

Dr. T. Asir

Assistant Professor and Head *i/c*

Department of Mathematics

Directorate of Distance Education



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Educational Qualifications : M.Sc., M.Phil., Ph.D.

Professional Experience : 9 years

FIELD OF SPECIALIZATION

- Algebra
- Graph Theory

RESEARCH SPECIALIZATION

- Algebraic Graph theory
- Commutative Algebra

Research Supervision:

Program	Completed	Ongoing
Ph.D	2	3
M.Phil	23	1

PROFESSIONAL EXPERIENCE

No	Institution	Position	From (date)	To (date)	Duration
1	Madurai Kamaraj University	Assistant Professor	5 th Dec. 2013	till date	5 years
2	Manonmaniam Sundaranar University	UGC- Kothari Postdoctoral researcher	August 2012	Dec. 2013	1 year 5 months
	St. Johns College, Tirunelveli	Lecturer (Ad-Hoc)	June 2012	August 2012	3 Months
3	Manonmaniam Sundaranar University	DST-INSPIRE Fellow	Feb. 2011	May 2012	1 years 5 months
4	Manonmaniam Sundaranar University	UGC- Major Project Fellow	March 2010	Jan. 2011	10 months
5	St. Johns College, Tirunelveli	Lecturer	May 2009	March 2010	11 Months

RESEARCH COLLABORATION (BOTH NATIONAL & INTERNATIONAL)

Name of the Collaborator	Institute	Collaboration Details	Collaboration Output
Prof. David F. Anderson	The University of Tennessee, USA	Survey research on graphs constructed from rings	Book
Prof. H. R. Maimani	Institute for Research in Fundamental Sciences, Iran	Research on Jacobson graphs from rings	Paper
Prof. Ayman Badawi	American University of Sharjah, UAE	Survey research on graphs constructed from rings	Book
Prof. M. R. Pournaki	Sharif University of Technology, Iran	Research on Jacobson graphs from rings	Paper
Prof. T. Tamizh Chelvam	Manonmaniam Sundaranar University, India	Research on total, zero-divisor and Cayley graphs from rings	Papers

COMPLETED RESEARCH PROJECT

No	Title of the Project	Funding Agency	Total Grant	Year
1.	Interlink between commutative rings and graphs	UGC	6,00,000/-	2015-2017

ON-GOING RESEARCH PROJECT

No	Title of the Project	Funding Agency	Total Grant	Year
1.	Graphs constructed from additive operator of commutative rings	Science and Engineering Research Board(SERB)	6,60,000/-	2018-2021
2.	MOOC: Core and Pedagogy of Mathematics	SWAYAM-Ministry of Human Resource Development(MHRD)	7,50,000/-	2018 onwards
3.	MOOC: Algebra	SWAYAM-Ministry of Human Resource Development(MHRD)	14,00,000/-	July 2019 onwards
4.	MOOC: Graph Theory	SWAYAM-Ministry of Human Resource Development(MHRD)	14,00,000/-	January 2020 onwards

HONORS/AWARDS/RECOGNITIONS

- Gold Medal for First rank in M.Sc Mathematics (2006-2008).
- University second rank holder in M.Phil. Mathematics (2008-2009).
- Travel grant from DST to attend the Fourth International Conference in Mathematical Sciences ICM 2012 held at United Arab Emirates University, Al-Ain, UAE.
- Received Rs. 1,50,000/- from SERB, Rs. 60,000/- from CSIR and Rs. 1,00,000/- from MKU to conduct an International Conference during January 08-10, 2018.
- Under the leadership, two memorandums of understanding (MoU) were signed. One between MKU and Shahid Rajae Teacher Training University, Tehran, Iran, and the other with MKU and Sharief University of Technology, Tehran.

PUBLICATIONS

- **T. Asir** and K. Mano, Classification of non-local rings with genus two zero-divisor graphs, *Soft Computing*, 24 (2020) 237–245. (SCI with I.F 2.784)
- **T. Asir** and K. Mano, Classification of rings with crosscap two class of graphs, *Discrete Applied Mathematics*, 256 (2019) 13-21. (SCI with I.F 0.983)
- **T. Asir** and K. Mano, Bounds for the genus of generalized total graph of a commutative ring, *Algebra Colloquium*, 26: 3 (2019) 519-528. (SCIE with I.F 0.394)
- **T. Asir**, H. R. Maimani, M. R. Pournaki and T. Tamizh Chelvam, Some bounds for the genus of a class of graphs arising from rings, *Houston Journal of Mathematics*, 45(2) (2019), 371-384. (SCI with I.F 0.424)
- **T. Asir** and K. Mano, The classification of rings with genus two class of graphs, *Politehnica University of Bucharest. Scientific Bulletin. Series A. Applied Mathematics and Physics*, 81(1), (2019) 143-152. (SCIE with I.F 0.279)
- **T. Asir** and K. Mano, The classification of rings with its genus of class of graphs, *Turkish Journal of Mathematics*, 42(3) (2018) 1424-1435. (SCIE with I.F 0.614)
- **T. Asir**, The genus two class of graphs arising from rings, *Journal of Algebra and its Application*, 17 (10), Article No. 1850193 (2018) (SCIE with I.F 0.600)
- **T. Asir** and T. Tamizh Chelvam, On the genus two characterizations of unit, unitary Cayley and co-maximal graphs, *ArsCombinatoria*, 138 (2018), 77-91. (SCIE with I.F 0.278)
- T. Tamizh Chelvam and **T. Asir**, Genus of total graphs from rings: A survey, *AKCE International Journal of Graphs and Combinatorics*, 15(1) (2018) 97-104. (ESCI Journal)
- **T. Asir** and T. Tamizh Chelvam, Genus of total graphs of commutative rings: A survey, *Electronic Notes in Discrete Mathematics*, 63 (2017) 59–68. [Elsevier]
- T. Tamizh Chelvam and **T. Asir**, Distances in zero-divisor and total graphs from commutative rings-A survey, *AKCE International Journal of Graphs and Combinatorics*, 13(3) (2016), 290-298. (ESCI Journal)
- **T. Asir** and T. Tamizh Chelvam, On the genus of generalized unit and unitary Cayley graphs of a commutative ring, *Acta Mathematica Hungarica*, 142(2014), 444–458. (SCIE I.F 0.456)
- **T. Asir** and T. TamizhChelvam, On the total Graph and its complement of a commutative ring, *Communications in Algebra*, 41 (10) (2013) 3820-3835. (SCIE with I.F 0.347)
- **T. Asir** and T. TamizhChelvam, On the Intersection graph of gamma sets in the total graph II, *Journal of Algebra and its Application*, 12(4) (2013), No.1250199 (14 pages). (SCIE I.F 0.446)

- T. Tamizh Chelvam and **T. Asir**, On the Intersection graph of gamma sets in the total graph I, *Journal of Algebra and its Application*, 12(4) (2013), No. 1250198(18 pages)(**SCIE I.F 0.446**)
- T. Tamizh Chelvam and **T. Asir**, On the genus of the total graph of a commutative ring, *Communications in Algebra*, 41(1) (2013) 142–153. (**SCIE with I.F 0.347**)
- T. Tamizh Chelvam and **T. Asir**, Domination in the total graph of a commutative ring, *Journal of Combinatorial Mathematics and Combinatorial Computing*, 87 (2013), 147-158.
- T. Tamizh Chelvam and **T. Asir**, Graphs with constant sum of domination and inverse domination numbers, *International Journal of Combinatorics*, 2012, ID 831489, 7 pages.
- T. TamizhChelvam and **T. Asir**, Intersection graph of gamma sets in the total graph,*Discussiones Mathematicae Graph Theory*, 32 (2012) 341–356. (**SCIE with I.F 0.302**)
- T. TamizhChelvam and **T. Asir**, Domination in Total Graph on Z_n , *Discrete Mathematics, Algorithms and Applications*, 3 (4) (2011) 1-9. (**ESCI Journal**)
- T. TamizhChelvam and **T. Asir**, A note on total graph of Z_n , *Journal of Discrete Mathematical Science and Cryptography*, 14 (1) (2011) 1-7.

PAPER PRESENTED IN CONFERENCE/SEMINAR/WORKSHOP

Name of the Conference	Date	Place	Title	Author(s)
<i>International Conference on Algebra and its Application-2016</i>	Nov. 12 to 14, 2016	Aligarh Muslim University, Aligarh	On the generalized total graph of rings	T. Asir
<i>International Conference on Agriculture, Science, Technology and Management-2016</i>	Nov. 10 to 11, 2016	Carmal College of Arts, Science and Commerce for Women, Goa	Ideal based total graph	T. Asir and K. Mano
International Conference on Emerging Trends in Science and Technology	April 21 to 22, 2016	College of Agricultural Engineering & Technology, Sikkim	The genus of the total graph of a commutative ring	T. Asir
<i>The International Multidisciplinary Academic Conference</i>	Nov. 02 to 06, 2015	Thailand	The zero-divisor and total graph of a ring	T. Asir
<i>Fourth International Conference in Mathematical Sciences</i>	March 11 to 14, 2012	United Arab Emirates University, UAE	The Intersection graph of gamma sets in total graph	T. Asir and T. Tamizh Chelvam

CONFERENCE/WORKSHOP/SEMINAR/TRAINING ORGANIZED

Type	Name	Date(s)	Place	Role Played	Funding Agency
International	International Conference on Algebra and Discrete Mathematics	January 08-10, 2018	MKU	Organizing Secretary/ Convener	SERB, CSIR and MKU
International	<i>Ramanujan's contributions and recent trends in Mathematics</i>	December 21-23, 2015	MKU	Organizing committee member	UGC and SERB
International	International Conference on Mathematical Sciences	August 21-23, 2014	MKU	Organizing committee member	UGC

BOOK PUBLISHED

Title of the Book / Chapter	Author	Publisher	Year	ISBN Number
Generalized total graphs of commutative rings: A survey	T. Tamizh Chelvam and T. Asir	De Gruyter	2018	978-3-11-054092-5
On dominations in graphs from commutative rings: A survey	T. Tamizh Chelvam, T. Asir and K. Selvakumar	Springer	2016	978-981-10-1651-6
On distances in zero-divisor and total graphs from commutative rings	T. Tamizh Chelvam, T. Asir and K. Selvakumar	Cochin University of Science and Technology	2015	978-93-80095-80-6

MEMBERSHIP IN ACADEMIC BODIES

- Member of American Mathematical Society
- Life Member of Academy of Discrete Mathematics and Applications
- Life Member of FATER Academy of India
- Editorial Board member in "Asian Journal of Algebra", "Journal of Management and Science" and "International Research Journal of Applied Sciences"
- *Guest Editor* for a special issue in "AKCE Journal of Graphs and Combinatorics" and "Palestinian Journal of Mathematics"

▪ **Journals refereeing/reviewing:**

1. Filomat; 2. Journal of Algebra and its Application; 3. Algebra Colloquium;
4. Turkish Journal of Mathematics, 5. Hacettepe Journal of Mathematics and Statistics, 6. Australasian Journal of Combinatorics, 7. Proyecciones Journal of Mathematics, 8. Revista de la Unión Matemática, 9. AKCE Journal of Graphs and Combinatorics, 10. Discrete Mathematics, Algorithms and Applications; 11. Italian Journal of Pure and Applied Mathematics, 12. Quasigroups and Related Systems;
13. Journal of Mathematics, 14. TWMS Journal of Pure and Applied Mathematics;
15. Karbala International Journal of Modern Science; 16. Palestine Journal of Mathematics; 17. Cogent Mathematics; 18. Cogent Mathematics and Statistics;
19. Journal of Advanced research in pure Mathematics; 20. Journal of Advances in Mathematics and Computer Science

ADMINISTRATIVE EXPERIENCE

Role Played	Responsibilities	Period (Month & Year)
Director (FAC), MKU Evening College, Dindigul	Managing entire functioning of MKU Evening College, Dindigul	July 2019 to till date
Head i/c, Department of Mathematics-DDE	Lesson writing, Seminar classes, Paper evaluation and addressing students	January 2018 to till date
Nodel Officer for UG and PG Mathematics Exam Valuation	Examination evaluation board chairman	April 2014 to April 2018.
Member of M.Phil. Dissertation evaluation board	M.Phil. Dissertation evaluation	May 2014 to May 2018
Admission Committee Member	Monitoring MKU DDE Admission	Feb. 2014 to April 2018
Member of the curriculum enrichment	UG and PG courses curriculum enrichment for Manonmaniam Sundaranar University	2014 to 2016
Board of Studies	Board of studies member for colleges like St. Xaviers college-Tirunelveli, Sourashtra College-Madurai, Fatima college-Madurai, Sadakathullah Appa College-Tirunelveli, Lady Doak College-Madurai, Arul Anandar College-Madurai and Vivekananda College, Madurai	2014 to till date

SELECTED INVITED TALKS

- Invited talk-International Conference on Algebra and Related Topics with Applications, Aligarh Muslim University, Aligarh during December 17-19, 2019.
- Participated as a SWAYAM Course Coordinator in MOOC-Capacity Building Training Programme at NITTER, Chandigarh during November 4-6, 2019.
- Invited talk-National Conference on Emerging Trends in Mathematics and its Applications, Noorul Islam Centre for Higher Education during October 29&30, 2019.
- Delivered series of Lecture at Palestine Technical University-Kharorie, **Palestine** during September 24&25, 2019.
- Resource person for 87th and 88th Orientation Programmes of Madurai Kamaraj University during July 19&20, 2019.
- Invited talk-International Conference on Number Theory and Graph Theory at University of Mysore during June 27-29, 2019.
- Delivered series of Lecture at Department of Mathematics, Savitribai Phule Pune University (formerly University of Pune), Pune during March 20-22, 2019.
- Invited talk-International Conference on Graph Theory and its Applications at Amrita Vishwa Vidyapeetham, Coimbatore during January 04-06, 2019.
- Invited talk- International Conference-Birla Institute of Applied Sciences, Bhimtal, Uttarakhand- June 12-14, 2017.
- Invited talk- 13th Annual ADMA Conference and Graph Theory day-XIII- SSN College of Engineering, Chennai- June 08-10, 2017.
- Invited talk- International Conference- Nirmala College for Women, Coimbatore- Dec. 15-17, 2016.
- Invited talk- International Conference- Carmel College of Arts, Science and Commerce for Women, Goa- November 10 to 11, 2016.
- Invited talk- National Workshop- Women's Christian College, Nagercoil- November 3-5, 2016.
- Plenary Speakers- International Conference- College of Agricultural Engineering & Post Harvest Technology, Gangtok, Sikkim- April 21&22, 2016.
- Invited talk- International Conference, **Thailand**- November 02 to 06, 2015.
- Invited talk- National seminar- Arignar Anna College, Krishnagiri, Tamilnadu- March 28, 2015.
- Invited talk- National Seminar on Semigroups- St. John's College, Anchal, Kerala-October 16-17, 2014.
- Invited talk- International Conference- REVA University, Bangalore- June 10-13, 2014.
- Invited talk- International Conference- United Arab Emirates University, **UAE**- March 11-14, 2012.

CONTACT

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