny Johny C J	A study on the spectra of directed graphs	2018	M G University	Ongoing

### Research Collaborators

SI No	Name	University	No of Papers resulted
1	Ivan Gutman	Kragujevac University , Serbia	4
2	Dragon Stevanovic	University of Primorska,Koper, Slovenia	2
3	R Balakrishnan	Bharathidasan University, Tiruchirappalli, India	4
4	X Liu	Northwestern Polytechnical University, China	1
5	Suleyman Ediz	Van Yuzuncu YI University, Turkey	1

### Radio Talks Given

SI No	Title of the Talk	Date of Broadcast
1	'Ganitham, Sastharaajnji' (Mathematics, the Queen of Sciences)'	1.03.2017
2	'Ganitham, Nithyajeevithaththil' (Mathematics, in Practical life)	26.06.2017
3	'Keralaththinte Ganithasasthrapaarampariyam' (The legacy of Kerala Mathematics)	1.11.2017
4	The legacy of Kerala Mathematics in English	10.08.2018
5	Srinavasa Ramanujan , athulyanaya Ganithasasthraphathibha	20.12.2018
6	Niels Henric Abel	24.04.2019
7	Hypatia - The bravest Women mathematician	28.08.2019
8	Vishaththilninnulla Jeevanraksha Uushadhangal	29.01.2020
9	Sasthram jayikkukathanne cheyyum	21.08.2020
10	Everiste Galois - ganithaththile nithyavismayam	23.10.2020