Curriculum Vitae
Spring 2026

Padmapani Seneviratne, Ph.D.,
Professor of Mathematics
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EDUCATION

Ph.D. Mathematical Sciences, Clemson University, South Carolina — August, 2007

M.S. Mathematical Sciences, Clemson University, South Carolina — May, 2003

B.Sc. Mathematics, University of Peradeniya, Sri Lanka — August, 1999

PROFESSIONAL EXPERIENCE

Professor	East Texas A&M University (ETAMU)	09/2023 - Present
Associate Professor	Texas A&M University - Commerce (TAMUC)	09/2017 − 08/2023
Assistant Professor	Texas A&M University - Commerce (TAMUC)	09/2014 − 08/2017
Assistant Professor	American University of Sharjah (AUS)	08/2007 − 08/2014

RESEARCH

Research Interests: Applications of Algebra and Discrete Mathematics: Classical & Quantum Error-Correcting Codes.

Publications

1. N. Zoubir, Kenza Guenda and **Padmapani Seneviratne**, LCD Codes over Finite Fields, *Discrete Mathematics, Algorithms and Applications*, Accepted.

2. **Padmapani Seneviratne**, Hannah Cuff, Alexandra Koletsos, Kerry Seekamp and Adrian Thananopavarn, New qubit codes from multidimensional circulant graphs, *Discrete Math.*, vol. 347, (2024) 114058.

3. **Padmapani Seneviratne** and Martianus Frederic Ezerman, New quantum codes from metacirculant graphs via self-dual additive F_4-codes, *Advances in Mathematics of Communications*, (2023), vol. 17, Issue 1: 288-297. Doi: 10.3934/amc.2021073

4. **Padmapani Seneviratne** and Taher Abualrub, New linear codes derived from skew generalized quasi-cyclic codes of any length, *Discrete Mathematics*, (2022), vol. 345, Issue 11, 113018. https://doi.org/10.1016/j.disc.2022.113018

5. Srinivasulu, B., **Seneviratne, P**. $Z_2Z_2[u4]$-cyclic codes and their duals, *Comp. Appl. Math. (Springer)*, vol. 41, no.172 (2022). https://doi.org/10.1007/s40314-022-01872-9

6. Fellah, N., Guenda, K., Özbudak, F. and **P. Seneviratne**, Construction of self dual codes from graphs, *Applicable Algebra in Engineering, Communication and Computing (Springer)*, vol.35, pages 545–556, (2024).

https://doi.org/10.1007/s00200-022-00567-2

7. Taher Abualrub and **Padmapani Seneviratne**, Quasi-cyclic and generalized quasi-cyclic codes and uniqueness of their generators, *Discrete Mathematics, Algorithms and Applications (World Scientific)*, vol. 15, No. 06, 2250145 (2023).

8. **Padmapani Seneviratne**, A remark on skew factorization and new F_4-linear codes, *Discrete Mathematics, Algorithms and Applications (World Scientific)*, vol. 14, No. 6 (2022) 2250011 (9 pages), https://doi.org/10.1142/S1793830922500112

9. **Padmapani Seneviratne** and Martianus Frederic Ezerman, Two new zero-dimensional qubit codes from bordered metacirculant construction, *Discrete Mathematics*, vol. 344 (2021), 112491. https://doi.org/10.1016/j.disc.2021.112491

10. B. Srinivasulu and **P. Seneviratne**, Some results on $F_4[v]$-double cyclic codes, *Computationaland Applied Mathematics (Springer)*, vol. 40, no. 64 (2021). https://doi.org/10.1007/s40314-021-01428-3

11. **Padmapani Seneviratne**, Jennifer D. Melendez and Alexander N. Westbrooks, Properties and Parameters of Codes from Line Graphs of Circulant Graphs, *Journal of Combinatorial Mathematics and Combinatorial Computing*, vol 114 (2020), pp 353–360.

12. Taher Abualrub, Martianus Frederic Ezerman, **Padmapani Seneviratne** and Patrick Sole´, Skew Generalized Quasi Cyclic Codes, *TWMS journal of Pure and Applied Mathematics*, vol. 9, issue 2 (2018), pp. 123–134.

13. **P. Seneviratne** and L. Melcher, LCD codes from projective spaces, *Discrete Mathematics, Algorithms and Applications(World Scientific)*, vol. 10, no. 06 (2018), 1850079. https://doi.org/10.1142/S1793830918500799

14. **P. Seneviratne** and L. Melcher, On generalized MacDonald codes, *Involve-A journal of Mathematics*, vol. 11 (2018), issue 5, pp. 885–892.

15. J. D. Key and **P. Seneviratne**, Partial permutation decoding for MacDonald codes, *Applicable Algebra in Engineering, Communication and Computing (Springer)*, vol. 27, no. 5, (2016), pp. 399—412.

16. **Padmapani Seneviratne**, Generalized hypercube graph $Q_n(S)$, graph products and self-orthogonal codes, *Journal of Algebra Combinatorics Discrete Structures and Applications*, vol. 3, no. 1 (2016), pp. 37–44.

17. **Padmapani Seneviratne**, Codes from multipartite graphs and minimal permutation decoding sets, *Discrete Mathematics, Algorithms and Applications*, vol. 7, no. 4 (2015), 1550060.

18. **Padmapani Seneviratne**, Codes associated with circulant graphs and Permutation decoding, *Designs, Codes & Cryptography*, vol. 70, no. 1-2, (2014).

19. **P. Seneviratne** and J. Limbupasiriporn, Permutation decoding of codes from generalized Paley graphs, *Applicable Algebra in Engineering, Communication and Computing (Springer)*, vol. 24, (2013), pp. 225–236.

20. T. Abualrub, N. Aydin, **P. Seneviratne**, θ-cyclic codes over $F_2 + vF_2$, *Australian Journal of Combinatorics*, vol. 54 (2012), pp.115–126.

21. Irfan Siap, Taher Abualrub, Nuh Aydin, **Padmapani Seneviratne**, Skew Cyclic Codes Of Arbitrary Length, *International Journal of Information and Coding Theory*. vol. 2, no. 1 ,(2011), pp. 10–20.

22. T. Abualrub, **P. Seneviratne**, Skew codes over rings, *Lecture Notes in Engineering and Computer Science*, vol: 2181, no. 1, (2010), pp.846–847.

23. **Padmapani Seneviratne**, Partial permutation decoding for the first-order Reed-Muller codes, *Discrete Mathematics*, vol. 309, (2009), 1967–1970.

24. J.D. Key and **P. Seneviratne**, Permutation decoding for binary codes from lattice graphs, *Discrete Mathematics*, vol. 308, no. 13, (2008), pp. 2862-2867.

25. J.D. Key and **P. Seneviratne**, Permutation Decoding for Binary Self-Dual Codes from the Graph Qn, where n is Even, *Advances in Coding Theory and Cryptography*, Series on Coding Theory and Cryptography, 3. pages 152-159, 2007.

26. J.D. Key and **P. Seneviratne**, Codes from the line graphs of complete multipartite graphs and PD-sets, *Discrete Mathematics*, vol. 307 (2007), pp.2217–2225.

27. J.D. Key and **P. Seneviratne**, Binary codes from rectangular lattice Graphs & permutation decoding, *European J. Combinatorics*, vol. 28, (2007), pp. 121–126.

Refereed Conference Proceedings

28. **Padmapani Seneviratne**, Codes associated with circulant graphs and permutation decoding, *Proceedings of the Third International Castle Meeting on Coding Theory and Applications, Cardona Castle in Cardona, (Editors: J. Borges and M. Villanueva) Pages: 257 - 264. volume I, 2011.*

29. *T. Abualrub, I. Siap and* **P. Seneviratne***, On the construction of skew cyclic codes for any length,Proceedings of the 3rd International conference on modeling, simulation and applied optimization (ICMSA)'09.*

30. **P. Seneviratne***, Binary codes from complete multipartite graphs and permutation decoding, Proceedings of the 3rd International conference on modeling, simulation and applied optimization(ICMSA)'09.*

Articles in-review

31. Amina Delhoum, Nuh Aydin, **Padmapani Seneviratne**, and Yiyang Lu, On factorization of polynomials in skew polynomial rings: Resolution of a conjecture, new results and new codes.

32. Andreas Garcia, Layla Jarrahy, Elisaveta Samoylov and **Padmapani Seneviratne**, New quantum codes from generalized Toeplitz graphs.

33. Nuh Aydin, Martianus Frederic Ezerman, Amina Delhoum and **Padmapani Seneviratne**, New qubit and qutrit stabilizer codes from skew hermitian self-orthogonal codes.

Presentations (Invited & Conference)

1. *Quantum codes from generalized Toeplitz graphs*, Invited talk, AMS central sectional meeting, University of Texas San Antonio, September 14-15, 2024.

2. *LCD codes over finite fields*, Invited talk, AMS Special Session on Advances in Coding Theory II, Joint Mathematics Meetings, San Francisco, 2024.

3. *Codes from Metacirculant graphs*, CombinaTexas conference, Texas A&M University, March 4-5, 2022.

4. *Binary codes from line graphs of circulant graphs*, MCCCC 32, Duluth MN, October 5-7, 2018.

5. *Codes from Paley-type bipartite graphs*, CombinaTexas conference, Texas A&M University, February 10-11, 2018.

6. *Paley-type bipartite graphs and self-dual codes*, Invited-talk, Mathematical Congress of the Americas, July 24-29, 2017, Montreal, Canada.

7. *On a class of few weight codes*, Invited-talk, AMS sectional meeting, fall 2016, October 28-30, 2016, Minneapolis, MN.

8. $(0, 2)$*-graphs and their codes*, Joint Mathematics Meetings, Janaury 10-13, 2015, San Antonio, TX.

9. *Self-dual codes from* $(0, 2)$*-graphs*, Antalya Algebra days, 2014, Antalya, Turkey.

10. *Permutation decoding for codes from generalized Paley graphs*, 18th International Conference on Applications of Computer Algebra, special session on Coding Theory, June 25-28, 2012, Sofia, Bulgaria.

11. *Codes from generalized Paley graphs*, Joint Mathematics Meetings 2012, January 04-07, Boston, MA, USA.

12. *Codes associated with circulant graphs and Permutation decoding*, Third International Castle Meeting on Coding Theory and Applications, September 11-15, 2011, Cardona, Spain.

13. *Codes from multipartite graphs and permutation decoding*, The 3rd biennial Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM), May 31 - June 03, 2011. Victoria, BC, Canada.

14. *Skew Cyclic Codes Over* $\mathbf{F}_2 + v\mathbf{F}_2$, Algebraic Combinatorics & Applications(ALCOMA'10), April 11- 18, 2010. Thurnau, Germany.

15. *An optimal class of binary codes for permutation decoding*, Fortieth Southeastern International Conference on Combinatorics, Graph Theory and Computing. March 2-6, 2009, Florida Atlantic University, Boca Raton, USA.

16. *Binary Codes from Complete Multi-Partite Graphs and Permutation Decoding*, ICMSAO'09 Third International Conference On Modeling, Simultation, and Applied Optimization, January 20 - 22, 2009, Sharjah, UAE.

17. *Partial permutation decoding of Hermitian codes*, Special Session on Algebraic Coding Theory honoring the retirement of Harold N. Ward at AMS Central Section Meeting, October 2007, Chicago, IL.

GRANTS

External Grants - Funded

- National Science Foundation, *REU Site: Theoretical and Application-Driven Mathematics*, DMS − 2243991, $385,387 (Role: PI)   2023–2026

- NREUP grant (Math. Association of America, funded by the NSF Grant DMS - 1652506), $27,500 (Role: Co-PI)   2020

- NREUP grant (Math. Association of America, funded by the NSF Grant DMS - 1652506), $28,260 (Role: Co-PI)   2018

Internal Grants & Awards

- Faculty Research Enhancement Project (FREP) Grant, TAMUC, $9880, (Role: PI)   2016/2017
- International Faculty Development Award, TAMUC, $1200   Spring 2017

HONORS AND AWARDS

- H.M. Lafferty Distinguished Faculty Award for Scholarship and Creative Activity   2024

- Researcher of the year: TAMUC Annual Research Awards   2023

- Clemson University: MURI Graduate Research Fellowship   2005

- Clemson University: Department of Mathematical Sciences Teaching Excellence Award   2004

TEACHING

East Texas A&M University 2014 - Present

- Graduate

    1. MATH 522: Topology I, Summer I, 2016 − 2020.

    2. MATH 523: Topology II, Summer II, 2016 − 2020.

    3. MATH 531: Theory of Matrices, Fall - 2016, 2019, 2021, 2023, 2024.

    4. MATH 536: Cryptography, Summer I - 2019, 2021, 2022, 2024.

    5. MATH 537: Theory of Numbers, Spring - 2016, 2018, 2020, 2022, 2024.

    6. MATH 543: Abstract Algebra I, Fall - 2018, 2020, 2024.

    7. MATH 544: Abstract Algebra II, Spring 2019, 2021.

    8. MATH 597: Coding Theory, Spring - 2022.

- Undergraduate

    – MATH 1314: College Algebra: Fall 2025.

    – MATH 1342: Elementary Statistical Methods: Fall 2021.

    – MATH 1324: Mathematics for Business Applications I: Fall 2023.

- MATH 1325: Mathematics for Business Applications II: Fall 2015, 2017, Spring 2015.
- MATH 2305: Discrete Mathematics: Fall 2022, 2024, Spring 2023, Summer 2017.
- MATH 2318: Linear Algebra: Fall 2020, 2022, Spring 2015, 2017, 2019, 2021, Summer 2021 − 2024.
- MATH 2320: Differential Equations: Fall 2014.
- MATH 2413: Calculus I: Fall 2017, 2019, Spring 2016, 2018.
- MATH 2414: Calculus II: Fall 2014.
- MATH 2415: Calculus III: Fall 2014, 2016, 2017, Spring 2015, 2018, 2019.
- MATH 333: Advanced Linear Algebra: Fall 2019, 2020, 2021, 2023, 2024.
- MATH 334: Abstract Algebra: Summer 2015, 2021, Fall 2015, 2022, Spring 2020, 2021.
- MATH 401: Mathematical Statistics: Fall 2015, 2016, 2018.
- MATH 437: Theory of Numbers: Spring 2017, 2023, 2024, 2025.
- MATH 453: Essentials of Statistics: Fall 2015, 2018, 2020, Spring 2023, 2024, 2025.
- MATH 489: Partial Differential Equations: - Spring 2016 (Independent study).