

## CURRICULUM VITAE

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### **Education:**

- Ph. D. in mathematics, Department of Mathematics & Statistics, Arizona State University, August 2003.
- M. Sc. in mathematics, Department of Mathematics, Addis Ababa University, Ethiopia, July 1990.
- B. Sc. in mathematics, Department of Mathematics, Asmara University, Eritrea, August 1986.

### **Teaching Experience:**

- 2020 – Present    Professor, Department of Mathematics & Statistics, Coastal Carolina University.
- 2009 – 2020    Associate Professor, Department of Mathematics & Statistics, Coastal Carolina University.
- 2003 – 2008    Assistant Professor, Department of Mathematics & Statistics, Coastal Carolina University.

Courses taught: College Algebra, Discrete Mathematics, Brief Calculus, Proofs and Problem Solving, Calculus I, II, & III, Linear Algebra, Abstract Algebra, Advanced Calculus, Applied Complex Analysis, Seminars in Mathematics, Cryptography, Number theory (Graduate level) and Introduction To Analysis (Graduate level).

- 1997 – 2003    Graduate Teaching Assistant, Department of Mathematics & Statistics, Arizona State University, teaching College Algebra, Pre-calculus, Brief Calculus, and Calculus I, & II.
- 2000 – 2002    Adjunct faculty, Chandler Gilbert Community College, teaching Calculus III and Differential Equations.
- 1992 – 1997    Lecturer, Department of Mathematics, Addis Ababa University, Ethiopia. Teaching a wide range of courses including Elementary Mathematics, College Algebra, Calculus I, II and III, Solid (Euclidean) Geometry, Abstract Algebra, Logic and Set Theory, and Number Theory.

- 1990 – 1992      Lecturer, Department of Mathematics, Arbaminch Water Technology Institute, Arbaminch, Ethiopia. Teaching College Algebra, Calculus I, and Elementary Probability & Statistics.
- 1986 – 1988      Assistant Lecturer, Department of Mathematics, Arbaminch Water Technology Institute, Arbaminch, Ethiopia. Assisting in College Algebra, Calculus I. Teaching Elementary Probability & Statistics.

**Research Interest:**

- Functional Analysis, Operator Algebras, Wavelets.

**Publications:**

- D. P. Banjade, A. Chambers, M. Ephrem *On Singularities of Labeled Graph  $C^*$ -algebras*, in review.
- D. P. Banjade, M. Ephrem, D. Stevanovich *Finite Dimensional Labeled Graph Algebras*, in review.
- D. P. Banjade, M. Ephrem, *Generalization of Wolff’s Ideal Theorem on  $H_{K(B)}^\infty(\mathbb{D})$ , Operators and Matrices*. Vol. 16, No. 1, (2022), 141-150. .
- D. P. Banjade, M. Ephrem, *On Labeled Graph  $C^*$ -algebras*, Rocky Mountain Journal of Math. Vol. 50, No. 3, (2020), 863-870.
- M. Ephrem, *Primitive Ideals of Labeled Graph  $C^*$ -algebras*, Houston Journal of Math. **Vol. 46, No. 2**, (2020), 377–387.
- D. P. Banjade, M. Ephrem, A. Incognito, and M. Wilkerson *On a Generalization of Wolff’s Ideal Theorem for Certain Subalgebras of  $H^\infty(\mathbb{D})$* , Rocky Mountain Journal of Mathematics, **Vol. 47, No. 8**, (2017), 2535–2544.
- M. Ephrem,  *$C^*$ -Algebra of The  $\mathbb{Z}^n$  Tree*, New York J. Math. **Vol. 17** (2011) 1 – 20.
- M. Ephrem, and J. Spielberg,  *$K$ -Theory of  $C^*$ -Algebras of Directed Graphs*, The Houston Journal of Mathematics, **Vol. 37, No. 2**, (2011), 435–447.
- M. Ephrem, *Characterizing Liminal And Type I Graph  $C^*$ -algebras*, J. Operator Theory, **52** (2004), 303–323.

**Talks/Lecture Series:**

- *Wavelets and Their Application to Image Noise Removal (invited)*, Second International Conference on Applications of Mathematics to Nonlinear Sciences (AMNS-2019), Pokhara, Nepal, June 2019.

- *Generalization of Wolff's Ideal Theorem for Certain Subalgebras of  $H^\infty(\mathbb{D})$  (invited)*, University of Tennessee, Knoxville, TN, April 2019.
- *Wavelets and Image Noise Removal*, Addis Ababa University, June 2016.
- *$C^*$ -Dynamical Systems of Labeled Graphs*, Faculty Excellence Summit, Coastal Carolina University, October 14, 2014.
- *Labeled Graph  $C^*$ -algebras*, gave two talks at the school of Mathematical & Statistical sciences, Arizona State University, March 19 & April 2, 2014.
- *Labeled Graphs*, gave three talks at the departmental talks series, department of Mathematics & Statistics, Coastal Carolina University, Fall 2013.
- *Cryptography*, presented a lecture to UNIV 110 students at COS dean's "One-talk-one-time" initiative, November 12, 2013.
- *Talk/Discussion series on Wavelets*, presented semester long lecture series on Wavelets to members of the department of Mathematics & Statistics, Coastal Carolina University, Fall 2011.
- *Wavelets and signal processing*, 4 weeks, 4 hours a day, lecture series to graduate students at Addis Ababa University, June/July 2011.
- *On  $K$ -Theory of Graph  $C^*$ -algebras*, International Conference on Mathematical Research and Education, Addis Ababa University, July 2009.
- *Cryptography: Secret Sharing and Watching Over One's Shoulder*, Celebration of Inquiry (University wide symposium), Coastal Carolina University, 2008.
- *On  $K$ -Theory of Graph  $C^*$ -algebras*, Southeastern Analysis Meeting (SEAM) XXIII, University of Richmond, March 2007.
- *Wavelets and Signal Processing (invited)*, Clayton State University, 2006.
- *Wavelets, Fingerprints and Image Processing*, Celebration of Inquiry (University wide symposium), Coastal Carolina University, 2005.
- *$C^*$ -Algebra of the  $\mathbb{Z}^2$  Tree*, Great Plains Operator Theory Symposium, Texas A & M University, May 2004.
- *$C^*$ -algebra of the  $\mathbb{Z}^2$ -tree*, The Joint Mathematics Meetings, Phoenix, AZ, January 2004
- *Characterizing Liminal & Type I Graph  $C^*$ -Algebras*, Great Plains Operator Theory Symposium, University of North Carolina, Charlotte, 2002.
- *Liminal & Type I Graph  $C^*$ -algebras*, Department  $C^*$ -algebra seminar, 2002.

- *Irrational Rotation Algebras*, Research Experience for Undergraduates – Northern Arizona University, 2000.

**Services:**

- Mentored students Victor Harris and Maria Peters to do research on denoising image using Haar wavelets. They presented their result at a conference at Kennesaw State University in October 2014.
- Mentored student Anthony Franklin to do a study on wavelets and we jointly presented a talk entitled “Wavelets, Fingerprints and Image Processing” on the 2005 Celebration of Inquiry at Coastal Carolina University. Anthony presented his work at a regional conference hosted by Francis Marion University and received an award for his work and presentation.
- Participated, as a trainer, in Graduate Teaching Assistant training at the department on mathematics & statistics, ASU to new teaching assistants. The training includes: lesson planning, teaching methodology, board work, technology in classroom.
- Served and am currently serving at various levels of Departmental, College, University-wide committees, and a National Mathematical Community service. These include:
  - Mentor in “The National Alliance for Doctoral Studies in the Mathematical Sciences”.
  - University Academic Affairs Committee
  - College of Sciences Handbook Committee
  - Chair, College of Sciences Handbook Committee
  - Department Academic Committee
  - Department Faculty Affairs Committee
  - (Tenure Track) Faculty Search Committee (twice)
  - Chair of Lecturer Search Committee (three times)
  - Department Chair Search Committee (twice)
  - University Senator (four year term)
  - University Core Curriculum Committee
  - (University wide) Scheduling Task Force Committee
  - A academic adviser for a number of mathematics majors
  - College of Natural and Applied Sciences Faculty Handbook Revision Committee
  - Department Library Representative (for ten years and counting).

- I continue to organize “departmental colloquium” weekly talks at the department level in Mathematics and Statistics.
- I served in the research and seminars committee of the department of mathematics at Addis Ababa University, 1995–1997.

**Fellowships:**

- 1997 – 2003 Graduate Teaching Assistant, Department of Mathematics & Statistics, Arizona State University, U.S.A.
- 1988 – 1990 Graduate Teaching Assistant, Department of Mathematics, Addis Ababa University, Ethiopia.

**Award:**

- Recipient of Graduate Research Award (for excellence in research), Arizona State University.
- Recipient of Student Excellence Award, Asmara University.

**Other:**

- I took various courses on high level programming languages, algorithms and a course on assembly language (HC-11) at ASU.