Inne Singgih

Curriculum Vitae

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Education

2015 – 2020 **Ph.D. Mathematics**, *University of South Carolina*, Columbia, SC.
Advisor: Éva Czabarka, László Székely
Thesis title: *Diameter of 3-colorable Graphs and Some Remarks on Midrange Crossing Constant*

2013 – 2015 **M.S. Applied & Computational Mathematics**, *University of Minnesota Duluth*, MN.
Advisor: Dalibor Froncek, Co-advisor: Sylwia Cichacz
Thesis title: *New Methods for Magic Total Labelings of Graphs*

2006 – 2009 **B.Sc. Mathematics**, *University of Indonesia*, Depok, Indonesia.
Advisor: Kiki Ariyanti Sugeng, Co-advisor: Denny Riama Silaban
Thesis title: *DNA graph characterization for Line Digraph of Dicycle with One Chord*

Teaching Experience

University of Cincinnati, Cincinnati, OH

2020 – **Assistant Professor Educator**, *Department of Mathematical Sciences.*
- MATH1044: Applied Calculus I
- MATH1045: Applied Calculus II
- MATH1046: Business Calculus
- MATH1060/1061: Calculus I with Pre-Calculus Review
- MATH1071: Introduction to Discrete Mathematics
- MATH2076: Linear Algebra
- MATH3021: Mathematics for Middle School Teachers I: Number Sense
- MATH3022: Mathematics for Middle School Teachers II: Algebra
- MATH3023: Mathematics for Middle School Teachers III: Geometry

University of South Carolina, Columbia, SC

2016 – 2020 **Instructor of Record**, *Department of Mathematics.*
- MATH170: Finite Mathematics
- MATH112: Calculus for Business Administration and Social Sciences
- MATH115: Pre-Calculus
- MATH111: Basic College Mathematics
- MATH111I: Intensive Basic College Mathematics

2015 – 2016 **Graduate Teaching Assistant**, *Department of Mathematics.*
- MATH142: Calculus II
- MATH141: Calculus I

University of Minnesota Duluth, MN

2013 – 2015 **Graduate Teaching Assistant**, *Mathematics & Statistics Department.*
- MATH1296: Calculus I
- MATH1250: Pre-Calculus
- MATH1160: Finite Mathematics
- MATH1005: College Algebra

Surya Institute and Surya College of Education, Indonesia

2010 – 2013 **Full-time Instructor**, *Mathematics*.
- Served as team leader for regional, national, and international K-12 competitions
- Taught K-12 competition based classes for gifted students
- Taught competition based classes for teachers in rural villages
- Taught college preparation Mathematics for students from rural villages
- Taught Mathematics and English for students who are preparing for study abroad
- Modules writer for Business Calculus, book editor for K-12 textbooks

Publications

In print

- I. Singgih, **Edge Magic Total Labeling for (n,t)-kites**, *Advances in Computer Science Research*, 96 (2022), 26–31.
- É. Czabarka, I. Singgih, L. Székely, **On the maximum diameter of k-colorable graphs**, *Electronic Journal of Combinatorics*, 28(3) (2021), P3.52.
- É. Czabarka, I. Singgih, L. Székely, **Counterexamples to a conjecture of Erdös, Pach, Pollack and Tuza**, *Journal of Combinatorial Theory, Series B*, 151 (2021), 38–45.
- Yang, et.al, **Antimagic orientations of graphs with large maximum degree**, *Discrete Mathematics*, 343(12) (Dec 2020), article 112123.
- É. Czabarka, I. Singgih, L. Székely, and Z. Wang, **Some remarks on the midrange crossing constant**, *Studia Scientiarum Mathematicarum Hungarica*, 57(2) (Jun 2020), 187–192.
- I. Singgih, **Edge Magic Total Labeling of Lexicographic Product $C_{4(2r+1)} \circ \overline{K_2}$, Cycles with Chords, Unions of Paths, and Unions of Cycles and Paths**, *Indonesian Journal of Combinatorics*, 2(2) (2018), 111–122.
- S. Cichacz, D. Froncek, I. Singgih, **Vertex Magic Total Labeling of 2-regular graphs**, *Discrete Mathematics*, 340(1) (2017), 3117–3124.
- I. Singgih, K. Sugeng, D.R. Silaban, **DNA Graph Characterization for Line Digraph of Dicycle with One Chord**, *AKCE Int. Journal of Graphs & Combinatorics*, 10(2) (2013), 157–167.

Preprints

- Bailey, et.al., **Complexity and Enumeration in Models of Genome Rearrangement**, *Submitted, arXiv.org:2305.01851*.
- I. Singgih, **DNA graph characterization for the line digraph of dicycle with $\left\lfloor \frac{n}{3} \right\rfloor$ chords, ∞-digraph $C_n \cdot C_p$, and 3-blade-propeller $C_n \cdot C_p \cdot C_q$**, *Submitted, arXiv:1812.02880*.

Grants

Teaching Related Grants

Summer 2023 **Materials Developer**, Applied Calculus Supplementary Review Sessions (SRS) Materials, University of Cincinnati

Summer 2023 **Co-author**, An Introduction to Python Jupyter Notebooks for College Math Teachers (classroom resources)

Spring 2023 **Co-coordinator**, Applied Calculus Sequence Mastery Grading Transition, Department of Mathematical Sciences, University of Cincinnati

Summer 2019	**Principal Investigator**, the Graduate Teaching Assistant Teaching Resource Development Grant, University of South Carolina
	Developed practical actively-engaging content for discrete mathematics to be used as teaching resources within the Department of Mathematics
Summer 2019	**Curriculum Developer**, Senior Personnel on the Innovative Teaching Associate Grant of the College of Arts and Sciences, University of South Carolina
	Internal incubator grant in collaboration with the University of Nebraska-Lincoln.
	Developed lesson plans and problem sets for College Algebra to be used as resources for graduate students who are newly appointed as instructors of record

Research Grant and Fundings

January 2023	Individual Faculty Development Fund, University of Cincinnati
Summer 2022	Fully funded participant: Mathematics Research Communities (MRC) Summer Conferences - Trees in Many Context, Beaver Hollow Conference Center, NY
Summer 2021	Research Launch Award, Office of Research, University of Cincinnati.
Summer 2019	Research Assistantship from NSF contract #DMS-1600811
June 2019	Fully funded participant: The 6th Graduate Research Workshop in Combinatorics (GRWC), University of Kansas, KS
Summer 2014	Summer Research Fellowship, Department of Mathematics and Statistics, University of Minnesota Duluth, MN

Travel Grants

July 2023	CET&L Travel Grant, University of Cincinnati, to the Gardner Symposium on Transforming the Foundational Postsecondary Experience
January 2023	AMS MRC Travel Grant to the Joint Mathematics Meetings 2023
Nov 2019	AMS Grad Student Travel Grant to the Joint Mathematics Meetings 2020
Sept 2019	Department of Mathematics Travel Grant, University of South Carolina
March 2019	Graduate School Travel Grant, University of South Carolina
March 2019	Department of Mathematics Travel Grant, University of South Carolina
Oct 2018	Travel Grant from NSF contract #DMS-1600811
April 2018	Graduate School Travel Grant, University of South Carolina

▬▬▬ Awards

2020	**Outstanding Graduate Student Instructor Award**
	Department of Mathematics, University of South Carolina, SC
	Awarded to 1 graduate student for excellence in teaching
2017	**1st Place Winner, *Math Matters, Apply it!* Contest**
	Society for Industrial and Applied Mathematics (SIAM)
	An awareness campaign contest on Mathematics behind everyday life
2016	**Outstanding First Year ACM Graduate Student Award**
	Department of Mathematics, University of South Carolina, SC
	Awarded to 2 promising 1st year graduate students in applied and computational mathematics

2015 **Elliott Scholarship for the Sciences** (first recipient)
University of Minnesota Duluth, MN
Awarded to 1 international undergraduate or graduate student enrolled full-time in the Swenson College of Science and Engineering

2015 **Outstanding Graduate M.S. Program in Applied & Computational Mathematics**
University of Minnesota Duluth, MN
Awarded to 3 graduating students with outstanding GPA and research.

2015 **Outstanding Graduate Teaching Assistant in Mathematics and Statistics**
Swenson College of Science and Engineering, University of Minnesota Duluth, MN
Awarded to 2 excellent graduate teaching assistants from each department in Swenson College of Science and Engineering

2015 **Outstanding Graduate Teaching Assistant**
Department of Mathematics and Statistics, University of Minnesota Duluth, MN
Awarded to 3 graduate teaching assistants with excellent teaching performance

2014 **Duane E. Anderson Graduate Fellowship**
University of Minnesota Duluth, MN.
Awarded to 2 female students enrolled in Mathematics and Statistics Department

2009 **2nd Place Winner, Outstanding Student Award**
School of Mathematics and Natural Sciences, University of Indonesia

2008 **2nd Place Winner**
Mathematics category, The 1st All-Indonesian College National Science Olympiad (OSNPTI), Indonesia

Presentations

Invited Talks

Nov 2021 **Edge Magic Total Labeling of (n, t)-Kites**.
International Conference on Mathematics, Geometry, Statistics and Computation (IC-MaGeStiC), Jember University, Indonesia

June 2021 **Being a 'Lenient' Math Professor**, (Keynote Speaker).
1st International Conference on Education, Humanities, Health and Agriculture (ICEHHA), Universitas Katolik Indonesia Santu Paulus Ruteng, Indonesia

Nov 2019 **Antimagic Orientations of Graphs**.
Carolina Math Seminar (CMS) – Fall Joint Meeting, Columbia College, Columbia, SC

April 2018 **On DNA Graph Characterization**.
AMS Spring Southeastern Sectional Meeting – Special Sessions on Mathematical Chemistry, Vanderbilt University, TN

March 2018 **Vertex Magic Total Labelings**.
Carolina Math Seminar (CMS) – Spring Meeting, The Citadel, Charleston, SC

February 2015 **Magic Total Labelings for 2-Regular Graphs**.
GRATKO – Lake Superior Seminar on Graphs, Algebra and Combinatorics, University of Minnesota Duluth, MN

October 2014 **On DNA Graph Characterization for Line Digraph of Dicycle with One Chord**.
GRATKO, University of Wisconsin-Superior, MN

Contributed Conference Talks

January 2020	**Antimagic Orientations of Graphs with Large Maximum Degrees**. Joint Mathematics Meeting 2020, Colorado Convention Center, CO
July 2019	**On Subtractive Magic and Antimagic Labeling**. 4th International Conference on Graph Theory and Information Security, Jember, Indonesia
March 2019	**Subtractive Magic and Antimagic Labeling**. 50th Southeastern International Conference on Combinatorics, Graph Theory, and Computing (SEIC-CGTC), Boca Raton, FL
March 2015	**New Methods for Magic Total Labeling of Graphs**. 46th SEICCGTC, Boca Raton, FL
October 2014	**Magic Total Labeling for 2-Regular Graphs (poster)**. 25th International Workshop on Combinatorial Algorithms (IWOCA), Duluth, MN
July 2012	**DNA Graph Characterization for Line Digraph of Dicycle with One Chord**. 7th International Workshop On Graph Labeling (IWOGL), Cisarua, Indonesia
February 2010	**DNA Graph Characterization (talk & poster)**. National Mathematics Seminar, Depok, Indonesia

Seminar Talks

January 2020	**Diameter of 3-colorable graphs**. Discrete/Combinatorics Seminar, University of South Carolina, SC
Nov 2018	**Bounding Metric Dimension of Graph**. Discrete/Combinatorics Seminar, University of South Carolina, SC
Feb 2018	**Magic Total Labeling for 2-Regular Graphs**. Discrete/Combinatorics Seminar, University of South Carolina, SC
Sept 2016	**The Match Set of Random Permutation has the FKG Property**. Discrete Reading Seminar, University of South Carolina, SC
April 2015	**New Methods for Magic Total Labeling of Graphs**. Graduate Colloquium, University of Minnesota Duluth, MN

Talks for a General Mathematics Audience

Feb 2019	**Magic and Antimagic Total Labeling**. Graduate Student Colloquium, University of South Carolina, SC
July 2015	**Graph Labeling**. Surya College of Education Open Seminar, Banten, Indonesia
Nov 2013	**Study Abroad: Mathematics and Statistics university courses in various parts of the world and recommendations for UMD students**. Open Colloquium (w/ L. Geolge and O. Zjevik), University of Minnesota Duluth, MN

▬▬▬ Professional Development: Workshops/Certifications

JMM Professional Enhancement Programs (PEP)

2023	**Introductory Python Jupyter Notebooks for College Math Teachers**. Four-part enrichment program on how to incorporate a wide variety of Jupyter Notebooks in (i) pre-college outreach programs and general education courses; (ii) quantitative literacy/introductory statistics courses and social justice service projects; (iii) calculus and linear algebra courses; and (iv) REUs in math modeling and data analysis leading to publication in refereed journals

University of Cincinnati

2022   **Hazing Awareness and Prevention (Faculty & Staff)**.

2021   **The Ohio Ethics Law: Building a Culture of Integrity**.

2021   **Checkpoint: Data Security & Privacy**.

2021   **Research Development & Support Series**.
- Competitive Intelligence, April 26, 2021
- Writing your Career Grant in 12 weeks, April 19, 2021
- Proposal Budgets - More Than Just a Bunch of Numbers, February 5, 2021
- How to Find Funding Opportunities, January 26, 2021
- Office of Research - Expert Round Table, January 21, 2021
- Department of Defense (DOD), November 16, 2020
- Writing the One Pager - The Shortest Path to Success, November 4, 2020
- Ralph E. Powe Junior Faculty Enhancement Award, October 30, 2020
- Building Your Research Team, October 27, 2020

2020   **Conflict of Interest Training**.

2020   **FERPA Basics**.

Center for Teaching Excellence, University of South Carolina

2019   **Preparing Future Faculty (PFF) Credential**.

2019   **Preparing Future Faculty with Distinction in Teaching (PFF Plus)**.

2019   **Teaching Towards Inclusive Excellence (TTIE)**, *Certificate of Completion*.
- Supporting LGBTQ+ Students in Your Classroom, October 29, 2019
- Disrupting Oppressive Spaces: Our Roles as Institutional Actors, April 1, 2019
- Grappling with Culturally Relevant and Culturally Responsive Teaching, February 22, 2019
- Discussing Controversial Issues and Right of Free Speech, February 12, 2019
- Effective Discussions about Controversial Topics, February 8, 2019
- Reaching All Students: Creating Inclusive Content, February 6, 2019
- Inclusive Excellence at University of South Carolina, January 24, 2019

2019   **Fostering Proactive Learning Environments (FPLE)**, *Certificate of Completion*.
- Addressing Common Violations, October 7, 2019
- Dealing with the Unexpected: Classroom Disruptions, March 21, 2019
- Promoting Academic Integrity and Responding to Student Disruptions, February 12, 2019
- Privacy and Security in Classroom and Beyond, February 11, 2019
- Classroom to Career: Fostering Student Career Readiness, February 8, 2019
- 10 Tips for Effectively Teaching International Students, February 7, 2019
- Engage! Educate! Entertain! Methods for Successful Online Teaching, February 4, 2019
- Setting Classroom Expectations and Creating a Sense of Belonging, January 31, 2019

2019   **2019 Oktoberbest: A Celebration of Teaching**.
Presented developed curriculum from the GTA Teaching Resource Development Grant in the one-day symposium that focused on sharing best practices in teaching.

Multicultural Student Affairs, University of South Carolina

March 2019   **Student Safe Zone Allies workshop**.
Understanding issues related to the LGBTQ+ community

Nov 2018   **Carolina Intercultural Training program**.
Communicate and connect more effectively with people of different cultures, creed, and origin

Nov 2016   **Multicultural Student Affairs workshop**.
International Teaching Assistant Challenges in American Classrooms

Career Readiness

Feb 2019 · **Career Readiness Completion: 8 NACE Competencies**.
National Association of Colleges and Employers

Nov 2016 · **Professional Leadership Training: STEM Power**, University of South Carolina.
Creating Pathways for Diversity, A conference promoting diversity in the STEM fields

Global Leadership Forum, South Carolina

April 2019 · Leading the 3D (Debtors, Distressed, and Discouraged) Groups

March 2019 · Leaving a Legacy

Feb 2019 · Leadership in Times of Change and Risk

January 2019 · Leading Across Cultures

Other Workshops

October 2019 · Responding to an Active Shooter

April 2019 · First Aid in the Classroom workshop

March 2019 · UofSC Educational Technology Showcase

Professional Development: Services

Academic Services

May 2023 · **Session Moderator**, *The 6th Annual Learning & Teaching at UC Conference-Inclusive Excellence in Postsecondary Education*.
University of Cincinnati, OH

March 2023 · **Grader**, *Math Bowl 2023*.
University of Cincinnati, OH

January 2023 · **Volunteer**, *AMS Mathematics Research Communities Exhibition Table at the Joint Mathematics Meeting 2023*.
Boston, MA

Fall 2021 · **Committee**, *International Conference on Mathematics, Geometry, Statistics and Computation (IC-MaGeStiC)*.
Jember University, Indonesia

August 2021 · **Journal Referee**, *Electronic Journal of Graph Theory and Application*.

August 2021 · **Journal Referee**, *Indonesian Journal of Combinatorics*.

July 2021 · **Invited Panelist**, *Careers in Academia*.
Faculty of Science at the University of Manitoba, Winnipeg, Canada

March 2021 · **Grader**, *Math Bowl 2021*.
University of Cincinnati, OH

2018 – 2019 · **Organizer**, *Discrete/Combinatorics Departmental Seminar*.
University of South Carolina, SC

Nov 2019 · **Journal Referee**, *Indonesian Journal of Combinatorics*.

July 2019 · **Problem Writer for Mathematics division**, *9th Asian Science and Mathematics Olympiad for Primary and Secondary School (ASMOPSS)*.

April 2019 · **Proctor**, *Advanced Placement Practice Exam for Calculus*.
University of South Carolina, SC

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April 2019	**Invited Panelist**, *Graduate Student Colloquium*, University of South Carolina. *Everything you always wanted to know about exams (but were afraid to ask)*
2018 – 2019	**Volunteer**, *The 32nd, 33rd, and 34th annual High School Math Contest (HSMC)*. University of South Carolina, SC.
2018 – 2019	**Journal Referee**, *Punjab University Journal of Mathematics*.
2017 – 2019	**Jury**, *The 15th, 16th, and 17th annual Integration Bees*. Pi Mu Epsilon and Gamecock Math Club, University of South Carolina, SC
2017 – 2018	**Vice President**, *Association for Women in Mathematics Student Chapter*. University of South Carolina, SC
Fall 2017	**Treasurer**, *Society for Industrial and Applied Mathematics Student Chapter*. University of South Carolina, SC
2017 – 2019	**Poster Competition Reviewer**, *Discover UofSC*, University of South Carolina, SC. ○ Chemistry, Physics, and Math section, April 26, 2019 ○ Social Science and STEM section, April 20, 2018 and April 21, 2017
Nov 2017	**Invited Panelist**, *Center for Teaching Excellence*, University of South Carolina. *Discussion: Academic Classroom Culture in the US*
October 2014	**Organizer**, *25th International Workshop on Combinatorial Algorithms (IWOCA)*. Duluth, MN
2012	**Indonesia Team Leader**, *2nd Asian Science and Mathematics Olympiad for Primary School (ASMOPS)*.
2010	**Problem Writer**, *2nd All-Indonesian College National Science Olympiad (OSNPTI)*. Abstract Algebra and Number Theory sections
2009 – 2010	**Online Learning Contents Creator**, *for Matematika Dasar II (on par with Calculus II)*. Student Centered e-Learning Environment University of Indonesia (SCeLE UI)
October 2009	**Organizer**, *Indonesian Combinatorial Society (InaCombS) annual workshop*. Depok, Indonesia
January 2009	**Problem Writers Coordinator**, *"LOGIKA" (annual All Java and Sumatran Mathematics Competition and Activities for high school students)*. University of Indonesia

Community Services

2017 – 2020	**Thinking Globally Ambassador for Indonesia**, *International Student Service*. ○ Visitor Presenter for Language Class at Pelion High School, March 2, 2020 ○ Presenter for U101 classes at University of South Carolina (record not fully kept) ○ Invited presenter for ISS staff meeting special presentation, February 20, 2019 ○ Presenter for Meadow Glen Middle School on campus visit, February 11, 2019 ○ Visitor Presenter for World Geography class at Dreher High School, April 11, 2018 ○ Presenter for C.A. Johnson High School on campus visit, March 9, 2018
2017 – 2019	**National Exhibitor**, *Columbia International Festival (CIF)*. ○ National exhibitor and flier designer for CIF 2019, April 6-7, 2019 ○ National flier/brochure designer for CIF 2018, Apr 14, 2018 ○ National exhibitor for CIF 2017, April 1-2, 2017
April 2017	**Indonesia Representative (National exhibitor)**, *International Day*. Richland County Library, South Carolina

Memberships

2013 –	American Mathematical Society (AMS)
2016 – 2021	Society for Industrial and Applied Mathematicians (SIAM)
2017 – 2021	Association for Women in Mathematics (AWM)
2018 – 2020	Pi Mu Epsilon Honor Society

Skills

Languages
- Bahasa Indonesia: Native
- English: TOEFL IBT by ETS, Scored 102/120, November 2014
- Japanese: Japanese Language Proficiency Test (JLPT), level N3, December 2012
  Certificate in Japanese Language and Culture, Fall 2022
  JASCO Prize, Ohio Japanese Speech Contest, 2023

Technology   JNB, Python, LaTeX, Maple, COREL, MS Office

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