

CURRICULUM VITAE

Contact Details

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Research Interests : Combinatorics, Extremal Graph Theory, Graph Labelling, Dimension of Graphs, Line Digraphs, Algebraic Graph Theory, Spectral Graph Theory.

Academic Background

2013 – 2017 (awarded Feb 15 th , 2017)	Ph.D (Computer Science) in School of Electrical Engineering and Computing (Faculty of Engineering and Built Environment), The University of Newcastle, Australia. (Thesis title: Properties and structures in extremal graphs; Thesis Advisors: Dr. Joe Ryan, Late Prof. Mirka Miller, Dr. Yuqing Lin and extended advisor: Dr. Kiki Ariyanti Sugeng (University of Indonesia))
2014	Student Exchange/Research Visitor at University of West Bohemia, Czech Republic.
2010 – 2011	Second year Master in Algebra, Geometry and Number Theory (Erasmus Mundus ALGANT Programme), Universite Bordeaux 1, France.
2009 – 2010	First year Master in Algebra, Geometry and Number Theory (Erasmus Mundus ALGANT Programme), Universiteit Leiden, The Netherlands.
2007	Student Exchange, National University of Singapore.
2004 – 2008	Bachelor of Science in Mathematics, University of Indonesia.

Work Experiences

Sept 2017 – Present	Temporary Assistant Professor at Department of Mathematical Sciences, University of Delaware, USA.
May 2017 – Sept 2017	Casual Research Assistant, School of Electrical Engineering and Computing, The University of Newcastle, Australia
Aug 2016 – June 2017	Demonstrator (equivalent as Teaching Assistant) for MATH 1110 (Mathematics for Engineering, Science and Technology 1), The University of Newcastle.
Aug 2015 – June 2017	Demonstrator (equivalent as Teaching Assistant) for MATH 1002 (Foundational Studies in Mathematics), The University of Newcastle.
Feb 2017 – June 2017	Tutor for MATH 1001 (Preparatory Studies in Mathematics), The University of Newcastle.
Mar – July 2014;	
July – Dec 2012	Mandarin teacher, Serenity Preschool and Kindergarten.

Teaching at the University of Delaware

Instructor for : Calculus and Analytic Geometry A (MATH241) – Fall 2017
Calculus and Analytic Geometry B (MATH242) – Fall 2017, Spring 2018, Fall 2018, Fall 2019, Fall 2020, Spring 2021, Fall 2021, Spring 2022.
Calculus and Analytic Geometry B Honors (MATH242H) – Fall 2019
Discrete Mathematics I (MATH210) – Spring 2018, Spring 2019, Spring 2020
Introduction to Proof (MATH245) – Spring 2019
Elementary Linear Algebra (MATH349) – Spring 2020
Discrete Mathematics II (MATH315) – Spring 2021, Spring 2022

Course Coordinator for : Calculus and Analytic Geometry B (MATH242) – Fall 2018 (4 sections, 220 students), Fall 2019 (4 sections, 246 students), Fall 2020 (3 sections, 216 students), Spring 2021 (7 sections, ~500 students), Fall 2021 (4 sections, 244 students)

List of Publications

13. N. Benakli, N. H. Bong, S. Dueck, L. Eroh, B. Novick and O. Oellermann, "The threshold strong dimension of a graph", *Discrete Mathematics* **344 (7)** (2021) 112402.
12. N. H. Bong and Y. Lin, "Some properties of the multiset dimension of graphs", *Electronic Journal of Graph Theory and Application* **9 (1)** (2021).
11. M. Baca, N. H. Bong, A. Semanicova-Fenovcikova, Kiki A. Sugeng and T. Wang, "Local face antimagic evaluations and coloring of plane graphs", *Fundamenta Informaticae* **175** (2020), 1-17.
10. N.H. Bong, Y. Lin, and Slamin, "On inclusive and non-inclusive vertex irregular d-distance vertex labelling", *JCMCC*, *accepted (2019)*.
9. N.H. Bong, Y. Lin, and Slamin, "On distance irregular labelling on cycles and wheels", *The Australasian Journal of Combinatorics* **69 (3)** (2017), 315-322.
8. N. H. Bong, M. Miller, J. Ryan, K.A. Sugeng, "MaxDDBS Problem on Butterfly Networks", *The Australasian Journal of Combinatorics* **68** (2017), 245-264.
7. N.H. Bong, "Some new upper bounds of $ex(n; \{C_3, C_4\})$ ", *AKCE International Journal of Graphs and Combinatorics* **14 (3)** (2017), 251-260.
6. N. H. Bong, M. Miller, J. Ryan, K.A. Sugeng, "MaxDDBS Problem on Benes Networks", *Special issue Journal of Interconnection Networks* **17 (3 & 4)** (2017), 1741003.
5. K. A. Sugeng and N. H. Bong, "Vertex -Antimagic Total Labeling on Circulant Graph", *Special issue of JIMS* (2011), 79-88.
4. Kiki A. Sugeng, Bong N. Herawati, Mirka Miller and Martin Baca, "On Magicness and Antimagicness of the Union of 4-Regular Circulant Graphs", *The Australasian Journal of Combinatorics*, Vol. 50 (2011).
3. Bong N. Herawati, K. Sugeng " *On (a,d) -Vertex Antimagic Labeling of Circulant Graphs*". *Proceedings of the 5th IMT GT, ICMSA 2009*, Bukittinggi, Indonesia.
2. D. R. Silaban, A. Parestu, B. N. Herawati, K.A. Sugeng, Slamin, "Vertex magic total labeling of Disjoint Union of Petersen Graphs and Disjoint union of Circulant Graphs", *JCMCC* **11** (2009), 71
1. A. Sepang, P.A. Wibowo, B.N. Herawati, K.A. Sugeng, "Super Edge Magic Total Labeling on Unicyclic Graphs", *Jurnal Makara, Seri Sains*, Vol. 12 (2008), 31-36.

Book Chapters

1. N. Benakli, N. H. Bong, S. Dueck, B. Novick and O. Oellermann, The threshold dimension and threshold strong dimension of a graph: A Survey. In *Research Trends in Graph Theory and Applications*, Springer (2021), 73-98.

Article in preparation

1. N. H. Bong and I. Singgih, "EMT for (n,t) -tadpoles", (2021+)
2. N. H. Bong, C. Dalfó and M. A. Fiol, "The inner diameters of a digraph and its iterated line digraphs", (2021+)
3. N. H. Bong, J. Carlson, B. Curtis, R. Haas, and L. Hogben, "Zero forcing TAR reconfiguration", in preparation (2021+)
4. N. Benakli, N. H. Bong, L. Eroh and B. Novick, "Threshold strong dimension on trees", in preparation.
5. J. Alameda, N. H. Bong, J. Breen, H. Gupta, J. Haddock, K. Liu, and Y. Zhang, "Minimum number of distinct eigenvalues of the complete binary tree", in preparation
6. N. H. Bong, S. English, Z. Gershkoff, J. Lin, S. Nasserar and E. Olson, "Zero forcing number on claw-free cubic graphs", in preparation.

Conference Presentations

- Invited Speaker for Conference on Mathematical Sciences and Applications in Engineering (CMSAE - 2021), December 9-10, 2021 (online).
- The 4th International Conference on Graph Theory and Information Security (ICGTIS), Jember, Indonesia, July 17-19, 2019.
- Midwest Conference on Combinatorics and Combinatorial Computing, University of Minnesota Duluth, MN, USA, Oct 5-7, 2018.
AMS Fall Eastern Sectional Meeting, University of Delaware, Newark, DE, USA, Sept 29-30, 2018.
- The 40th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing, Newcastle, Australia, Dec 12-16, 2016.
- Distance in Graph 2016, Ubud, Indonesia, July 18-22, 2016
- The 7th International Workshop on Optimal Network Topology, Sanya, Hainan, China, July 11-15, 2016.
- The 2nd International Conference on Graph Theory and Information Security (ICGTIS), Bandung, Indonesia, September 21-23, 2015
- The 39th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing, Perth, Australia, Dec 7-11, 2015.
- Bordeaux Graph Workshop, Bordeaux, France, Nov 19-22, 2014.
- ICM2014 Satellite Conference on Extremal and Structural Graph Theory, Gyeongju, South Korea, Aug 5-9, 2014.
- The 3rd Australian Mathematical Sciences Student Conference, Newcastle, Australia, July 2-4, 2014.
- The 37th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing, Perth, Australia, Dec 9-13, 2013.
- The IndoMS International Conference on Mathematics and Its Application, Yogyakarta, Indonesia, Nov 6-7, 2013.

Service to the Profession

Sep 1 – Dec 10, 2021

Organizer of Discrete Mathematics/Algebra seminar at Department of Mathematical Sciences, University of Delaware.

Feb 14, 2020

Poster Judges at 2020 Winter Research Symposium, University of Delaware

Feb 16, 2018

Poster Judges at 2018 Winter Research Symposium, University of Delaware

2016

Oct 2013 – Sept 2014	Organizer for the 14 th GraphMasters workshop, Newcastle, Australia (January 30-February 1, 2016).
2014	Vice President of Indonesia Student Association, University of Newcastle. Organizer for the 3 rd Australian Mathematical Sciences Student Conference, Newcastle, Australia (July 2 -4, 2014) organizer.
2014	Organizer for the 11 th GraphMasters workshop, Newcastle, Australia (August 11-13, 2014).
2014	Organizer for the 12 th GraphMasters workshop, Pilsen, Czech Republic (November 1-2, 2014).

Courses, Workshops, and Trainings

June 6-12, 2021	MRC Combinatorics: Finding Needles in Haystacks: Approaches to Inverse Problems using Combinatorics and Linear Algebra (online).
June 2-3, 2021	2021 Summer Institute on Teaching at University of Delaware (online).
July 2020	Getting Started with Online Teaching, University of Delaware (online, self-paced)
July 2020	Delivering Learning Experiences Online (DLEO), University of Delaware (online – 4 weeks)
June 15 – 19, 2020	MRC Combinatorics: Finding Needles in Haystacks: Approaches to Inverse Problems using Combinatorics and Linear Algebra (online).
Aug 19-23, 2019	Workshop for Women in Graph Theory and Applications, Minnesota, USA
Jan 30-Feb 1, 2016	The 14 th GraphMasters workshop, Newcastle, Australia
Sept 2015	The 13 th GraphMaster Workshop, Jember, Indonesia.
Dec 2014	CIMPA Research School: Graph Labelings, Graph Decompositions and Hamiltonian Cycles, Vientiane, Laos.
Nov 1-2, 2014	The 12 th GraphMasters workshop, Pilsen, Czech Republic
Aug 2014	The 11 th GraphMaster Workshop, Newcastle, Australia
July 2014	AMSI Winter School: Contemporary Aspects of Cryptography, Queensland.
Nov 2013	The 8 th GraphMaster Workshop, Bandung, Indonesia
July 2011	Applied Computational Algebraic Geometric Modeling (ACAGM) Summer School, Leuven, Belgium
Nov 2010	Bordeaux Graph Workshop, LaBRi, Universite Bordeaux 1, France.
Feb 2009	UNESCO-Indonesia School: Extremal Problem and Hamiltonicity in Graphs, CIMPA-Bandung, Indonesia.

Other Talks

Nov 6, 2020	“Breathe! We are Teaching”, Teaching Seminar at University of Delaware, USA.
August 12, 2020	“Degree/Diameter Problem”, Algebra and Combinatorics Seminar, University of Auckland, New Zealand.
June 25, 2020	“Strong Dimension and Threshold Strong Dimension of Graphs”, Women in Combinatorics Virtual Colloquium.
April 30, 2020	“Strong Dimension and Threshold Strong Dimension of Graphs”, Discrete Seminar, University of Delaware, USA.
Jan 25, 2019	“Career for Mathematicians”, Sinarmas World Academy Career Day, Indonesia.

Other Courses

Sept 4 – Oct 9, 2021	Foundational Teacher Training (Mindfulness-Based Cognitive Therapy for Life), Module 4, Oxford Mindfulness Centre, UK (online – 6 weeks)
Jan 9-30, 2021	Foundational Teacher Training (Mindfulness-Based Cognitive Therapy for Life)
Nov 14- Dec 5, 2020	Module 1&2, Oxford Mindfulness Centre, UK (online – 8 weeks)
Fall 2020	SPAN300: Advanced Spanish Composition and Grammar I, University of Delaware, USA.
July 11 – Aug 29, 2020	Online – Mindfulness: Mindfulness-Based Cognitive Therapy for Life – 8 Weeks Course, Oxford Mindfulness Centre, UK.
June 14– Aug 10, 2020	Mindfulness-Based Stress Reduction (online – 8 weeks, self-paced), palousemindfulness.com
Spring 2020	SPAN305: Oral Communication, University of Delaware, USA.
Fall 2019	SPAN200: Spanish Composition and Grammar, University of Delaware, USA.
Summer 2019	SPAN206: Culture through Conversation, University of Granada, Spain. SPAN208: Spain: Past and Present, University of Granada, Spain.
Spring 2019	SPAN107: Spanish III – Intermediate, University of Delaware, USA.
Fall 2018	SPAN106: Spanish II – Elementary/Intermediate, University of Delaware, USA.
Spring 2018	SPAN105: Spanish I – Elementary, University of Delaware, USA

Awards and Honors

2018	Nomination for an Excellence in Teaching Award 2018, University of Delaware
2013	2013 University of Newcastle International Postgraduate Research Scholarship (UNIPRS) and University of Newcastle Research Scholarship Central (UNRSC50:50) holder.
2009	Erasmus Mundus Scholarship Holder (ALGANT Program).
2008	Honorable Mention in the 15th International Mathematics Competition, 25-31 July, 2008, in Blagoevrad, Bulgaria.
2008	University of Indonesia Best Graduate 2008.
2008	Second prize in the National Training for the 15th International Mathematics Competition (IMC).

Language Skills

Hakka	Native
Indonesian	Native
English	Fluent (speaking, reading, writing)
Mandarin	Fluent (speaking), Intermediate (reading), basic (writing)
Spanish	Advanced (speaking, reading, writing)
French	Basic (speaking, reading, writing)

Computer Skills

Microsoft Office, LaTeX, C++, Magma, SAGE, MatLab, Mathematica, Zoom