

CURRICULUM VITAE

Name: Edgar Estonanto Escultura

Birthplace: Nato, Gubat, Sorsogon, Philippines; **Nationality:** Filipino; **Birthdate:** April 17, 1936.

Citizenship: Filipino-Australian

Spouse: Violeta Galang Escultura; **Children:** One daughter; four sons

Current residence: 6/13-17 Sedgwick St., Leumeah, NSW 2560, Australia

Other residence: Blk 1 Lot 1 Granwood Villas, BF Homes, Q. C. 1127, Philippines;

Educational Attainment:

B.S. (Mathematics), University of the Philippines, 1957

M.S. (Mathematics), University of the Philippines, 1964; Major: analysis; Minors: physics, philosophy

Ph.D. (Mathematics), University of Wisconsin, 1970; Major: analysis; Minors: topology, algebra

Employment and Academic Posts:

Lecturer, University of Illinois Chicago (1980 – 1982); Lecturer, California State University Hayward (1983 – 85);

Lecturer, City College of San Francisco (1985 – 1986); Free Lance Journalist, 1971 – 1986; Science Editor and Columnist, Manila Times, 2004 - 2005

Assistant Professor (1970 – 1971), Associate Professor (1986 – 1990), Professor (1991 – 1997), University of the Philippines;

Research Professor of Mathematics and Physics (2007 – 2010), GVP – Professor V. Lakshmikantham Institute for Advanced Studies, GVP College of Engineering (affiliated with JNT University), Kakinada) Madurawada, Visakhapatnam, AP, India

Research Professor (Honorary), 2010 - to-date, GVP – V. Lakshmikantham Institute for Advanced Studies, GVP College of Engineering (affiliated with JNT University Kakinada), Madurawada, Visakhapatnam, AP, India

International Affiliation: International Federation of Nonlinear Analysts

Papers in peer-reviewed international publications and conference proceedings:

I. Nonlinear Analysis, Series A: Theory, Methods and Applications

1. The solution of the gravitational n-body problem, **30**(8), 1997, pp. 5021 – 5032.
2. Superstring loop dynamics and applications to astronomy and biology **35**(8), 1999, 259 – 285.
3. Turbulence: theory, verification and applications, **47**(2001), 259 – 285.
4. Dynamic Modeling of Chaos and Turbulence, *Nonlinear Analysis, A-Series: Theory: Method and Applications*, Volume 63(5-7), 2005, e519-e532.
5. (Co-authored with V. V. Gudkov, Latvia University) Mathematical models on the way from superstring to photon, **3**(2002), 375 – 382.
6. The grand unified theory, **69**(3), 2008, 823 – 831.
7. The mathematics of the grand unified theory **71** (2009), e420 – e431

II. Nonlinear Analysis, Series B: Real World Applications

9. Qualitative model of the atom, its components and origin in the early universe, **11**(2009), 29 – 38;

III. Nonlinear Analysis, Series C: Hybrid Systems

10. Revisiting the hybrid real number system (co-authored with T. Gnana Bhaskar, V. Lakshmikantham and S. Leela), **3**(2), 2009, . 101 – 107

III. Nonlinear Studies (Published by the International Federation of Nonlinear Analysts)

11. The Leap From Traditional to the New Science, *Nonlinear Studies (International Federation of Nonlinear Analysts (IFNA))*, **21**(2), 2014, 283 – 291;
<http://nonlinearstudies.com/index.php/nonlinear/article/view/1001>.

12. Exact solutions of Fermat's equations: Definitive resolution of FLT, **5**(2), 1998, 227 – 254.

13. The Pillars of the new physics and some updates, *Nonlinear Studies*, **14**(3), 2007, 241 – 260

IV. Applied Mathematics and Computation (Published by Elsevier Science, Ltd.)

14. The mathematics of the new physics, **130**(2002), 149 - 169
15. The new mathematics and physics, **138**(2003), 145 – 169
16. Macro and quantum gravity and the dynamics of cosmo waves, **139**(1), 2003, 23 – 36.

V. Problems of Nonlinear Analysis in Engineering Systems (Published jointly by the Russian Academy of Sciences and the International Federation of Nonlinear Analysts)

17. From macro to quantum gravity, *7*(1), 2001, 56 – 78.
18. Vortex interaction, *7*(2), 2001, 30 – 44.
19. Qualitative modelling for complex systems, *17*(36), 2011, 79 – 85.
20. Problems of modelling in Global geology and oceanography, *Problems of Nonlinear Analysis in Engineering Systems (International Federation of Nonlinear Analysts – Russian Academy of Natural Sciences, Vol.19, №2(40), 2013, pp. 164 – 178 (in English); <http://kpfu.ru/portal/docs/F2118903903/Zurnal40.pdf>.*
- VI. Indian Journal of Pure and Applied Mathematics**
 21. Chaos, turbulence and fractal, *32*(10), 2001
 22. Theory of intelligence and evolution, *33*(1), 2002
- VII. International Journal of Neural, Parallel and Scientific Computation**
 23. Dynamic modeling and the new mathematics and physics, *14*(2), 2007
 24. The new real number system and discrete computation and calculus, *17*(2009), 59 – 84.
- VIII. Applied Mathematics Letters.**
 25. Extending the reach of computation, *21*(10), 2008, 1074-1081
- IX. The Journal of the Science of Healing Outcomes**
 26. The origin and evolution of biological species, 2010, 6–7, pp. 17 – 27
 27. The physics of the mind, *6*(24), 2014, 6 – 15.
 28. Genetic alteration, modification and sterilization, *7*(26) 2015, 30 – 45.
 29. The Unified Theory of Evolution, *8*(29), 2015, 6 – 18.
- X. Open Access Journal of Biomaterials and Bionanotechnology (Science Research Publishing or SCIRP)**
 30. Electromagnetic Treatment of Genetic Diseases, *3*(2), 2012, 292 – 300;
<http://www.scirp.org/Journal/Home.aspx?IssueID=1673>.
 31. Extending Electromagnetic Treatment to Infectious Diseases Including the Ebola Virus, *6*(2), April, 2015, 100-115; <http://www.scirp.org/Journal/PaperInformation.aspx?PaperID=55595#.VYozjUZq3Rs>.
- XI. Open Access Journal of Modern Physics (SCIRP),**
 32. The Logic and Fundamental Concepts of the Grand Unified Theory, *4*(8A), 2013, pp. 213 – 222;
<http://www.scirp.org/journal/jmp>.
- XII. Open Access International Journal of Modern Nonlinear Theory (SCIRP)**
 33. Chaos, Turbulence and Fractal: Theory and Applications, (SCIRP), *6*(2), September 2013, 176 - 185;
<http://www.scirp.org/journal/jmp>.
- XIII. Open Access Journal of Creative Education (SCIRP)**
 - (34) Creative Mathematics Education, *3*(1), March 2012, 45 – 54; <http://www.scirp.org/journal/Home.aspx?IssueID=1404>.
- XIII. Open Access International Journal of Atmospheric and Climate Sciences (SCIRP)**
 35. Is Human Activity Linked to Climate Change? *4*(2), 2014, 305 – 316, 2014;
http://file.scirp.org/Html/15-4700251_45173.htm; <http://www.scirp.org/journal/acs>.
- XIV. Open Access Journal of Education and Learning (Canadian Center of Science and Education)**
 36. The Physics of Intelligence, *1*(2), 2012, 51 – 64;
<http://www.ccsenet.org/journal/index.php/jel/article/view/20095/13268>.
- XV. International Education Research**
 37. Rational Thought, Cognition and Rational Thought, *3*(1), 2015, 21 – 37;
<http://www.todayscience.org/IER/article/ier.v3i1p21.pdf>.
- XVI. Nova Science Publishers**
 38. “Extended Geometrical and Generalized Fractals, Chaos and Applications”, In Kyle J. Brennan, Ed, *Handbook on the Classification and Application of Fractals*, Nova Publishers, 2011, 1 – 39;
https://www.novapublishers.com/catalog/productinfo.php?products_id=23231.
 39. “The Big Bang and what it was,” In: Jason R. O’Connell and Alice L. Hale, ed., *The Big Bang: Theory, Assumptions and Problems*, *Nova Science Publishers*, pp. 61 – 102;
https://www.novapublishers.com/catalog/product_info.php?products_id=21109.
- XVII. Advances in Pure Mathematics (SCIRP)**
 40. The Resolution of the Great Debate of the 20th Century in the Foundations of Mathematics, *Advances in Pure Mathematics (SCIRP)*, Vol. 6, 2016, 144 – 158;
<http://www.scirp.org/Journal/PaperInformation.aspx?PaperID=63915>.
- XVII. World Scientific**
 41. “By-passing chaos with a theory of turbulence and development”, In: E. Perez and D. Bonzo, Ed.,

Finance Stochastics, London, 2001, 47 – 60

XVII. Peer Reviewed Proceedings of International Conferences on Dynamic Systems and Applications, Atlanta

42. Probabilistic mathematics and application to dynamical systems including Fermat's last theorem, May 1995, Atlanta.

43. Quantum gravity, May 1999, Atlanta.

44. 44. Dynamic and mathematical models in physics (keynote address), International Conference on Dynamic Systems and Applications, May 2007, Atlanta.

45. Our Fractal Universe and Applications, *Proc. International Conference on Dynamic Systems and Applications*, May 30, 2010, Morehouse College, Atlanta.

XVIII. Peer Reviewed Proceedings of International Conferences on Neural, Parallel Computations

46. Our Fractal Universe and Applications (keynote address), May 30, 2010, Neural, Parallel and Scientific Computation, Atlanta

XIX. Peer reviewed Proceedings of International Conferences on Tools for Mathematical Modeling

47. The flux theory of gravitation: recent verification and applications, June, 1999, St. Petersburg, Russia.

48. Set-valued differential equations and applications to quantum gravity, June 2000, St. Petersburg, Russia.

49. Dynamic modeling and applications, June 2003, St. Petersburg, Russia, 2002

XX Peer reviewed Proceedings of the International conference on Sustainable Development and Emerging Technologies

50. Emerging Trends in Engineering (ICETE-2010)", February 20 – 21, 2010, 119 – 127, Dr.J. J. Magdum College of Engineering (JIMCOE) in technical collaboration with Cafet-Innova Technical Society, Jaysingpur, Kolhapur District, Maharashtra, India.

51. K. P. Chandra, V. S. R. S. Sarma and E. E. Escultura, "Economic-Industrial Development for Sustainable Development of Underdeveloped Countries," Proceedings of the International Conference on Sustainable Development, Chennai, 1-6 February 2010, 241-249.

52. Green Building – a Tool for Environmental Sustainable Development (co-authored with Chandra Prakash, Kamana, first author, and V. S. R. S. Sarma Salagrama), 70 -79.

XXI. Article on Sustainable Development

53. K. P. Chandra, V. S. R. S. Sarma and E. E. Escultura, "Building Green to Attain Sustainability," International Journal of Earth Sciences and Engineering, Vol. 4, 2010, pp. 725-729.

XXII. Peer Reviewed Proceedings of the of the International Conference on Recent Advances in the Mathematical Sciences, Visakhapatnam, AP, India, December 25 – 2008.

54. Basic physical concepts of the Hybrid Grand Unified Theory, Lakshmikantham – GVP – Institute for Advanced Studies, GVP College of Engineering, J. Nehru Technicaal University, Madurawada, Vissakapatnam, AP, India.

XXIII. Scientific Books (Philippines)

55. Introduction to Qualitative Control Theory, Kalikasan Press, 1992

56. Diophantus: Introduction to Mathematical Philosophy (With probabilistic solution of Fermat's last theorem), Kalikasan Press, 1993

XXIV. Scientific Books (International)

57. The Hybrid Grand Unified Theory, by V. Lakshmikantham, E. E. Escultura and S. Leela, Atlantis (Elsevier Science), Paris. March 2009; in May, 2009, it got to #48 spot on World's Scientific best sellers list and rose to the #2 spot in July, 2009; now it remains in the list at #26 as of last July, 2009

58 Scientific Natural Philosophy, Bentham Science Publishers, 2011;
<http://www.benthamscience.com/eBooks/9781608051786/index.htm>

59. Qualitative Mathematics and Modeling: Theoretical and Practical Applications, LAP LAMBERT Academic Publishing GmbH & Co., KG, 2011, pp. pp. 122 – 127;
www.lap-publishing.com.

60. The Grand Unified Theory (With Theoretical, Technological and Other Applications), in press, Science Research Publishing.

XXV. Awards. (a) Rockefeller Fellow, U. Wisconsin, 1965 – 1969; (b) Visiting Scientist, Tokyo University, 1990; (c) Department of Science and Technology Fellow, 1994; National Science Development Board Graduate Scholar, 1960 – 1962.

E. E. Escultura, March 2016