

# Leandro Junes, PhD

---

*Associate Professor of Mathematics  
Department of Mathematics and Physical Sciences  
California University of Pennsylvania  
250 University Ave., California, PA 15419.  
(724) 938 - 4111  
junes@calu.edu  
<http://leandrojunes.com/>*

## CV Highlights

---

- 2017 **FPDC Teaching Merit Award**, *California University of Pennsylvania.*
- 2016 **FPDC Research Merit Award**, *California University of Pennsylvania.*
- 2013–Present **Undergraduate Research Group at CalU**,  
32 International peer-review publications,  
7 Awards,  
7 Presentations in National Conferences.
- 2012 **John J. Duffy Excellence in Teaching Award**, *USC.*
- 2012–Present **Service**,  
Academic Reviewer for PhD Thesis and two Peer-Review Journals (top tier),  
Academic Meeting Organizer (two conferences, one ongoing)  
Student Paper Judge, 11 committees at CalU (Chaired one).
- 2010–Present **Research**,  
11 Publications in top-tier journals (Discrete Mathematics, etc.),  
5 Articles in preparation,  
43 Presentations in National and International Conferences,  
4 Invited research visits (National and International),  
1 Book in preparation entitled *Some Topics in Number Theory* (149 pages),  
4 Grants (One from the National Science Foundation–NSF).
- 1996–Present **Teaching Experience**, *24 years of teaching experience at the university level.*
- 

## Education

- 2002–2008 **Ph.D. Mathematics**, *State University of New York at Binghamton, GPA – 4.0.*
- 1998–2002 **M.S. Mathematics**, *Universidad Nacional de Colombia, Medellín, GPA – 4.0.*
- 1992–1998 **B.S. Mathematics**, *Universidad de Antioquia, Medellín, GPA – 4.0.*

## Ph.D. Thesis

- Title *Duality of Higher Order Non-Euclidean Property for Oriented Matroids.*  
Supervisor Dr. Laura Anderson  
Description This thesis explored the idea of  $k$ -Euclidean oriented matroids for  $k \geq 1$ . We provide a simpler proof for Fukuda's duality property without using oriented matroid programming.

## Master Thesis

- Title *Existence of Retractions in Finite Module Extension for Commutative Rings.*  
Supervisor Dr. Juan Diego Velez  
Description We prove the Direct Summand Conjecture for Nilpotent extensions, and extend a computational technique for Gorenstein Rings.

## Bachelor Thesis

- Title *Young Tableaux and Group Representations.*  
Supervisor Dr. Margarita M. Toro Villegas  
Description We study group representations using Young Tableaux.

## Teaching Experience

- 2012 – present **Associate Professor**, CALIFORNIA UNIVERSITY OF PENNSYLVANIA, DEPARTMENT OF MATHEMATICS AND PHYSICAL SCIENCES, Supervisor: Dr. Swarndeeep Gill, Phone Number: (724) 938 - 4114.  
Job Duties: Teach undergraduate and graduated courses in mathematics, statistics and computer science, engage in scholarly activity, advise students, participate in curriculum development, and serve on various faculty committees.
- 2008 – 2012 **Assistant Professor**, UNIVERSITY OF SOUTH CAROLINA SUMTER, DIVISION OF SCIENCE, MATHEMATICS, AND ENGINEERING, Supervisor: Dr. James Privett, Phone Number: (607) 777 - 2147.  
Job Duties: Teach undergraduate courses in mathematics, engage in scholarly activity, advise students, participate in curriculum development, and serve on various faculty committees.
- 2002 – 2008 **Graduate Teaching Assistant**, BINGHAMTON UNIVERSITY, DEPARTMENT OF MATHEMATICAL SCIENCES, Supervisor: Dr. Anton Schick, Phone Number: (803) 938 - 3886.  
Job Duties: Instructor of record for College Algebra, Calculus I, Ordinary Differential Equations and Complex Variables. Teaching assistant for Calculus for Business and Management, Calculus I and Ordinary Differential Equations.
- 2000 – 2002 **Full Time Instructor**, UNIVERSIDAD NACIONAL DE COLOMBIA SEDE MEDELLÍN, DEPARTMENT OF UNDERGRADUATE MATHEMATICAL SCIENCES, Supervisor: Pr. Sigifredo Herron Osorio, Phone Number: (011)(57)(4) 430 - 9000.  
Job Duties: Instructor for Vector Geometry and Abstract Algebra.

1998 **Adjunct Faculty**, UNIVERSIDAD DE ANTIOQUIA, DEPARTMENT OF UNDERGRADUATE MATHEMATICAL SCIENCES, Supervisor: Pr. Armando Gomez, Phone Number: (011)(57)(4) 219 - 8332..

Job Duties: Instructor of record for Calculus I.

1996 – 1999 **Adjunct Faculty**, UNIVERSIDAD DE ANTIOQUIA, DEPARTMENT OF UNDERGRADUATE MATHEMATICAL SCIENCES, Supervisor: Pr. Gustavo Loaiza, Phone Number: (011)(57)(4) 219 - 8332.

Job Duties: Instructor of record for High school algebra.

---

## Publications

### Published Work

- 2019 **Enumerating several aspects of non-decreasing Dyck paths**, *R. Florez, L. Junes, and J. L. Ramirez*, "Discrete Mathematics", 342.10 (2019), 3079-3097.
- 2018 **Enumerations of Peaks and Valleys on Non-decreasing Dyck Paths**, *E. Czabarka, R. Florez, L. Junes, and J. L. Ramirez*, "Discrete Mathematics", 341.10 (2018), 2789-2807.
- 2018 **Further Results on Paths in an n-Dimensional Cubic Lattice**, *R. Florez, L. Junes, and J. L. Ramirez*, "The Journal of Integer Sequences", Vol. 21 (2018), Article 18.1.2..
- 2015 **A Discrete Convolution on the Generalized Hosoya Triangle**, *L. Junes, R. Flórez, and E. Czabarka*, "The Journal of Integer Sequences", Vol. 18 (2015), Article 15.1.6.
- 2015 **Some Enumerations on Non-decreasing Dyck Paths**, *L. Junes, R. Flórez and E. Czabarka*, "The Electronic Journal of Combinatorics", Vol. 22, Issue 1 (2015).
- 2014 **GCD Property of the Generalized Star of David in the Generalized Hosoya Triangle**, *L. Junes, R. Flórez, and R. Higuaita*, "The Journal of Integer Sequences", Vol. 17 (2014), Article 14.3.6.
- 2014 **9-modularity and GCD Properties of Generalized Fibonacci Numbers**, *L. Junes, R. Flórez, and R. Higuaita*, Electronic Journal of Combinatorial Number Theory, Volume 14 (2014) Article A55.
- 2012 **Teaching Inverse Functions with Cryptography**, *L. Junes*, Memoirs of the 12<sup>th</sup> International Congress on Mathematical Education, Seoul, South Korea, July 8 -15, 2012.
- 2012 **GCD Properties in the Hosoya's Triangle**, *L. Junes and R. Flórez*, The Fibonacci Quarterly, **50.2** (2012) 163-174.
- 2011 **A Relation Between Triangular Numbers and Prime Numbers**, *L. Junes and R. Flórez*, Electronic Journal of Combinatorial Number Theory, Volume 11 (2011) Article A50.
- 2010 **A Duality Theorem in Oriented Matroids**, *L. Junes*, Memoirs of the Fourth International Conference of Algebra, Number Theory, Combinatorics and Applications, Tunja, Colombia, May 2010.

#### Articles in Preparation

1. **A New Graph for an Oriented Matroid Program (12 pages)**, *L. Junes*.  
To be completed in January of 2021
2. **The Problem of the Existence of Retractions in Module-Finite Extensions (8 pages)**, *L. Junes and R. Flórez*.  
To be completed in 2022
3. **An Example of a Highly non-Euclidean Oriented Matroid (12 pages)**, *L. Junes*.  
To be completed in 2021
4. **Complex Apollonian Circles and Biased Graphs (9 pages)**, *L. Junes, R. Flórez and T. Zaslavsky*.  
To be completed in 2023
5. **Teaching Inverse Functions with Cryptography: An Interactive Approach (9 pages)**, *L. Junes and L. Harden*.  
To be completed in 2020

#### Book in Preparation

**Some Topics in Number Theory (149 pages)**, *L. Junes, R. Floréz, and J. Ramirez*.  
To be completed in 2021

---

### Undergraduate Research

I am a founder and director of three undergraduate research groups. They are located at California University of Pennsylvania, Universidad Distrital Francisco José de Caldas (Colombia), and Universidad de Antioquia (Colombia).

**Goal** The principal goal for undergraduate research is to introduce students to a serious mathematical experience and prepare them for graduated school and academic careers in Math disciplines. These groups provide hands-on positive research experiences and mentoring in a supportive setting. For more information about these groups visit the website [http://workforce.calu.edu/junes/Undergrad\\_Research/styled-13/](http://workforce.calu.edu/junes/Undergrad_Research/styled-13/).

#### Publications

- 2019 **Generating Function of the Catalan Number**, *L. Junes, L.G. Mcan (CalU Student)*, The Fibonacci Quarterly, **57.1** 83.
- 2019 **The Generating Function for Harmonic Numbers**, *L. Junes, A.M. Andrews and S.L. Zimmerman (CalU Students)*, The Fibonacci Quarterly, **57.1** 83.
- 2019 **Determinant of a Symmetric Matrix**, *L. Junes, S.M. Hartz (CalU Student)*, The Fibonacci Quarterly, **56.2** 180.
- 2018 **Bergstrom on a Cyclic Sum**, *L. Junes, Z.R. Smith (CalU Student)*, The Fibonacci Quarterly, **56.2** 180.
- 2016 **Closure!**, *L. Junes, L. Seader, A. Lethotsky (CalU Students)*, The Fibonacci Quarterly, **54.4** 368.

- 2015 **It Can Be Sharpened**, *L. Junes, L. Seader, S. Marks (CalU Students)*, The Fibonacci Quarterly, **53.2** 181.
- 2015 **Close This Sum**, *L. Junes, L. Seader, S. Marks (CalU Students)*, The Fibonacci Quarterly, **53.2** 182.
- 2014 **The AM-GM Inequality Paves the Way**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **52.3** 276.
- 2014 **The Value of a Series of Reciprocal Fibonacci Numbers**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **52.3** 277.
- 2014 **Nth Root of a Product**, *L. Junes, N. Hilbert, M. Kubicek (CalU Students)*, The Fibonacci Quarterly, **52.2** 179.
- 2014 **It Could Be A Rational Bound**, *L. Junes, N. Hilbert, M. Kubicek (CalU Students)*, The Fibonacci Quarterly, **52.2** 181.
- 2014 **Inequalities Generalized**, *L. Junes, N. Hilbert, M. Kubicek (CalU Students)*, The Fibonacci Quarterly, **52.2** 182.
- 2014 **Almost Déjà vu!**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **52.2** 183.
- 2013 **Another Division by 5**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.4** 369.
- 2013 **Two Sums with Square Roots**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.4** 370.
- 2013 **A Trig and Fibonacci Amalgam**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.4** 373.
- 2013 **Periodic Sequences**, *L. Junes, M. Silvio, K. Zemba (CalU Students)*, The Fibonacci Quarterly, **51.4** 373.
- 2013 **Fibonacci Numbers Divided by 11**, *L. Junes, M. Silvio, K. Zemba (CalU Students)*, The Fibonacci Quarterly, **51.3** 276.
- 2013 **The Fifth and Seven Powers of Fibonacci Numbers**, *L. Junes, T. Stoner, C. Killian (CalU Students)*, The Fibonacci Quarterly, **51.3** 278.
- 2013 **Evaluating a Double Sum with Inverse Fibonacci Numbers**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.2** 180.
- 2013 **A Fibonacci and Triangular Numbers Inequality**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.2** 182.
- 2013 **The Ubiquitous AM-GM Inequality**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.1** 86.
- 2013 **From the Weighted AM-GM Inequality**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.1** 87.
- 2013 **An Extension to Negative Subscripts**, *L. Junes, R. Florez, R. Higuaita (Colombia Student)*, The Fibonacci Quarterly, **51.1** 88.
- 2012 **By Means of the Geometric and Arithmetic Means**, *L. Junes, R. Florez, A. Galindo (Colombia Student)*, The Fibonacci Quarterly, **50.4** 369.

- 2012 **A Rate of Growth of Sum of Reciprocal Fibonacci Numbers**, *L. Junes, R. Florez, R. Higuita (Colombia Student)*, The Fibonacci Quarterly, **50.3** 274.
- 2012 **It Is Two!**, *L. Junes, R. Florez, R. Higuita (Colombia Student)*, The Fibonacci Quarterly, **50.2** 182.
- 2012 **It Is Two, Too!**, *L. Junes, R. Florez, R. Higuita (Colombia Student)*, The Fibonacci Quarterly, **50.2** 183.
- 2012 **A “Well-Connected” Sequence**, *L. Junes, R. Florez, R. Higuita (Colombia Student)*, The Fibonacci Quarterly, **50.2** 184.
- 2012 **A “Loaded Divisibility” Problem**, *L. Junes, R. Florez, R. Higuita (Colombia Student)*, The Fibonacci Quarterly, **50.2** 185.
- 2012 **A “Sterling” Sum**, *L. Junes, R. Florez, R. Higuita (Colombia Student)*, The Fibonacci Quarterly, **50.2** 186.

#### Awards

- 2015 **Jesse B. Guttman Research Grant**, *L. Seader*, California University of PA, \$273.80.
- 2015 **First Place–Information-oriented scholarship: Independent Student projects**, *L. Seader*, Student Research and Scholarship Poster Event, California University of PA.
- 2015 **Second and Third Place–Applied Mathematics Competition**, *L. Seader, R. Smith*, PASSHE-MA conference at Kutztown University of PA.
- 2014 **First Place–Information-oriented scholarship: Independent Student projects**, *L. Seader, S. Marks*, Student Research and Scholarship Poster Event, California University of PA.
- 2013 **First Place–Information-oriented scholarship: Independent Student projects**, *M. Silvio, K. Zemba, T. Stoner, C. Killian*, Student Research and Scholarship Poster Event, California University of PA.
- 2013 **Second Place–Information-oriented scholarship: Independent Student projects**, *N. Hilbert, M. Kubicek*, Student Research and Scholarship Poster Event, California University of PA.
- 2012 **Outstanding Mathematics Undergraduate Student Research Award**, *S. Areford*, South Carolina Academy of Science, South Carolina.

#### Presentations

- 2015 **Open Problem in Fibonacci Numbers and Sequences**, *L. Seader*, MAA Math Fest National Conference, Washington, D.C., August.
- 2015 **Open Problem in Fibonacci Numbers**, *L. Seader*, PASSHE Mathematics Association Conference–Kutztown University, Kutztown of PA, P.A., April.
- 2014 **Two Open Problems**, *L. Seader*, PASSHE Undergraduate Research Conference in STEM–Slippery Rock University, Slippery Rock, P.A., November.
- 2014 **Fibonacci Infusion**, *N. Hilbert*, MAA Allegheny Mountain Section, New Wilmington, P.A., April.

- 2014 **Where's Fibonacci?**, M. Kubicek, MAA Allegheny Mountain Section, New Wilmington, P.A., April.
- 2013 **Fibonacci's Perfect Power: The Power of Fibonacci**, C. Killian, T. Stoner, MAA Allegheny Mountain Section, Indiana, P.A., April.
- 2013 **Rise the Roof for Fibonacci**, M. Silvia, K. Zemba, MAA Allegheny Mountain Section, Indiana, P.A., April.

## Grants and Awards

- Award RESEARCH MERIT AWARD, California University of Pennsylvania, May 6, 2016.
- Grant TRAVEL GRANT, California University of Pennsylvania, April 1 – April 2, 2016.
- Grant FPDC SMALL GRANT, California University of Pennsylvania, Spring, 2014.
- Grant TRAVEL GRANT, California University of Pennsylvania, March 15 – March 25, 2013.
- Award JOHN J. DUFFY EXCELLENCE IN TEACHING AWARD, University of South Carolina, 2011 – 2012
- Grant NATIONAL SCIENCE FOUNDATION TRAVEL GRANT, 12<sup>th</sup> International Congress of Mathematics Education, Seoul, Korea 2012.
- Award AMATYC PROJECT ACCESS FELLOWSHIP, Cohort 6, (Fall 2009 – Fall 2010).
- Award CERTIFICATE OF APPRECIATION FOR OUTSTANDING DEDICATION AS A MATHEMATICS INSTRUCTOR, EOP Summer Program, Binghamton University (July 30, 2008).
- Award DISSERTATION YEAR FELLOWSHIP, Department of Mathematical Sciences, Binghamton University (Fall 2007 – Spring 2008).
- Award FELLOWSHIP FOR ARTS AND SCIENCES, Mazda Motor Corporation (1999).
- Award TOP STUDENT IN MATHEMATICS, Universidad de Antioquia (Spring 1995 and Spring 1996).

## Presentations

- 2016 **Counting Dyck Paths using Power Series**, Mathematical Association of America - Allegheny Mountain Section, Gannon University, Erie, PA, April 2, 2016.
- 2016 **is Mathematics useful? Different applications of Mathematics in the real world**, STEAM in the Valley Conference, California University of PA, California, PA, March 18, 2016.
- 2015 **Some Enumerations on Non-decreasing Dyck Paths**, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia, April 23, 2015.
- 2015 **A Discrete Convolution on the Generalized Hosoya Triangle**, PASSHE-MA Conference, Kutztown University, April 11, 2015.
- 2015  **$\pi$  and Copyright Infringement**, Math Club at The Citadel, The Citadel, Charleston, South Carolina, March 9, 2015.

- 2014 **Graduate Studies in the U.S.**, First Meeting of Numerical Sequences, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia, May 29, 2014.
- 2014 **Workshop in Cryptography III: Substitution Cipher**, First Meeting of Numerical Sequences, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia, May 28, 2014.
- 2014 **Workshop in Cryptography II: Modular Arithmetic**, First Meeting of Numerical Sequences, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia, May 27, 2014.
- 2014 **Workshop in Cryptography I: Basic Properties of Natural Numbers**, First Meeting of Numerical Sequences, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia, May 26, 2014.
- 2014 **Workshop: Inverse Functions and Cryptography**, Universidad Sergio Arboleda, Bogotá, Colombia, May 24, 2014.
- 2014 **Some Problems in Logic**, Universidad Sergio Arboleda, Bogotá, Colombia, May 22, 2014.
- 2014 **Workshop in Number Theory III: Software for Cryptography**, Universidad Sergio Arboleda, Bogotá, Colombia, May 21, 2014.
- 2014 **Workshop in Number Theory II: Applications of the GCD**, Universidad Sergio Arboleda, Bogotá, Colombia, May 20, 2014.
- 2014 **Workshop in Number Theory I: The Natural Numbers**, Universidad Sergio Arboleda, Bogotá, Colombia, May 20, 2014.
- 2014 **GAP: A Computational Tool for Teaching and Research in Group Theory**, 2014 PASSHEMA Conference, Lock Haven University, Lock Haven, PA, April 12, 2014.
- 2014 **Undergraduate Research at Cal U: A Personal Experience**, Mathematical Association of America - Allegheny Mountain Section, Westminster College, New Wilmington, PA, April 5, 2014.
- 2014 **Fibonacci Numbers and Non-Decreasing Dyck Paths**, Carolina Mathematics Seminar, Charleston, SC, March 17, 2014.
- 2013 **A Formal Power Series for Non-Decreasing Dyck Paths**, The Combinatorics Seminar, Binghamton, NY, November 26, 2013.
- 2013 **A discrete convolution on Fibonacci numbers**, The Asian Mathematical Conference, BEXCO, Busan, South Korea, July 1, 2013.
- 2013 **Making and Breaking Codes**, 7<sup>th</sup> Academic Excellence Day, California University of Pennsylvania, California, PA, April 23, 2013.
- 2013 **Triangular Arrangements and The Star of David**, 2013 PASSHEMA Conference, Clarion University, Clarion, PA, April 20, 2013.
- 2013 **A Conjecture about Triangular Numbers and Prime Numbers**, Mathematical Association of America - Allegheny Mountain Section, Indiana University of Pennsylvania, Indiana, PA, April 6, 2013.
- 2013 **Polygons in the Hosoya's Triangle**, Carolina Mathematics Seminar, USC Salkehatchie, Walterboro SC, March 22, 2013.



- 2012 **A Graph-Theoretical Approach to Euclidean Oriented Matroids**, Combinatorics Partitions Seminar, Pennsylvania State University, State College, November 13, 2012.
- 2012 **From Linear Algebra and Graphs to Oriented Matroids**, Combinatorics Partitions Seminar, Pennsylvania State University, State College, October 2, 2012.
- 2012 **Round Table Discussion: Poster Teaching Inverse Functions with Cryptography**, International Congress of Mathematical Education 2012, Seoul, South Korea, July 13, 2012.
- 2012 **A relation between Triangular Numbers and Prime Numbers**, 91<sup>th</sup> meeting of the Mathematical Association of America-Southeastern Section, Morrow, GA, March 9, 2012.
- 2011 **Teaching Inverse Functions with Cryptography: An Interactive Approach**, 37<sup>th</sup> AMATYC Annual Conference, Austin, TX, November 10 – 13, 2011.
- 2011 **A non-Abelian Group of Minimal Order with Abelian Automorphism Group**, 2011 Zassenhaus Group Theory Conference, Towson University, Towson, MD, May 29, 2011.
- 2010 **Math: Much more than Numbers, Poster Presentation**, 36<sup>th</sup> AMATYC Annual Conference, Boston, MA, November 12, 2010.
- 2010 **A New Graph for an Oriented Matroid Program**, Department of Mathematics, Combinatorics Seminar at USC Columbia, SC, September 2010.
- 2010 **A First Approach to Oriented Matroids**, Department of Mathematics, Combinatorics Seminar at USC Columbia, SC, September 2010.
- 2010 **A Duality Theorem in Oriented Matroids**, Fourth International Conference of Algebra, Number Theory, Combinatorics and Applications, ALTENCOA4-2010. Universidad Pedagógica y Tecnológica de Colombia, Tunja, Colombia, June 1, 2010.
- 2010 **How to Apply to the Graduate Math Programs in U.S.A**, Universidad de Antioquia, Medellin, Colombia, May 27, 2010.
- 2010 **How to Implement Mathematical Induction in the Classroom**, 89<sup>th</sup> meeting of the Mathematical Association of America-Southeastern Section, Elon, NC, March 26 -27, 2010.
- 2009 **From Hyperplanes to Oriented Matroid Programs**, Carolina Mathematics Seminar, Lancaster, SC, October 30, 2009.
- 2009 **What is an oriented matroid?**, Carolina Mathematics Seminar, Sumter, SC, September 18, 2009.
- 2008 **A Non-Tableaux Proof for Duality of the Euclidean Property in Oriented Matroids.**, Joint MAA/AMS Mathematical Meeting, San Diego CA, January 9, 2008.
- 2007 **Paradoxes and Fallacies in Mathematical Induction**, Joint MAA/NYSMATYC Conference, Rochester NY, October 20, 2007.
- 2007 **A Simplified Proof for Duality of the Euclidean Property in Oriented Matroids**, Combinatorics Seminar, Department of Mathematical Sciences, Binghamton University, Binghamton NY, October 2, 2007.

- 2007 **Mathematical Induction**, Undergraduate Math Club, Department of Mathematical Sciences, Binghamton University, September 26, 2007.
- 2006 **Oriented Matroids and the Combinatorial Grassmannian**, Seminario de Becarios, Instituto de Matemáticas Unidad Morelia UNAM, Morelia México, November 21, 2006.
- 2006 **The Combinatorial Grassmannian and Extension Spaces: II, III**, Combinatorics Seminar, Department of Mathematical Sciences, Binghamton University, Binghamton NY, March 2, 2006.
- 2006 **The Combinatorial Grassmannian and Extension Spaces: I**, Combinatorics Seminar, Department of Mathematical Sciences, Binghamton University, Binghamton NY, February 23, 2006.

### Research Visits

1. The Military College of South Carolina The Citadel, Charleston, SC, March 7 – March 14, 2015.
2. Universidad Sergio Arboleda, Bogotá, Colombia, May 19 – May 30, 2014.
3. The Military College of South Carolina The Citadel, Charleston, SC, March 13 – March 17, 2014.
4. The Military College of South Carolina The Citadel, Charleston, SC, March 15 – March 25, 2013.

### Reviewer

- 2015 *Ph.D Thesis*, National University of Colombia.
- 2015 *MathSciNet*.
- 2010 *Discrete Mathematics*.

### Meeting Organizer

1. *Carolina Mathematics Seminar*, South Carolina, 2009 – present.
2. *International Conference of Algebra, Number Theory, Combinatorics and Applications*, Colombia, 2010 – present.

### Student Paper Judge

1. Judge for the Pennsylvania Junior Academy of Science, California, PA, February 2014.
2. Judge for the South Carolina Junior Academy of Science, Columbia, SC, April 2012.
3. Judge for the Undergraduate Papers Session, 91<sup>th</sup> meeting of the Mathematical Association of America-Southeastern Section, Morrow, GA, March 10, 2012.
4. Judge for the South Carolina Junior Academy of Science, Charleston, SC, April 2011.
5. Judge for the South Carolina Junior Academy of Science, Charleston, SC, April 2010.

6. Judge for the Undergraduate Papers Session G, 89<sup>th</sup> meeting of the Mathematical Association of America-Southeastern Section, Elon, NC, March 27, 2010.
7. Judge for the South Carolina Junior Academy of Science, Columbia, SC, April 2009.

## Selected Conferences Attended

- 2016 Mathematical Association of America - Allegheny Mountain Section, Gannon University, Erie, PA, April 1–2.
- 2016 STEAM in the Valley Conference, California University of PA, California, PA, March 18.
- 2015 PASSHE–MA Conference, Kutztown University of PA, April 11, 2015.
- 2014 First Meeting of Numerical Sequences, Universidad Distrital Francisco José de Caldas, Bogotá, Colombia, May 26 - 29, 2014.
- 2014 Carolina Mathematics Seminar, Charleston, SC, March 17.
- 2013 The Combinatorics Seminar, Binghamton, NY, November 26.
- 2013 The Asian Mathematical Conference, BEXCO, Busan, South Korea, July 1.
- 2013 PASSHEMA Conference, Clarion University, Clarion, PA, April 20.
- 2013 Mathematical Association of America - Allegheny Mountain Section, Indiana University of Pennsylvania, Indiana, PA, April 6.
- 2013 Carolina Mathematics Seminar, USC Salkehatchie, Walterboro SC, March 22.
- 2012 Combinatorics Partitions Seminar, Pennsylvania State University, State College, November 13.
- 2012 Combinatorics Partitions Seminar, Pennsylvania State University, State College, October 2.
- 2012 International Congress of Mathematical Education 2012, Seoul, South Korea, July 13.
- 2012 91<sup>th</sup> meeting of the Association of America-Southeastern Section, Morrow, GA, March 9.
- 2012 11<sup>th</sup> Carolina Mathematics Seminar, Benedict College, Columbia, SC, February 10.
- 2011 37<sup>th</sup> AMATYC Annual Conference, Austin, TX, November 10 - 13.
- 2011 10<sup>th</sup> Carolina Mathematics Seminar, The Citadel, Charleston, SC, October 28.
- 2011 9<sup>th</sup> Carolina Mathematics Seminar, Sumter, SC, September 16.
- 2011 8<sup>th</sup> Carolina Mathematics Seminar, USC Lancaster, Lancaster, SC, April 15.
- 2011 Zassenhaus Group Theory Conference, Towson University, Towson, MD, May 29.
- 2011 Undergraduate Mathematics Conference, Francis Marion University, Florence, SC, March 25.
- 2011 7<sup>th</sup> Carolina Mathematics Seminar, Benedict College, Columbia, SC, February 11.
- 2011 Joint AMS/MAA Mathematical Meeting, New Orleans, LA, January 6 - 9.
- 2010 36<sup>th</sup> AMATYC Annual Conference, Boston, MA, November 11 - 14.
- 2010 6<sup>th</sup> Carolina Mathematics Seminar, USC Salkehatchie, Waterboro, SC, November 5.

- 2010 5<sup>th</sup> Carolina Mathematics Seminar, USC Sumter, Sumter, SC, September 17.
- 2010 4<sup>th</sup> Carolina Mathematics Seminar, USC Lancaster, Lancaster, SC, April 23.
- 2010 89<sup>th</sup> meeting of the Mathematical Association of America-Southeastern Section, Elon, NC, March 26 -27.
- 2010 3<sup>rd</sup> Carolina Mathematics Seminar, USC Sumter, Sumter, SC, February 19.
- 2009 35<sup>th</sup> AMATYC Annual Conference, Las Vegas, NV, November 12 - 15.
- 2009 2<sup>nd</sup> Carolina Mathematics Seminar, USC Sumter, Sumter, SC, October 30.
- 2009 1<sup>st</sup> Carolina Mathematics Seminar, USC Sumter, Sumter, SC, September 18.
- 2008 GSU-USC Commutative Algebra Seminar, University of South Carolina, Columbia, SC, November 15.
- 2008 Joint MAA/AMS Mathematical Meeting, San Diego CA, January 9.

## Computer Literacy

$\LaTeX$	Advance	<i>12 years of experience.</i>
Mathematica	Advance	<i>14 years of experience.</i>
Java	Advance	<i>5 years of experience.</i>
Maple	Medium	<i>6 years of experience.</i>
GAP	Medium	<i>3 years of experience.</i>
C++	Medium	<i>2 years of experience.</i>

## Member of Professional Organizations

- 2012–present The American Mathematical Society (AMS).
- 2012–present The Mathematical Association of America (MAA).
- 2012–present The Fibonacci Association.
- 2015–present The Great Internet Mersenne Prime Search (GIMPS) project.

## Professional Reference

1. **Luise-Charlotte Kappe**  
 Professor Emerita  
 State University of New York at Binghamton  
 Department of Mathematical Sciences  
 Library North 2200, Binghamton University  
 Vestal Parkway East  
 Binghamton, New York 13902-6000  
 Phone number: 607-777-2355  
 E-mail: menger@math.binghamton.edu