CURRICULUM VITAE

Professor Kostas Tarchanidis Ph.D.
Professor in the Department of Chemistry, School of Science,
Democritus University of Thrace
Kavala Campus

NAME:	**Kostas Tarchanidis**
FATHER's NAME:	NikolaosTarchanidis
DATE OF BIRTH:	30th of March 1964
PLACE OF BIRTH:	Kalohori - Kastorias - Greece
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*Google Scholar Citations (**385 citations**, **h-index 8**)*	https://scholar.google.com/citations?user=wfVVcu4AAAAJ&hl=en&oi=ao

EDUCATION

1989   Degree in Electrical Engineering, Dept. Electrical Eng., Engineering Faculty, Democritus University of Thrace, grade 7.86/10

1993   Ph.D. in Robotics ("*Kinematics for Modular Robots*"), Dept. Electrical Engineering and Electronics, Engineering Faculty, University of Liverpool

WORK EXPERIENCE

2/3/93- 28/2/95	Military Service: Second Lieutenant – Telecommunication Expert
1989 – 1998	Development of customised digital circuits - Microcontroller/ microprocessor boards.
1989 – 1998	Electrical Engineer – Consulting
1995-1998	Founder and Partner of the Lamda Inc. High Technology Applications. The company specialises in sectors like: industrial automation-Robotics, development of digital circuits, digital image processing, process control - modelling, software, telemetry and monitoring systems. It has been accredited by the Ministry of Development as high technology company.

Research Interests

- Analog – Digital circuits – Logic Design
- Microelectronics – Integrated Circuits – Microsystems
- Microcontrollers – Computer/Microcomputer Architecture
- Parallel Processing – Concurrent System Programming
- Instrumentation and Measurements (Sensors and Transducers)
- Mechatronics – Metrology
- Control Systems – Embedded Systems – Integrated Industrial Control Applications
- Robotic Systems- Design – Control – Industrial Applications
- Autonomous Systems (Vehicles – Walking/Crawling Robots etc)

Teaching Experience

1990-92	Lab demonstration to the 1st year students of the Engineering Science Dept. , Liverpool University – Gr. Britain
1995	Lecturer for "Electrical Circuits & Machines" (2nd Semester) and "Automation" (6th Semester) - Dpt of Industrial Mechanical Engineering , University of Thessaly - Greece
2/1997 - 2000	Lecturer for "Digital Systems and Computers I" (6th Semester) – Dpt of Electrical and Computer Engineering – Democritus University of Thrace - Greece
1997	Lecturer for "Mechanical Design using Computer" (2nd Semester), Dpt of Industrial Mechanical Engineering , University of Thessaly - Greece
1998- 2013	"Electrical Circuits" (1st semester), "Basic Electronics" (2nd Semester), "Control I" 3rd Semester.), "Control II" 4th Semester, Dept. of Petroleum & Natural Gas Technology, Kavala Institute of Technology - Greece
2013-2019	"Electrical Circuits-Applied Physics" ,"Control", "Measurement systems", "Mechanical and Natural Gas Building Installations", "CAD Design Principles" , Dept. of Petroleum & Natural Gas Engineering and Mechanical Engineering, Easter Macedonia and Trace Institute of Technology – Greece
2014-2019	"Group Project", M.Sc. Course, Easter Macedonia and Trace Institute of Technology – Greece

2019-Today   "PhysicsII", "MeasurementsystemsinChemicalIndustry", "EmbeddedSystems in Chemical Industry" Department of Chemistry, Democritus University of Thrace.

Laboratory Director :
Control **S**ystems **T**echnologies and **A**utonomous **S**ystems(COSTAS)Laboratory

Administration Position

1. 1999 – 2001   Representative of the Assistant Professors to the Council of the Dept. of Petroleum & Natural Gas Technology – Kavala Institute of Technology

2. 2001 – 2003   Head of Department of Petroleum & Natural Gas Technology – Kavala Institute of Technology

3. 2003-2009   Dean of Engineering School – Kavala Institute of Technology

4. 2013-2016   University's Council Vice President

5. 2024-today   Dean of School of Sciences, Democritus University of Thrace

COORDINATION/PARTICIPATION IN RESEARCH PROJECTS
Coordinator in 3 research Projects. Participant in 10 research projects as member of the research team.

Journal Publications

1   Tarchanidis K., Mackay A.S, Lucas J., "Flexible Kinematics for Modular Robots" Microprocessors and Microsystems, Vol. 19, No.9, pp.525-532, 1995

2   I. Seftelis, S. Trasanidis, K. Tarchanidis*, G. Bakos, N. Tsagas " Variations of gross alpha, beta air radioactivity correlated with air temperature and humidity", Hadronic Journal, Vol. 18, no. 3, pp.237-244, 1995 , (*) Corresponding author.

3   Lygouras J., Tsagas N., Bakos G., Tarchanidis K. and Tsalides P. "Remotely Operated Vehicle (ROV) Position Control by Implementation of Modern Control Theory Techniques", Modelling Measurement & Control, B, AMSE Press, Vol. 59, No.3, 1995, pp. 5-14

4   J.N. Lygouras, K.N. Tarchanidis "Non-linear circuit cancels the non-linearity of a DC motor ", Int. J. of Electronics, 1998, Vol.84, No. 2, pp 147-156

5   J.N. Lygouras, K.N. Tarchanidis "Suspended sediment and dye concentration measurements using a digital technique", Int. J. of Electronics, 2000, Vol. 87, No1, pp107-118

6.   Tarchanidis K.N., Lygouras J.N., "Data Glove with a Force Sensor", IEEE Journal of Instrumentation and Measurement, Vol. 52, Num.3, June 2003, pp. 984-989.

7.   A. Christoforides, N. Kanellopoulos, A. Mitropoulos, K.L. Stefanopoulos and K. Tarchanidis, "Characterization of controlled pore glasses by small angle x-ray scattering and evaluation of the scattering data by he indirect Fourier transformation method", CHARACTERIZATION OF POROUS SOLIDS VI -STUDIES IN SURFACE SCIENCE AND CATALYSIS,144: 769-774 2002, Elsevier,

8.   Pachidis T., Tarchanidis K.,Lygouras J. and Tsalides P., "Robot Path Generation

Method for a Welding System Based on Pseudo Stereo Visual Servo Control," EURASIP Journal on Applied Signal Processing, Vol. 2005, No. 14, 11 August 2005

9. Lygouras J.N., Kodogiannis V.S., Pachidis Th., Tarchanidis K.N. and Koukourlis C.S., "Variable structure TITO fuzzy-logic controller implementation for a solar air-conditioning system", Applied Energy, Volume 85, Issue 4, April 2008, Pages 190-203

10. D. Badekas,N. Vordos, Tarchanidis K.N. , L. Magafas, G.Tsirigotis "Optimum Selection based on the Energy Capacity between Different Types of Renewable Sources using a Controller", Electronics and Electrical Engineering 2007.No. 8(80), pp 9-12

11. Pachidis T, Lygouras J.N.and Tarchanidis K.N., "HumanPT : An Open-source, HumanPT Architecture-based, Robotic Application for Low Cost Robotic Tasks", Journal of Intelligent and Robotic Systems, Volume 51, Number 4 / April, 2008, pp. 385-420

12. Pachidis T, Lygouras J.N.and Tarchanidis K.N., "Adaptive High-Performance Velocity Evaluation Based on High Resolution Time-to-Digital Converter", IEEE Transactions on Instrumentation and Measurements, 57(9) 2008 , pp. 2035-2043

13. Tarchanidis K.N., Soilemes A.T., "Digitally Synthesized Alternative Current Sinusoidal Waveform for Resistive Sensor Measurements", Journal of Engineering Science and Technology Review 4 (1) (2011) 50-54

14. Tarchanidis K.N., Lygouras J.N., P. Botsaris, "Voltage Stabilizer Based on SPWM technique Using Microcontroller", Journal of Engineering Science and Technology Review 6 (1) (2013) 38-43

15. Tarchanidis K.N., Lygouras J.N., PachidisTh.,Tarchanidis J.N., "PUMA Internet Task Logging Using the IDAC-1",Journal of Engineering Science and Technology Review 7 (3) (2014) 188– 191

16. Lygouras E., Gasteratos A., Tarchanidis K.N., Mitropoulos A., "ROLFER: A fully autonomous aerial rescue support system", Microprocessors and Microsystems 61 (2018) 32–42

17. Lygouras E., Dokas I., Andritsos K., Gasteratos A., Tarchanidis K., "Identifying Hazardous Emerging Behaviors in Search and Rescue Missions with Drones: A Proposed Methodology", Lecture Notes in Business Information Processing, 301 (2017), pp. 70-76

18. Lygouras E., Gasteratos A., Tarchanidis K., "ROLFER: An Innovative Proactive Platform To Reserve Swimmer's Safety", Lecture Notes in Business Information Processing, 301 (2017), pp. 57-69

Conferences

1 Lygouras J., Tsagas N., Bakos G.,Tarchanidis K. and Tsalides P. "Remotely Operated Vehicle (ROV) Position Control by Implementation of Modern Control Theory Techniques", International AMSE Conference, Systems, Control & Design, SYS´94, Lyon (France), July 1994.

2 Bakos G. C., Tsagas N.F., Lygouras J. N, TarchanidisK.N. and Micholitsis G., "Development of a Sonar System For ROV Positioning". AMSE , Intern. Confer. "Information Processing Methodologies & Applications", New Orleans (USA), Nov. 9-11 1994

3   Tarchanidis K.N.,Lygouras J.N., Sarafis I.T., "A New Residual Vector for Fast Converging Iterative Algorithm Solving the Inverse Kinematics Problem", AMSE SYS '90, July 3-5, 1995.

4   Lygouras J.N., Tarchanidis K.N.,Kakkalis J.K., Dimitriadis C. " DC motor linearisation", Workshop on Developments in Industrial Control Systems, 3-5 Oct. 1996, Thessaloniki

5   Tarchanidis K.N., Lygouras J.N. "Communication Interface Between Transputer and the PUMA robot", ICARCV`96, Singapore 3-6 Dec. 1996

6   Lygouras J.N., Tarchanidis K.N., Tsalides Ph., "THETIS An underwater Remotely Operated Vehicle", OCCEANS96/MTS/IEEE, 23-26 Sept. 1996, Ft. Lauderdale, Florida, USA

7   Lygouras J.N., TarchanidisK.N. "High resolution optical suspended sediment detector" IASTED, 22 Feb. 1996, Innsbruck- Austria

8   Tarchanidis K.N., Lygouras J.N., "A Hybrid Neural Network/ Newton-Raphson Algorithm Solving the Inverse Kinematics Problem", IASTED Int. Conference, Control and Applications (CA'2000), May 24-27, Cancun, Mexico, pp.236-245

9   Tarchanidis K.N., Ioannidis I., Kakkalis I., Lygouras J.N., « FLEXIMAT, an Integrated System Scanning the Beding of Any Mattress", Int. Workshop on Virtual and Intelligent Measurements Systems VIMS 2000, 29-30 April, MD, USA, pp.115-120

10   Tarchanidis K.N., Sarafis E., Lygouras J.N., « Multisegment Snake-like Manipulator", IASTED Int. Conf. Robotics and Applications, RA2000, August 14-16 2000, Honolulu, Hawaii, USA, pp. 264-269

11   Sarafis E.T, Tarchanidis K.N.,Lygouras J.N., «**Automation of underwater tasks using an electrically driven manipulator",** Proceedings of the IASTED International Conference Robotics and Applications 2000 August 14-16, 2000 – Honolulu, Hawaii, USA, pp. 24-28

12   Tarchanidis K.N., Lygouras J.N., "Data Glove with a Force Sensor",Proceedings of the 18th IEEE Intrumentation and Measurement Technology Conference, Budapest, 21-23 May, 2001, pp 380-385

13   Lygouras J.N., Tarchanidis K.N., Tsalides Ph., "A Digital Optical-Fiber Finger Blood Volume Meter", Proceedings of the 18th IEEE Instrumentation and Measurement Technology Conference, Budapest, 21-23 May, 2001, pp 648-653

14   Tarchanidis K.N., Koukourlis Ch., "Digital Alternative Sinusoidal Current Waveform for Virtual Resistance Measurements" Proceedings of the VIMS 2001, International Workshop on Virtual and Intelligent Measurement Systems, Budapest, 19-20 May, 2001,pp. 52-56

15   Christoforides A., Kanellopoulos N., Mitropoulos A., Stefanopoulos K.L. and Tarchanidis K.N., **"**Characterization of controlled pore glasses by small angle x-ray scattering and evaluation of the scattering data by he indirect Fourier transformation

method",Proceedings of the 6th Int. Symposium on the Characterization of Porous Solids (COPS-VI), Allicante, Spain, May 8-11, 2002

16   Tarchanidis K.N.,Lygouras J.N., Chatziandreoglou Ch., "Internet Task Logging Using the IDAC-1", IWSSIP 2002, Manchester, November 7-8, 2002

17   Tarchanidis K.N.,Lygouras J.N., Chatziandreoglou Ch., "Closed Loop Control Trough Internet Using the IDAC-1", IEEE Instrumentation and Measurement Technology Conference 2003 ,Vail, CO, USA, 20-22 May 2003

18.   Tarchanidis K.N., Pachidis T., Lygouras J.N., Koutras J.K., "Remote Robot Task Monitoring Using the IDAC-1", IEEE Instrumentation and Measurement Technology Conference 2006, Sorento, Italy, April 2006.

19.   Tarchanidis, K.N.,Lygouras, J.N., Pachidis, T., Kodogiannis, V., Chatziandreoglou, C.G. "PH neutralization through Internet ", 2006 Proceedings of 2006 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, VECIMS 2006, art. no. 4016654, pp. 19-23

20.   Pachidis, T., Tarchanidis, K.,Lygouras, J. "Apparatus based experimental study of physics phenomena» 2006 Proceedings of 2006 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, VECIMS 2006, art. no. 4016673, pp. 102-107

21.   Pachidis, T., Lygouras, J., Tarchanidis, K., Kodogiannis, V. "HumanPT: Architecture for low cost robotic applications" 2006 Proceedings of 2006 IEEE International Conference on Virtual Environments, Human-Computer Interfaces and Measurement Systems, VECIMS 2006, art. no. 4016685, pp. 154-159

22.   Lygouras E., Dokas I., Andritsos K., Gasteratos A., Tarchanidis K., "**Identifying Hazardous Emerging Behaviors in Search and Rescue Missions with Drones: A Proposed Methodology**" 4th International Conference on Information Systems For Crisis Response and Management in Mediterranean Countries (ISCRAM), 2017

23.   Lygouras E., Gasteratos A., Tarchanidis K., **"ROLFER: An Innovative Proactive Platform To Reserve Swimmer's Safety"** 4th International Conference on Information Systems For Crisis Response and Management in Mediterranean Countries (ISCRAM), 2017