

# Michael Gregory Voskoglou--deleted

Subjects: **Mathematics**

Contributor: Michael Voskoglou

This is a short Bio-note of Michael Gr. Voskoglou, Professor Emeritus of Mathematical Sciences at the School of Technological Applications of the Graduate Technological Educational Institute (TEI) of Western Greece, which has been joined recently with the University of Peloponnese, Greece.

fuzzy mathematics

Markov chains

algebra

artificial intelligence

mathematics education

## 1. Introduction

Michael Gr. Voskoglou received his B.Sc. in Mathematics (1972, Excellent) from the Aristotle University of Thessaloniki, Greece, his M.Sc. in Pure Mathematics (1978) and M.Phil. in Algebra (1980) from the University of Leeds, UK and his Ph.D. (1982, Excellent) from the University of Patras, Greece. His Ph.D. thesis entitled "A Contribution to the Study of Rings" was a research study on derivations and skew polynomial rings.



At the beginning of his career (1972-1987) M. Voskoglou worked as a teacher of mathematics of the Greek public secondary Education in the city of Patras, with a three years break (1976-78) for his postgraduate studies in England under sabbatical from the Greek Ministry of Education and a NATO's fellowship (technical assistance). In 1987 he was elected as a Lecturer at the TEI of Messolonghi, where he became a full Professor of Mathematics and Operations Research at the School of Management and Economics in 1989. Vice president of the Research Committee and Erasmus coordinator (1990 - 1994), Dean of the School of Management and Economics (1995-1997) and Scientific Director of five programs of technological research on applications of quantitative methods to Cooperatives (1989 – 1996).

During the period 1997-2000 Prof. Voskoglou worked as a visiting researcher in the Institute of Mathematics and Informatics of the Bulgarian Academy of Sciences in Sofia. At the end of 2000 he joined as a full Professor of Applied Mathematics the School of Technological Applications of the Graduate TEI of Patras. Head of the Department of Renovation and Restoration of Buildings and Scientific Director of the European Program "Expansion of Tertiary Education" (2001-2005), he became an Emeritus Professor in 2012. The School of Technological Applications of the TEI of Patras, which was renamed later as TEI of Western Greece, has been joined recently with the University of Peloponnese.

Prof. Voskoglou used to be also an instructor at the Hellenic Open University, at the Mathematics Department of the University of Patras and at the Schools of Primary and Secondary In – Service Teachers' Training in Patras. He has lectured abroad as a Visiting Professor in M.Sc. courses at the School of Management of the University of Warsaw (2009), at the Department of Operational Mathematics of the University of Applied Sciences in Berlin (2010) and at the Mathematics Department of the National Institute of Technology of Durgapur (2016) under a grant of the GIAN program (Course No. 161021K03) of the Indian Government.

Supervisor of many student dissertations on applications of Mathematics to Management and Engineering and external examiner of Ph.D. dissertations at Universities of Egypt, India and Saudi Arabia. He is the recipient of many scholarships (Greek Institute of National Scholarships, NATO's technical assistance, GIAN-India, etc.), distinctions (Who is Who in the World, Who is Who in America, Men of Achievement, Board of Advisors of the American Biographical Institute, etc.) and honorary awards (appreciation plaques from the Egyptian Computer Society, Ain Shams University, Cairo, National Institute of Technology of Durgapur, India, Einstein Award of the International Biographical Centre, Cambridge, UK, etc.). Prof. Voskoglou is also a member of several scientific associations (AMS, HMS, ICTMA, IETI, etc.).

## 2. Research and Publications

The research work of Prof. Voskoglou is on fuzzy mathematics, Markov chains, algebra, artificial intelligence and mathematics education. He has published around to 550 works including:

- 3 dissertations (M.Sc., M. Phil., Ph.D.)
- 14 books (11 authored and 3 edited books)
- 320 papers in English published in international academic journals and in Proceedings of refereed International Conferences of more than 30 countries of the five continents around the Globe.
- 33 announcements in International Mathematical Conferences (publication of the abstracts only).
- 44 reviews of the American Mathematical Society.
- 103 articles in Greek published in Greek mathematical journals and in proceedings of Mathematical Conferences.
- 11 announcements in Greek Mathematical Conferences (publication of the abstracts only).
- 5 technical reports of programs of applied research.
- 14 lecture notes.

### Books

#### *Authored Books*

ELEMENTARY MATHEMATICS FROM CONTEMPORARY SCOPE, Self-edition, Patras, 1984 (in Greek).

MATHEMATICS FOR MANAGEMENT AND ECONOMICS, Macedonian Publications, Athens, 1995, ISBN 960-319-154-X (in Greek).

APPLIED MATHEMATICS, Macedonian Publications, Athens, 2002, ISBN 960-319-258-9 (in Greek).

ANALYTIC GEOMETRY, Self-edition, Patras, 2004, ISBN 960-92460-0-1 (in Greek).

HIGHER MATHEMATICS, Self-edition, Patras, 2005, ISBN 960-92460-1-X (in Greek).

TOPICS FROM OPERATIONS' RESEARCH, Self-edition, Patras, 2007, ISBN 960-92460-2-8 (in Greek).

AN INTRODUCTION TO OPERATIONS' RESEARCH, Gotsis Publications, Patras, 2010, ISBN 978-960-9427-05-0 (in Greek).

STOCHASTIC AND FUZZY MODELS IN MATHEMATICS EDUCATION, ARTIFICIAL INTELLIGENCE AND MANAGEMENT, Lambert Academic Publishing, Saarbrucken, Germany, 2011, ISBN 978-3-8465-2821-1.

ADVANCED MATHEMATICS FOR ENGINEERS AND ECONOMISTS, Gotsis Publications, Patras, 2012, ISBN 978-960-92460-3-3.

FINITE MARKOV CHAINS AND FUZZY MODELS IN MANAGEMENT AND EDUCATION, GIAN Program, Course No. 161021K03, National Institute of Technology, Durgapur, India, 2016

FINITE MARKOV CHAIN AND FUZZY LOGIC ASSESSMENT MODELS: EMERGING RESEARCH AND OPPORTUNITIES, Create Space Independent Publishing Platform (Amazon), Columbia, SC, USA, 2017, ISBN 978-1548340070.

#### *Edited Books*

PROCEEDINGS OF THE 7<sup>TH</sup> IEEE INTERNATIONAL CONFERENCE ON INTELLIGENT COMPUTING AND INFORMATION SCIENCE (ICICIS 2015), Vol. 3, M Roushdy, M. Voskoglou, et al. (Eds.), Ain Shams University, Cairo, Egypt, 2015, ISBN 977-237-172-3.

AN ESSENTIAL GUIDE TO FUZZY SYSTEMS, M. Voskoglou (Ed.), Nova Publishers, N.Y., 2019, ISBN, 9787-1536161281

FUZZY SETS, FUZZY LOGIC AND THEIR APPLICATIONS, M. Voskoglou (Ed.), MDPI, Basel, Beijing, Wuhan, Barcelona, Belgrade, Manchester, Tokyo, Cluj, Tiaqnjin, 2020, ISBN 978-3-03928-520-4.

#### **Recent Publications (2019-2020)**

MULTI-VALUED LOGICS: A REVIEW, International Journal of Applications of Fuzzy Sets and Artificial Intelligence, 9, 5-12, 2019.

USE OF FUZZY NUMBERS AS ASSESSMENT TOOLS , in: M. Khosrow-Pour (Ed.), Advanced Methodologies and Technologies in Artificial Intelligence, Computer Simulation and Human – Computer Interaction, Chapter 30, pp.407-420, Information Resources Management Association, Hersey PA, USA, 2019

METHODS FOR ASSESSING HUMAN-MACHINE PERFORMANCE UNDER FUZZY CONDITIONS, Mathematics, 7(3), 230, 2019.

DERIVATIONS AND INTEGRATIONS ON RINGS, American Journal of Applied Mathematics and Statistics, 7(2), 75-78, 2019.

APPLICATION OF MARKOV CHAIN TO THE ACE TEACHING STYLE OF MATHEMATICS, Sumerianz Journal of Education, Linguistics and Literature, 2(2), 4-11, 2019

FUZZY SYSTEMS, EXTENSIONS AND RELATIVE THEORIES, WSEAS Transactions on Advances in Engineering Education, 16, 63-69, 2019.

FUZZY RELATION EQUATIONS ON THE VAN HIELE LEVELS OF GEOMETRIC REASONING, NAUN International Journal of Fuzzy Systems and Advanced Applications, 6, 8-12, 2019

ON PROPERTIES OF DIFFERENTIAL RINGS, WSEAS Transactions on Mathematics, 18, 112-117, 2019.

USE OF FUZZY RELATION EQUATIONS AND THE BLOOM'S TAXONOMY FOR LEARNING FOR EVALUATING STUDENT LEARNING SKILLS, WSEAS Transactions on Advances in Engineering Education, 16, 1-6, 2019.

FUZZY AND GREY ASSESSMENT METHODS, NAUN International Journal of Fuzzy Systems and Advanced Applications, 6, 1-7, 2019.

A MARKOV CHAIN MODEL FOR THE APOS/ACE INSTRUCTIONAL TREATMENT OF MATHEMATICS, IARAS International Journal of Education and Learning Systems, 4, 1-6, 2019.

A MARKOV CHAIN APPLICATION ON THE LEVELS OF THE BLOOM'S TAXONOMY OF LEARNING OBJECTIVES, American Journal of Educational Research, 7(3), 294-298, 2019.

DATA EVALUATION IN FUZZY SYSTEMS, WSEAS Transactions on Advances in Engineering Education, 16, 70-74, 2019.

MANAGEMENT OF FUZZY DATA IN EDUCATION, Scientific Journal of Physical and Mathematical Education, 1(19), 13-17, 2019.

COMMUNITIES OF PRACTICE FOR TEACHING AND LEARNING MATHEMATICS, American Journal of Educational Research, 7(6), 186-191, 2019.

TEACHING AND LEARNING MATHEMATICS: RESEARCH AND PRACTICE FOR THE 21<sup>ST</sup> CENTURY, Sumerianz Journal of Education, Linguistics and Literature, 2(4), 19-24, 2019

COMPARING TEACHING METHODS OF MATHEMATICS AT UNIVERSITY LEVEL, Education Sciences, 9(3), 204, 2019.

FUZZY GRAPHS AND FUZZY HYPERGRAPHS (with T. Pramanik), in M. Pal, S. Samanta & A. Pal (Eds.), Handbook of Research on Advanced Applications of Graph Theory in Modern Society, Chapter 19, 437-468, IGI Global, Hersey, PA., USA, 2019.

POSSIBILITIES IN FUZZY DATA, Journal of Mathematical Sciences and Mathematics Education, 14(2), 20-28, 2019.

UNCERTAINTY, FUZZY SETS AND RELATED THEORIES, Oriental Journal of Physical Sciences, 4(1), 1-3, 2019.

COMPUTATIONAL THINKING IN PROBLEM SOLVING AND EDUCATION, in R.V. Nata (Ed.), Progress in Education, Vol. 61, Chapter 2, 33-94, Nova Publishers, N.Y., 2019.

FUZZY SETS, GREY SYSTEM THEORY AND COMPUTATIONAL THINKING, in M. Voskoglou (Ed.), An Essential Guide to Fuzzy Systems, Chapter 1, 1-54, Nova Publishers, N.Y., 2019.

EVALUATION OF FUZZY DATA AND FUZZY RELATION EQUATIONS, in M. Voskoglou (Ed.), An Essential Guide to Fuzzy Systems, Chapter 2, 55-78, Nova Publishers, N.Y., 2019.

GENERALIZATIONS OF FUZZY SETS AND RELATED THEORIES, in M. Voskoglou (Ed.), An Essential Guide to Fuzzy Systems, 345-352, Nova Publishers, N.Y., 2019.

APPLICATION OF POSSIBILITY THEORY TO DATA ASSESSMENT, Proceedings of the International Conference on Software Engineering, 14-17, National Aviation University, Kiev, Ukraine, 2019.

AN APPLICATION OF THE “5 E’S” INSTRUCTIONAL TREATMENT FOR TEACHING THE CONCEPT OF FUZZY SET, Sumerianz Journal of Education, Linguistics and Literature, 2(9), 73-76, 2019.

AN APPLICATION OF ERGODIC MARKOV CHAINS TO THE PROCESS OF TEACHING MATHEMATICS, American Journal of Applied Mathematics and Statistics, 7(5), 187-190, 2019.

A MARKOV CHAIN REPRESENTATION OF THE “5E’s” INSTRUCTIONAL TREATMENT, Scientific Journal of Physical and Mathematical Education, 3(21), 7-11, 2019.

ARTIFICIAL INTELLIGENCE AS A TOOL IN THE MODERN EDUCATION, International Journal of Applications of Fuzzy Sets and Artificial Intelligence, 9, 125-138, 2019.

APPLYING THE ABSORBING AND THE ERGODIC MARKOV CHAIN THEORY TO CBR, International Journal of Computers, 13, 122-126, 2019.

COMPUTERS AND ARTIFICIAL INTELLIGENCE AS TOOLS FOR EDUCATION IN THE FORTHCOMING ERA OF THE INTERNET OF THINGS AND ENERGY, WSEAS Transactions on Information Science and Applications, 16, 185-190, 2019

APPLICATIONS OF FINITE MARKOV CHAINS TO ARTIFICIAL INTELLIGENCE, International Journal of Innovation, 10(1), 1-10, 2020.

BENEFITS AND LIMITATIONS OF THE ARTIFICIAL WITH RESPECT TO THE TRADITIONAL LEARNING OF MATHEMATICS (with A.-B. M. Salem), Mathematics, 8, 611, 2020

USE OF GREY NUMBERS FOR ASSESSING THE EFFECT OF THE APPLICATION OF THE FLIPPED LEARNING MODEL ON THE PERFORMANCE OF A MATHEMATICS CLASS, Egyptian Computer Science Journal, 44(2), 24-31, 2020

SMART LEARNING SYSTEMS (with A.-B. M. Salem), International Journal of Applications of Fuzzy Sets and Artificial Intelligence, 10, 103-120, 2020.

THOUGHTS FOR THE FUTURE EDUCATION IN THE ERA OF THE FOURTH INDUSTRIAL REVOLUTION, American Journal of Educational Research, 8(4), 214-220, 2020.

A PHILOSOPHICAL TREATISE ON THE CONNECTION OF SCIENTIFIC REASONING WITH FUZZY LOGIC (with E. Athanassopoulos), Mathematics, 8, 875, 2020.

INDUCTIVE REASONING AND FUZZY LOGIC (with E. Athanassopoulos), International Journal of Applications of Fuzzy Sets and Artificial Intelligence, 10, 169-195, 2020.

APPLICATIONS OF FUZZY LINEAR PROGRAMMING TO BUSINESS PROBLEMS, WSEAS Transactions on Mathematics, 19, 343-348, 2020.

A MARKOV CHAIN REPRESENTATION OF HUMAN REASONING AND SCIENTIFIC THINKING, American Journal of Applied Mathematics and Statistics, 8(2), 52-57, 2020.

TRADITIONAL LEARNING AND ARTIFICIAL LEARNING THEORIES AND TEACHING METHODS, Sumerianz Journal of Education, Linguistics and Literature, 3(8), 178-185, 2020.

APPLICATIONS OF FUZZY NUMBERS TO HYPERCONNECTIVITY AND COMPUTING, International Journal of Hyperconnectivity and the Internet of Things, 4(2), 80-101, 2020.

NEW CHALLENGES FOR EDUCATION IN THE FORTHCOMING ERA OF THE FOURTH INDUSTRIAL REVOLUTION, in S. Buckley (Ed.), Promoting Inclusive Growth in the Fourth Industrial Revolution, Chapter 4, 98-117, IGI Global, Hersey, PA., USA, 2020.

BAYESIAN REASONING AND ARTIFICIAL INTELLIGENCE AGAINST COVID-19, International Journal of Scientific Advances, 1(1), 74-78, 2020 (with A.B. Salem).

QUANTIFYING THE ARISTOTLE'S FALLACIES (with E. Athanassopoulos), Mathematics, 8, 1399, 2020.

MACHINE LEARNING TECHNIQUES FOR TEACHING MATHEMATICS (with A.-B.M. Salem), Scientific Journal of Physical and Mathematical Education, 2(24), 17-25, 2020.

USE OF FINITE MARKOV CHAINS IN BUSINESS PROBLEMS INVOLVING DECISION MAKING AND CASE-BASED REASONING, in B. Christiansen & T. Skrinjaric (Eds.), Chapter 16, 321-338, IGI Global, Hersey, PA., USA, 2020.

THE IMPORTANCE OF BAYESIAN REASONING FOR EVERYDAY LIFE AND SCIENCE, International Journal of Education Science and Technology, 8(2), 24-33, 2020 (with E. Athanassopoulos)

BAYESIAN REASONING AND ARTIFICIAL INTELLIGENCE, WSEAS, Transactions on Advances in Engineering Education, 17, 92-98, 2020.

USE OF GREY NUMBERS FOR EVALUATING A SYSTEM'S PERFORMANCE UNDER FUZZY CONDITIONS, in M. Khosrow-Pour (Ed.), Encyclopaedia of Information Science and Technology, Fifth Edition, Chapter 23, 315-331, IGI-Global, Hersey, PA, USA, 2020.

STATISTICAL THINKING IN PROBLEM SOLVING, American Journal of Educational Research, 8(10), 754-761, 2020 (with E. Athanassopoulos).

A MARKOV CHAIN MODEL FOR THE TEACHING PROCESS, Proceedings of the International Conference on Software Engineering, 43-47, National Aviation University, Kiev, Ukraine, 2020.

ASSESSMENT AND LINEAR PROGRAMMING UNDER FUZZY CONDITIONS, Journal of Fuzzy Extension and Applications, 1(3), 198-216, 2020.

SOCIAL CONSTRUCTIVISM IN TEACHING MATHEMATICS: AN ABSORBING MARKOV CHAIN REPRESENTATION, Journal of Physical Sciences, 25, 1-10, 2020.

FUZZY CONTROL SYSTEMS, WSEAS Transactions on Systems, 19, 295-300, 2020.

MODES OF THINKING IN PROBLEM SOLVING, Scientific Journal of Physical and Mathematical Education, 3(25), 11-18, 2020.

MODELLING THE TEACHING PROCESS: A MARKOV CHAIN APPROACH, International Education and Culture Studies, 1(1), 7-14, 2021.

For a **full list of publications** see at [eclassesteiwest.gr/modules/document/?course=523102](http://eclassesteiwest.gr/modules/document/?course=523102)

## Citations

According to Scholar Google, Prof. Voskoglou has 1524 citations, h-index 21 and i10-index 52.

For the full list of his citations see at

<https://scholar.google.com/citations?user=9K3F9GkAAAAJ> .

## Editorial Boards

Prof. Voskoglou is the Editor in Chief of the “International Journal of Applications of Fuzzy Sets and Artificial Intelligence” (<http://eclassesteiwest.gr/eclassestourses/523103>, ISSN 2241-1240, Impact Factor SJIF 6.185), Reviewer of the American Mathematical Society (No. 60147), Associate Editor of the “Journal of Interdisciplinary Mathematics” ([www.tarupublications.com/jim.html](http://www.tarupublications.com/jim.html)), Section Editor (Fuzzy Set Theory) of “Mathematics”, MDPI ([www.mdpi.com/journals/mathematics](http://www.mdpi.com/journals/mathematics)), Editor of the IJBST Journal Group (<https://board.ijbst.org>) and member of the Editorial Board or reviewer of many other international journals around the world.

## Other Links

<http://orcid.org/0000-0002-4727-0089>

[http://arxiv.org/a/voskoglou\\_m\\_1](http://arxiv.org/a/voskoglou_m_1)

<https://mindreaderpublications.academia.edu/MichaelVoskoglou>

[https://researchgate.net/profile/Michael\\_Voskoglou](https://researchgate.net/profile/Michael_Voskoglou)

<http://www.researcherid.com/rid/C-4504-2014>

## 3. Conclusions

Prof. M. Voskoglou provided significant contributions to Mathematics in the areas of Fuzzy Sets and Logic, Algebra, Markov Chains, Artificial Intelligence and Mathematics Education. His research work has been recognized and used by many researchers around the world.

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