



Curriculum Vitae

I. NAME: SEVERINO V. GERVACIO

- *Date of Birth:* 23 April 1944
- *Place of Birth:* Pasig City, Philippines
- *Spouse:* Rosario Madrigal
- *Children:* Julius and Jasmin

II. COLLEGE AND DEPARTMENT:

Present Position: *Professor Emeritus*
Department of Mathematics
College of Science
De La Salle University

- *Prof. Lecturer 3:* 1993–1994
- *Associate Prof. 5:* 1994–1995
- *Prof. 3:* 1995–1997
- *Prof. 5:* 1997–2001
- *Prof. 6:* 2001–2003
- *Prof. 7:* 2003–2005
- *Prof. 8:* 2005–2007
- *Prof. 9:* 2007–2008
- *Prof. 10:* 2008–2010
- *Professor Emeritus:* 2010–

Other Positions:

- *Professorial Lecturer, 2009–2013*
De La Salle Canlubang
Santa Rosa City, Laguna
- *Professorial Lecturer, 2009–present*
Mapúa Institute of Technology
Intramuros, Manila

III. ACADEMIC BACKGROUND:

School	Degree	Year Finished
Pasig Elementary School	graduated	1956
Rizal High School	graduated	1960
Mapúa Institute of Technology	BS Mech. Eng'g.*	1965
University of the Philippines	MS Mathematics	1971
Ateneo de Manila University	PhD Mathematics	1977

* Board Examination passed, 1966.

IV. PROFESSIONAL EXPERIENCE*:

Position	School	Inclusive Dates
<i>Instructor → Assistant Prof.</i>	UP at Los Baños	1968–1981
<i>Prof. Lecturer</i>	UP-Diliman	1997–1998
<i>Prof. Lecturer</i>	Ateneo de Manila University	1977-1988
<i>Prof. → University Prof.</i>	MSU-IIT	1981–1993
<i>Assoc. Prof. → Prof.</i>	DLSU-Manila	1993–2009
Chairman	Math Dept, UPLB	1977-1980
Dean	Graduate School, MSU-IIT	1982–1986
Dean	CSM, MSU-IIT	1986–1988
Vice Chancellor (Res. & Ext.)	MSU-IIT	1988–1993
<i>Prof. Lecturer</i>	Mapua Institute of Technology	2009–present
<i>Prof. Lecturer</i>	DLSU-Manila	2009–present
<i>Prof. Lecturer</i>	DLS-Canlubang (STC)	2009–2013
<i>Prof. Lecturer</i>	Mapúa Institute of Technology	2009–2012
<i>Prof. Lecturer</i>	Malayan Colleges Laguna	2014–2018

* In addition, I have supervised several undergraduate theses, master's theses and doctoral dissertations.

V. SEMINARS/TRAININGS CONDUCTED*:

Seminar/Training	Venue	Date
Thesis Advising Seminar ¹	MSU-IIT	September 13–16, 1983
Number Theory/Graph Theory	NORMISIST	January 1989
Graph Theory Research Group	DLSU-Manila	AY2001–2002 Terms 1, 2, & 3
Graph Theory Research Group	DLSU-Manila	AY2002–2003 Terms 1, 2, & 3
Graph Theory Research Group	DLSU-Manila	AY2003–2004 Terms 1, 2, & 3
Graph Theory Research Group	DLSU-Manila	AY2004–2005 Terms 1, 2, & 3
Graph Theory Research Group	DLSU-Manila	AY2005–2006 Terms 1, 2, & 3
Graph Theory Research Group	DLSU-Manila	AY2006–2007 Terms 1 & 2
Graph Theory Research Group	DLSU-Manila	AY2007–2008 Terms 1 & 2
Graph Theory Research Group	DLSU-Manila	AY2008–2009 Terms 1, 2, & 3

¹ Seminar Director and Resource Person

* In addition, I delivered one Professorial Chair Lecture every academic year starting AY 1993–1994 until AY 2008–2009.

VI. SOME SEMINARS/TRAININGS ATTENDED*:

Seminar/Training	Venue	Date
Introduction to APL ¹	UP-Los Baños,	Mar 1978
Executive Course on Systematic Problem Analysis and Decision-Making ¹	UP-Los Baños,	Apr 17, 1980
Conf./Workshop on Policies and Standards and Standards for Basic Sciences and the Science Component of Teacher Education ²	PNC, Manila	Dec 9, 1986
Graph Theory Seminar ³	Konan Univ., Japan	1986
Graph Theory Seminar ³	Tokai Univ., Japan	1986
Discrete Mathematics Seminar ³	Keio Univ., Japan	1990
MSP Convention ⁴	Manila	1991
Graph Theory Seminar ³	Tokyo Science Univ.	1992
Mathematics Symposium ⁴	Quezon National High Sch.	Oct 1993
Science Symposium ⁴	Batangas National High Sch.	Nov 8, 1993
T _E X Seminar, T _E X Users Group-Phil. ⁵	DLSU-Manila	Jan 22, 1994
Math Teachers Education Conf. ⁴	Ateneo de Manila Univ.	Apr 1995

¹ Trainee

² Participant

³Paper Presenter

⁴Plenary Speaker

⁵Resource Speaker

* In addition, I have presented papers in several international and local conferences such as the Annual Scientific Meetings of the NAST, Annual Conventions of the Mathematical Society of the Philippines, etc.

Note: Local and International Mathematics Conference attended are not listed. In most of them, I have presented original research papers.

VII. AWARDS AND DISTINCTIONS RECEIVED:

Award/Distinction	Details
UP-NSDB Graduate Scholarship	1966–1968 MS Mathematics, UP-Diliman
UPLB Faculty Fellowship	1974–1977 PhD Mathematics, Ateneo de Manila University
Research Fellowship	July-August, 1976 Lee Kong Chian Institute of Mathematics and Computer Science Nanyang University, Singapore
Outstanding Mapúan	1981, Mathematics National Association of Mapúa Alumni
Outstanding Young Scientist	1981, Mathematics
Exchange Scientist to Japan	March–June, 1986 October 1989 October 1992 DOST-JSPS
Achievement Award	1992 National Research Council of the Philippines
Professorial Chair (Mathematics)	AY 1993–1994 until AY2008–2009
Outstanding Teacher	1997 Students Search for Outstanding Teachers
Research Award	1999 Miguel Febres de Cordero Research Award
University Fellow (De La Salle University)	1999–present DLSU Society of Fellows
Outstanding Teacher	2006 Students Search for Outstanding Teachers
Outstanding Mapúa Alumnus	August 20, 2009 Mapua Institute of Technology*

* Awarded after my commencement speech during the commencement exercises of Mapúa Institute of Technology, August 20, 2009.

VIII. EXTRA-CURRICULAR/COMMUNITY INVOLVEMENT:

- President, Iligan City Bowlers Association, 1991-1993
- President, T_EX Users Group, Philippines, May 1993–September 1998
- Vice Chairman, NRCP Division II, 1997–1998
- Chairman, NRCP Division II, 1998–1999
- Member, Senior Citizens' Association of Laguna Bel Air, 2007–present
- President, Laguna Bel Air Home Owners' Association, Inc., 2007–2009

IX. PUBLICATIONS/RESEARCH PAPERS PUBLISHED:

- [1] *On Kernels of (n, k) -Graphs*. Mathematics in the Philippines. Proceedings of the First International Summer Institute of Mathematics, Manila, 1975.
- [2] *On $*$ -BD Graphs*. Research Report No. 29, Lee Kong Chian Institute of Mathematics and Computer Science, Singapore, 1976.
- [3] *A Generalization of a Theorem of Lovasz*. Research Report No. 30, Lee Kong Chian Institute of Mathematics and Computer Science, Singapore, 1976.
- [4] *On (k, r) -BD Graphs*. Research Report No. 31, Lee Kong Chian Institute of Mathematics and Computer Science, Singapore, 1976.
- [5] *An Introduction to Graph Theory*. Matimyas Matematika, vol. 1, no. 6, Philippines, 1977.
- [6] *On Pythagorean Triples*. Matimyas Matematika, Philippines, 1977.
- [7] *On the Existence of Weak Direct Product of Algebras*. Southeast Asian Bulletin of Mathematics, 1977.
- [8] *Block Design Graphs and Associated Hypergraphs*. Southeast Asian Bulletin of Mathematics, 1977.
- [9] *A Note on Pythagorean Angles*. Matimyas Matematika, Philippines, 1977.
- [10] *Some Problems in Graph Theory–IV*. Southeast Asian Bulletin of Mathematics, 1978.
- [11] *On Magic Graphs*. Matimyas Matematika, vol. 3, no. 3, Philippines, 1979.
- [12] *Characterization of Magic Graphs*. Matimyas Matematika, Philippines, vol. 3, No. 4, 1979.
- [13] *On Graphs All of Whose Orientations Have Kernels*. Southeast Asian Bulletin of Mathematics, Proceedings of the First FRANCO-Southeast Asian Mathematics Conference, 1979.
- [14] *Are Generalized Petersen Graphs Proper Autographs?* (co-author: R. G. Panopio), vol. 6, no. 4, Matimyas Matematika, Philippines, 1979.

- [15] *A Characterization of Bipartite Graphs Using Kernels*. Research Report, Ateneo de Manila University, 1979.
- [16] *Full Graphs and Permutation Graphs*. Nanta Mathematica, Singapore, vol. 13, no. 1, 1980.
- [17] *Constructions of Experimental Designs from Block Design Graphs*(coauthor: W. C. Lao), NRCP Research Bulletin, vol. 36, no. 2, Philippines, 1981.
- [18] *Difference Graphs*. Proceedings of the Second FRANCO-Southeast Asian Mathematics Conference, Manila, 1982.
- [19] *Which Wheels are Proper Monographs?* Southeast Asian Bulletin of Mathematics, 1983.
- [20] *Some Notes on Power Graphs* (co-author: R. C. Guerrero), Matimyas Matematika, vol. 6, no. 1, Philippines, 1982.
- [21] *Characterization of Power Graphs* (co-author: R. C. Guerrero), Matimyas Matematika, vol. 6. no. 2, Philippines, 1982.
- [22] *Graphs Induced by Topological Spaces*. Matimyas Matematika, vol. 7, nos. 1 & 2, Philippines, 1983.
- [23] *Cycle Graphs*. Asian Journal of Graph Theory and Combinatorics, Proceedings of the First Graph Theory Colloquium, Singapore, 1983.
- [24] *On Cycle Graphs*. Transactions, Nat. Acad. of Sci. & Tech., Philippines, 1984.
- [25] *Graph Theory*. NRCP Research Bulletin, vol. 39, No. 2, 1984 and vol. 40, No. 2, 1985.
- [26] *A Study of Topological Graphs*. NRCP Research Bulletin, February 1984.
- [27] *On Topological Graphs*. Transactions, Nat. Acad. of Sci. & Tech., Philippines, 1985.
- [28] *Some Properties of Difference Graphs*. (co-author: R. B. Eggleton) Ars Combinatoria, Canada, 1985.
- [29] *n-cycle Block Design Graphs*. Transactions, Nat. Acad. of Sci. & Tech., Philippines 1985.
- [30] *Generalization of Chromatic Number*. Transactions, Nat. Acad. of Sci. & Tech., Philippines, 1986.
- [31] *Characterization of Topological Graphs* (co-author: R. C, Guerrero), Matimyas Matematika, Philippines, 1987.
- [32] *On the Lexicographic Order of the n -Permutations*. Transactions, Nat. Acad. of Sci. & Tech., Philippines, 1987.
- [33] *Score Sequences: Lexicographic Enumeration and Tournament Construction*. Proceedings of the First Japan Conference in Graph Theory and its Applications, Hakone, Japan, June 1986, Discrete Mathematics, vol. 72, 1988.
- [34] *Extension of Congruence to the Field of Rational Numbers*. Transactions, Nat. Acad. of Sci. & Tech., Philippines, 1988.
- [35] *On Paley Graphs*. (co-author: J. M. Bernaldez) Very Often Graphs, Ateneo de Manila University, No. 3, 1988.
- [36] *Scheduling Round-Robin Tournaments*. Very Often Graphs, Ateneo de Manila University, No. 4, 1988.
- [37] *Path Chromatic Numbers of Graphs*. (co-authors: J. Akiyama, H. Era, M. Watanabe) Journal of Graph Theory, vol. 13, No. 5, 1989.

- [38] *Tournament Score Sequences*. Proceedings of the First China-US Conference in Graph Theory, Jinan, China, 1986. Annals of the New York Academy of Sciences, vol. 576, 1989.
- [39] *Topologies Induced by Graphs*. (co-author: R. Guerrero) Matimyas Matematika, Philippines, 1989.
- [40] *Non-singular Trees* (co-author: H. Rara). Very Often Graphs, Ateneo de Manila University, No. 5, 1989.
- [41] *Minimizing the Maximum Difference Between Integer Labels of Adjacent Vertices in a Graph*. Transactions, Nat. Acad. of Sci. & Tech., Philippines, 1989.
- [42] *Disjoint Subsets of Integers Having Constant Sum*. (co-authors: K. Ando and M. Kano) Discrete Mathematics, 82, 1990, North Holland.
- [43] *Necessary Conditions for Cycle Graphs*. (co-author: E. L. Tan) Matimyas Matematika, Philippines, 1990.
- [44] *Which Bipartite Graphs are Singular?*, to appear in Transactions.
- [45] *A Study of Singular Bipartite Graphs*, NRCF Research Journal, vol. 1, no. 1, January–March 1992.
- [46] *Minimizing the Maximum Difference Between Integer Labels of Adjacent Vertices in a Graph–II*, Discrete Mathematics, 1991
- [47] *Singular and Non-singular Regular Graphs with Arbitrarily Large Order*, (co-author: E. P. Agpalza), NRCF Research Journal, vol. 5, January–December 1998
- [48] *On Path-chromatically Unique Graphs*, (co-author: E. B. Arugay), Discrete Mathematics, 1991
- [49] *Construction of Tournaments with a Given Score Sequence*, SEA Bull. Math., 1992.
- [50] *Singular Graphs: The Cartesian Product of Two Graphs*, accepted for presentation in the annual scientific meeting of NAST, 1992.
- [51] *On Triangles with Congruent Angle Bisectors—A Tough Problem*, Matimyas Matematika, vol. 16, no. 1, January 1993.
- [52] *Folding a Graph*, Journal of Mindanao Mathematics, vol. 1, no. 1, September 1992.
- [53] *Some Applications of Graph Theory*, Journal of Mindanao Mathematics, vol. 1, no. 1, 1992.
- [54] *Trees with Diameter Less than 5 and Nonsingular Complement*, Discrete Mathematics, vol. 151, 1996, pp 91–97.
- [55] *The Bandwidth of a Tree with k leaves is at most $\lceil \frac{k}{2} \rceil$* , (co-authors: Kiyoshi Ando, Atsusi Kaneko), Discrete Mathematics, vol. 150, 1996, pp 403–406.
- [56] *On the Chromatic Number of Graphs*, (co-author: Esperanza Arugay), Discrete Mathematics, 1996.
- [57] *Unit Graphs: Dimension and Span*, (co-author: B. P. Raposa), NRCF Research Journal, 1998.
- [58] *Construction of r -regular Singular Graphs*, (co-author: L. A. Ruivivar), Indian Journal of Pure and Applied Mathematics, 2000
- [59] *Regular Singular and Nonsingular Graphs of Arbitrarily Large Order Exist*, accepted for publication, NRCF Research Journal, 1998.

- [60] *Unit Graphs*, in : Proceedings of the 1998 Annual Meeting of the National Research Council of the Philippines.
- [61] *Subdividing a Graph Toward a Unit Distance Graph in the Plane*, (co-author : Hiroshi Maehara), European Journal of Combinatorics, 2000.
- [62] *A Teacher's Nomograph*, (co-author : Sonia Y. Tan), The Manila Journal of Science, 1999.
- [63] *Folding Wheels and Fans*, (co-authors : Romulo C. Guerrero & Helen M. Rara), Graphs and Combinatorics, 2000.
- [64] *Subdivision Numbers of Large Complete Graphs and Large Complete Multipartite graphs*, Lecture Notes in Computer Science, 3330, pp. 94–101, 2005
- [65] *Rational Sines and Cosines*, Journal of Research in Science, Computing, and Engineering, Aug 2005.
- [66] *A Partial Order on a Family of k -subsets of a Partially Ordered Set*, (co-author: Hiroshi Maehara), Discrete Mathematics, 306, pp. 413–419, 2006
- [67] *Rational Sines, Cosines, and Tangents of Rational Multiples of 2π* , Journal of Research in Science, Computing, and Engineering, 2006.
- [68] *Integral Embedding of Complete Graphs in the Euclidean Plane*, Journal of Research in Science, Computing, and Engineering, 2006.
- [69] *Economical Integral Representation of the Complete Graph in the Euclidean Plane*, Proceedings of the Eighth Osaka University-De La Salle University Science Research Workshop, 2006.
- [70] *Solvable Powers of Paths and Cycles*, Proceedings of the Eighth Osaka University-De La Salle University Science Research Workshop, 2006.
- [71] *A Family of Cusped Cubic Bézier Curves*, Proceedings of the Ninth Osaka University-De La Salle University Academic Research Workshop, 2007.
- [72] *Lights Out Puzzle: Number of Solvable States of Graphs*, (co-author: Yvette F. Lim), Proceedings of the Ninth Osaka University-De La Salle University Academic Research Workshop, 2007.
- [73] *Subdividing the Complete Bipartite Graph Toward a Unit-Distance Graph in 3-Dimensional Space*, (co-author: Ernita R. Calayag), Proceedings of the Ninth Osaka University-De La Salle University Academic Research Workshop, 2007.
- [74] *The Euclidean Dimension of the Power of a Path*, (co-author: Alana H. Hernandez), Proceedings of the Ninth Osaka University-De La Salle University Academic Research Workshop, 2007.
- [75] *The Three-Way Lights Out Puzzle*, (co-authors: Leonor A. Ruivivar and Bladimir Ocampo), Proceedings of the Ninth Osaka University-De La Salle University Academic Research Workshop, 2007.
- [76] *Universal and Primitive Graphs*, (co-author: Neil M. Mame), Proceedings of the Ninth Osaka University-De La Salle University Academic Research Workshop, 2007.
- [77] *The Euclidean Dimension of the Join of Two Cycles*, (co-author: Isagani B. Jos), Discrete Mathematics, 308, pp. 5722–5726, 2008.
- [78] *Planar Unit-Distance Graphs with Planar Unit-Distance Complement*, (co-authors: Yvette F. Lim, Hiroshi Maehara), Discrete Mathematics, 308, pp. 1973–1984, 2008

- [79] *Solvable Trees*, (co-authors: Yvette F. Lim and Leonor A. Ruivivar), Lecture Notes in Computer Science, 4535, pp. 79–84, 2008.
- [80] *Resistance Distance in Graphs*, Proceedings of the 10th Osaka University-De La Salle University Academic Research Workshop, 2009.
- [81] *Generator Subgraphs of p -power of a Cycle*, (co-author: Neil M. Mame), Proceedings of the Gervacio International Conference on Graph Theory and Combinatorics, The DLSU Mathematics Inbox, special issue, p. 98, 2009.
- [82] *Searching for Other Generator Subgraphs of Fans and Wheels*, Proceedings of the Gervacio International Conference on Graph Theory and Combinatorics, The DLSU Mathematics Inbox, special issue, p. 101, 2009.
- [83] *A Note on Lights Out Puzzle–Parity-State Graphs*, (co-author: Hiroshi Maehara), Graphs and Combinatorics, 2010.
- [84] *Resistance Distance in Complete n -Partite Graphs*, Journal of Educational Development, Tokai University, vol. 6, 2010, p. 111–119.
- [85] *Resistance Distance in Complete n -Partite Graphs*, The Mindanawan Journal of Mathematics, vol. 3, issue no. 1, May 2012, 1–19.
- [86] *Characterization and Construction of Permutation Graphs*, (co-authors: Teofina Rapanut, Phoebe Chloe Ramos), Open Journal of Discrete Mathematics, accepted October 2012, published January 2013, (3) 33–38.
- [87] *Resistance distance in complete n -partite graphs*, Discrete Applied Mathematics, 203 (2016) 53–61. <http://dx.doi.org/10.1016/j.dam.2015.09.017>
- [88] *On the span and extent of unit-distance graphs in the plane*, co-authors: Hiroshi Maehara and Joselito A. Uy, Applied Mathematical Sciences, vol 10, 2016 no. 33, 1611-1618. <http://dx.doi.org/10.1016/j.dam.2015.09.017>
- [89] *A note on the generator subgraph of a graph*, (Neil M. Mame and Severino V. Gervacio), Electronic Journal of Graph Theory and Applications, (8) (1) (2020) 17–27.
- [90] *On the fold thickness of graphs*, (Francis Joseph H. Campenña and Severino V. Gervacio), Arabian Journal of Mathematics, volume 9, pages 345–355 (2020)

Prepared by:


Severino V. Gervacio

31 August 2020