NIKOLAOS C. TSOURVELOUDIS
Professor and Dean
School of Production Engineering and Management
Technical University of Crete
73 100 Chania, Crete, GREECE.
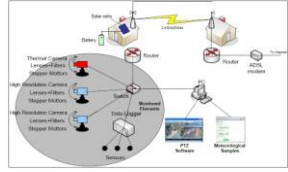
Office Phone: +30 2821 037285   *Fax*: +30-2821 069410
Cell Phone: +30 6976909405   *E-mail:* nikost@dpem.tuc.gr

PROFESSIONAL EXPERIENCE

Sep. 2013 – present	Dean, School of Production Engineering and Management, Technical University of Crete (TUC), Chania, Greece
Oct. 2010 – present	*Professor*, School of Production Engineering and Management, TUC, Chania, Greece.
Sep. 2003 – present	*Director*, Intelligent Systems and Robotics Laboratory (IS&RL-www.robolab.tuc.gr), TUC.
Jun. 2001 – present	*Director,* Machine Tools Laboratory, TUC.
Jan. 2011 – July 2011	*Visiting Professor*, Dept. of Systems and Automation, University Carlos III of Madrid (UC3M), Madrid, Spain.
Sep. 2007 – Sep. 2011	*Vice Chairperson***,** Department of Production Engineering and Management, TUC.
May 2006 – Oct. 2010	*Associate Professor*, Department of Production Engineering and Management, TUC, Chania, Greece.
Sep. 2006 – Feb. 2007	*Visiting Professor*, Unmanned Systems Laboratory, University of South Florida, Tampa, Florida, USA.
Sep. 2002 – Sep. 2003	*Member* of the Senate, TUC.
Apr. 2001 – May 2006	*Assistant Professor (tenured),* TUC.
Sep. 2000 – May 2001	*Visiting Professor*, Department of Electronics, Technological Institute of Crete, Chania, Greece.
Mar. 1997 – Jan. 1999	*Research Scientist*, Center for Advanced Computer Studies (CACS), University of Louisiana, Lafayette, Louisiana, USA.
May 1992 - Mar. 1995	*President,* Hellenic Association of Industrial and Management Engineers.

FUNDED RESEARCH-ACTIVITIES-AWARDS

SELECTED RESEARCH PROJECTS involved as *Principal Investigator (PI or Co-PI)*	
SUNNY: "**S**mart **un**manned aerial vehicle sensor **n**etwork for detection of border crossing and illegal entr**y"**, Large-scale Integration Project, FP7-SEC-2012-1, 2013-2017.	
SEM 2008-2017: "Design, Development and Assembly of a Low Energy Consumption Urban Vehicle". Financially *sponsored* by the Info at: www.tucer.tuc.gr	

"Integrated Surveillance and Fire Protection System for Samaria Gorge". Funded by GSRT (Hellenic Secretariat for Research and Development), through the EU Innovative Actions: Innovative strategies for regional competitiveness, 2007-2009.	
"*KRISSALOS: Study, Design, Development and Prototyping of an Unmanned Surface Vehicle (USV)"*. Funded by GSRT (Hellenic Secretariat for Research and Development) and EADS 3 SIGMA S.A., 2006-2008. This project won the *2009 EURON/EUROP Robotic Technology Transfer Award*, 3rd prize, Leuven, Belgium, 2009.	
"Flying Stability for Unmanned VTOLs: Control Techniques and Best Characteristics Selection". Funded by the Greek Secretariat for Research and Technology and the EADS 3 SIGMA S.A., 2005-2008. The control architecture of an autopilot was studied and implemented on the unmanned helicopters of IS&RL.	
"*Development of Autonomous Mobile Robot*". Funded by the CRINNO program through the UNISTEP action "Innovative Student Research Ideas", 2004-2005. Two series of mobile robots (ALE I and ALE II) were designed and developed based on the integration of readily/market available equipment. Complete control and user interface software was produced.	
Development of a Vertical Take-Off-and-Landing (VTOL) Unmanned Aerial Vehicle" – Phase I. Funded by the Greek Secretariat for Research and Technology through the EU Funds Forum 2000-2006 and the EADS 3 SIGMA S.A., 2001-2002.	

Selected SCIENTIFIC SOCIETY ACTIVITIES (Organizing Committee member/chair)
- ICRA-IEEE International Conference on Robotics and Automation, April 26-May 1, New Orleans, LA, USA, 2004.
- *11th IEEE Mediterranean Conference on Control and Automation*, Rhodes, Greece, 2003.
- *15th IEEE Mediterranean Conference on Control and Automation*, Athens, Greece, 2007.
- *1st Hellenic Conference on Robotics,* Athens, Greece, 23-24 Feb., 2009*.*
- *2nd Hellenic Conference on Robotics,* Patras, Greece, 2011*.*
- *21st IEEE Mediterranean Conference on Control and Automation,* Platanias-Chania, Greece 2013.

Reviewer for Journals/Transactions (Selection)
- Journal of Intelligent & Robotic Systems (Editor)
- Journal of Mechanical Engineering (Member of the International Steering Committee)
- Sensors
- IEEE Transactions on Robotics
- IEEE Transactions on Automation Sciences and Engineering
- IEEE Transactions on Systems, Man and Cybernetics
- IEEE Robotics and Automation Magazine
- IEEE Transactions on Intelligent Transportation Systems

Selected Awards and Honors
- *Safety Award, 1st prize, 2017 Shell Eco Marathon, London, UK,* 2017.
- *Safety Award, 1st prize, 2016 Shell Eco Marathon, London, UK,* 2016.
- 1st "People's Choice" award, *2013 Shell Eco Marathon* Rotterdam, The Netherlands, 2013.

- 1st Students Energy Challenge award, *2013 Shell Eco Marathon* Rotterdam, The Netherlands, 2013.
- *Chair of Excellence in Robotics, University Carlos III of Madrid - Santander Bank, Madrid, Spain, 2011.*
- *ADAC Safety Award, 1st prize, 2011 Shell Eco Marathon, Lausitz, Germany, 2011.*
- *TUC Award for Exceptional Research Achievements, 2010.*
- *ADAC Safety Award, 1st prize, 2010 Shell Eco Marathon, Lausitz, Germany, 2010.*
- *Robotics Technology Transfer Award, 3rd prize,* 2009 EURON/EUROP annual meeting, Leuven, Belgium, 2009.
- *Best Paper Award, 3rd World Automation Conference*, Anchorage, Al, USA, May 9-15, 1998.

PATENTS

1. «**Autonomous Navigation System for Unmanned Aerial Vehicles**», Hellenic Industrial Property Organization (OBI), <u>Patent no. 1004873/26-4-2005, valid till 02-04-2024</u> (with K. Valavanis).

PUBLICATIONS

SELECTED Transactions/Journal Papers and Book Chapters

[A1] Kouikoglou V. S., N. C. Tsourveloudis, "Eigenvalue Bounds on the Covariances of Discrete-Time Systems with Multiplicative Noise," ***Linear Algebra and Its Applications***, vol. 235, pp. 247-259, 1996.

[A2] Tsourveloudis N. C., Y. A. Phillis, "Fuzzy Assessment of Machine Flexibility," ***IEEE Transactions on Engineering Management***, vol. 45, no. 1, pp. 78-87, 1998.

[A3] Tsourveloudis N. C., Y. A. Phillis, "Manufacturing Flexibility Measurement: A Fuzzy Logic Framework," ***IEEE Transactions on Robotics and Automation***, vol. 14, no. 4, pp. 513-524, 1998.

[A4] Gracanin D., K. P. Valavanis, N. C. Tsourveloudis, M. Matijasevic, "Virtual Environment based Navigation and Control of an Underwater Vehicle for Managing Coastal Water Environments," ***IEEE Robotics and Automation Magazine***, vol. 6, no. 2, pp. 52-63 June 1999.

[A5] Tsourveloudis N. C., R. Kolluru, K. P. Valavanis, D. Gracanin "Suction Control of a Robotic Gripper System: A Neuro-fuzzy approach," ***International Journal of Intelligent and Robotic Systems***, vol. 27, no. 3, pp. 215-235, 2000.

[A6] Kolluru R., K. P. Valavanis, S. Smith, N. C. Tsourveloudis, "Design Fundamentals of a Reconfigurable Robotic Gripper System," ***IEEE Transactions on Systems, Man and Cybernetics*-*Part A,*** vol. 30, no. 2, pp. 181-187, 2000.

[A7] Valavanis K. P., T. Hebert, R. Kolluru, N. C. Tsourveloudis, "Mobile Robot Navigation in 2-D Dynamic Environments Using Electrostatic Potential Fields," ***IEEE Transactions on Systems, Man and Cybernetics*-*Part A,*** vol. 30, no. 2, pp. 187-197, 2000.

[A8] Tsourveloudis N. C., E. Dretoulakis, S. Ioannidis, "Fuzzy Work-In-Process Inventory Control of Unreliable Manufacturing Systems," ***Information Sciences,*** vol. 127, no. 1-2, pp. 69-83, 2000.

[A9] Nikolos Y., Tsourveloudis N., K. P. Valavanis, "Evolutionary Algorithm Based off-line Path Planner for UAV Navigation," ***Automatika***, vol. 42, no 3-4, pp. 143-150, 2001.

[A10] Tsourveloudis N. C., K. P. Valavanis, T. Hebert, "Autonomous Vehicle Navigation Utilizing Electrostatic Potential Fields and Fuzzy Logic," ***IEEE Transactions on Robotics and Automation***, vol. 17, no 4, pp. 490-497, 2001.

[A11] Tsourveloudis N. C., K. P. Valavanis, "On the Measurement of Enterprise Agility," ***International Journal of Intelligent and Robotic Systems***, vol. 33, no 3, pp. 329-342, 2002.

[A12] Kolluru R., K. P. Valavanis, S. Smith, N. C. Tsourveloudis, "An Overview of the University of Louisiana Robotic Gripper System Project," ***Transactions of the Institute of Measurement and Control***, vol. 24, no. 1, pp. 65-84, 2002.

[A13] Doitsidis L., K. P. Valavanis, N. C Tsourveloudis, "On the Motion Control of Unmanned Skid Steering Vehicles", ***Recent Advances in Intelligent Systems and Signal Processing***, World Scientific & Engineering Society Press, pp. 245-250, 2003.

[A14] Spanoudakis P., L. Doitsidis, N. C. Tsourveloudis, K. P. Valavanis, "A Market Overview of the Vertical Take-Off and Landing UAVs", ***Unmanned Systems***, vol. 21, no. 5, pp. 14-18, 2003.

[A15] Nikolos Y., K. P. Valavanis, N. C. Tsourveloudis, A. N. Kostaras, "Evolutionary Algorithm Based Off-line / On-line Path Planner for UAV Navigation," ***IEEE Transactions on Systems, Man and Cybernetics,-Part B,*** vol. 33, no. 6, pp. 898-912, 2003.

[A16] Ioannidis S., N. C. Tsourveloudis, K. P. Valavanis, "Fuzzy Supervisory Control of Manufacturing Systems," ***IEEE Transactions on Robotics and Automation***, vol. 20, no. 3, pp. 379-389, 2004.

[A17] Kanakakis V., K. P. Valavanis, N. C. Tsourveloudis, "Fuzzy-Logic Based Navigation of Underwater Vehicles," ***Journal of Intelligent and Robotic Systems***, vol. 40, no. 1, pp. 45-88, 2004.

[A18] Tsinarakis G. J., N. C. Tsourveloudis K. P. Valavanis, "Modular Petri Net Based Modeling, Analysis, Synthesis and Performance Evaluation of Random Topology Dedicated Production Systems," ***Journal of Intelligent Manufacturing***, vol. 16, pp. 79-92, 2005.

[A19] Tsourveloudis N. C., L. Doitsidis, K. P. Valavanis, "Autonomous Navigation of Unmanned Vehicles: A Fuzzy Logic Perspective," ***Cutting Edge Robotics***, ARS Press, pp. 291-310, ISBN 3-86611-038-3, 2005.

[A20] Tsinarakis G., Tsourveloudis N. C., Valavanis K. P., "Modeling, Analysis, Synthesis and Performance Evaluation of Multi-Operational Production Systems with Hybrid Timed Petri Nets," ***IEEE Transactions on Automation Sciences and Engineering,*** vol. 3, no. 1, pp. 29-46, 2006.

[A21] Tsourveloudis N. C, Doitsidis L., Ioannidis S., "Work-In-Process Scheduling by Evolutionary Tuned Fuzzy Controllers," ***International Journal of Advanced Manufacturing Technology***, vol. 34, no. 7-8, October, 2007.

[A22] Spanoudakis C., N. C. Tsourveloudis, K. P. Valavanis, "Crash Test Design Specifications for a Vertical Take-Off and Landing Vehicle", ***International Journal of Intelligent and Robotic Systems***, vol. 46, no. 4, pp. 339-364, 2006.

[A23] Tsalatsanis A., K. P. Valavanis, N. C. Tsourveloudis, "Mobile Robot Navigation Using Sonar/Camera Range Measurements", ***International Journal of Intelligent and Robotic Systems***, vol. 48, no. 2, pp. 253-284, 2007.

[A24] Vitzilaios N., N. C. Tsourveloudis, "Altitude Control of Small Helicopters Using a Prototype Testbed," ***International Journal of Intelligent and Robotic Systems***, vol. 54, no. 5, pp. 769-794, 2009.

[A25] Doitsidis L., N. C. Tsourveloudis, S. Piperidis," 'Evolution of Fuzzy Controllers for Robotic Vehicles: The Role of Fitness Function Selection', ***International Journal of Intelligent and Robotic Systems,*** vol. 56, pp. 469–484, 2009.

[A26] Heretis N., P. Spanoudakis, N. C. Tsourveloudis, "Surface roughness characteristics of Ti6Al4Valloy in conventional lathe and mill machining", ***International Journal of Surface Science and Engineering***, vol. 3, no. 5/6, 2009.

[A27] Tsourveloudis N. C., "On the Evolutionary-Fuzzy Control of WIP in Manufacturing Systems", ***Neurocomputing***, vol. 73, no. 4-6, pp. 648-654, 2010.

[A28] Tsourveloudis N. C., "Predictive Modeling of the Ti6Al4V Alloy Surface Roughness", ***International Journal of Intelligent and Robotic Systems***, vol. 60, no 3-4, pp. 513-530, 2010.

[A29] Limnaios G., Tsourveloudis N. C., "Fuzzy Logic Controller for a Mini Coaxial Indoor Helicopter", ***International Journal of Intelligent and Robotic Systems***, vol. 65, no. 1-4, pp. 187-201, 2012.

[A30] Spanoudakis P., Tsourveloudis N. C., "A Prototype Variable Transmission System for Electric Vehicles: Energy Consumption Issues", ***International Journal of Automotive Technology***, vol.16, no. 3, pp. 525-537, 2015.

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III. SELECTED Refereed Conference Papers

[B1] Gracanin D., M. Matijasevic, N. C. Tsourveloudis, K. P. Valavanis, "Virtual Reality Testbed for Mobile Robots," Proceedings *of the* ***IEEE International Symposium on Industrial Electronics***, Bled, Slovenia, July 12-16, 1999.

[B2]   Kolluru R, K. P. Valavanis, S. A. Smith and N. Tsourveloudis "Design and Analysis of a Reconfigurable Robotic Gripper for Limp Material Handling" Proceedings of the 2000 *IEEE International Conference on Robotics and Automation*, San Francisco, CA, USA, 2000.

[B3]   Kostaras A., Nikolos Y., Tsourveloudis N., K. P. Valavanis, "Evolutionary Algorithm Based on-lone Path Planner for UAV Navigation," Proceedings of the *10th IEEE Mediterranean Conference on Control and Automation*, Lisbon, Portugal, July 9-12, 2002.

[B4]   Doitsidis L., K. P. Valavanis, N. Tsourveloudis, "Fuzzy Logic Based Autonomous Skid Steering Vehicle Navigation," Proceedings of the 2002 *IEEE International Conference on Robotics and Automation*, Washington D.C., 2002.

[B5]   Tsinarakis G. J., K. P. Valavanis, N. C. Tsourveloudis, "Modular Petri Net Based Modeling, Analysis and Synthesis of Dedicated Production Systems," Proceedings of the *IEEE International Conference on Robotics and Automation,* Taipei, Taiwan, 2003.

[B6]   Tsinarakis G. J., K. P. Valavanis, N. C. Tsourveloudis, "Studying Multi-operational Production Systems with Modular Hybrid Petri Nets", Proceedings of the *International Conference on Intelligent Robots and Systems* (IROS), Las Vegas, USA, 2003.

[B7]   Kaloutsakis G., N. C. Tsourveloudis, P. Spanoudakis, "Design and Development of an Automated Guided Vehicle', Proceedings of the *IEEE ICIT'03 International Conference on Industrial Technology*, Maribor, Slovenia, 2003.

[B8]   Doitsidis L., K. P. Valavanis, N. Tsourveloudis, M. Kontitsis, "A Framework for Fuzzy Logic Based UAV Navigation and Control," Proceedings of the *IEEE International Conference on Robotics and Automation*, pp. 4041-4046, New Orleans, USA, 2004.

[B9]   Kontitsis M., N. C. Tsourveloudis, K. P. Valavanis, "A UAV Vision System for Airborne Surveillance", Proceedings of the *IEEE International Conference on Robotics and Automation*, vol. 1, pp 78-83, New Orleans, USA, 2004.

[B10]   P. Spanoudakis, L. Doitsidis, N. C. Tsourveloudis, K. P. Valavanis, "Design Specifications for an Unmanned VTOL", Proceedings of the *IEEE International Conference on Robotics and Automation*, pp. 4041-4046, New Orleans, USA, 2004.

[B11]   Tsinarakis G. J., N. C. Tsourveloudis, K. P. Valavanis, "Studying Multi-assembly Machine Production Systems with Hybrid Timed Petri Nets", CD Proceedings of *IEEE Conference on Automation Science and Engineering*, Edmonton, Canada, 2005.

[B12]   Tsourveloudis N. C., L. Doitsidis, S. Ioannidis, "Work-in-Process Scheduling by Evolutionary Tuned Distributed Fuzzy Controllers," Proceedings of the *IEEE International Conference on Robotics and Automation*, Orlando, FL, USA, May 15-19, 2006.

[B13]   Doitsidis L., N. C. Tsourveloudis, "An Empirical Study for Fitness Function Selection in Fuzzy Logic Controllers," CD Proceedings of the *32nd Conference of the IEEE Industrial Electronics Society*, November 7-10, Paris, France, 2006.

[B14]   Piperidis S., Doitsidis L., Anastasopoulos C., Tsourveloudis N, "A Low Cost Modular Robot Vehicle Design for Research and Education," CD Proceedings of the *15th Mediterranean Conference on Control and Automation*, Athens, Greece, June 27-29, 2007.

[B15]   Petrou A., Efstathiou D., Tsourveloudis N., *"Modeling and Control of the Energy Consumption of a Prototype Urban Vehicle"*, Proceedings of the *19th IEEE Mediterranean Conference on Control and Automation*, Corfu, Greece, June 20-23, 2011.

[B16]   Efstathiou D. S, A. K. Petrou, P. Spanoudakis, N. C. Tsourveloudis, and K. P. Valavanis, "Recent advances on the energy management of a Hybrid Electric Vehicle", Proceedings of the *20th IEEE Mediterranean Conference on Control and Automation*, Barcelona, Spain, July 3-6, 2012.

[B17]   Spanoudakis P., Tsourveloudis N., "On the Efficiency of a Prototype Continuous Variable Transmission System", Proceedings of the *21th IEEE Mediterranean Conference on Control and Automation*, Platanias-Chania, Greece, June 25-28, 2013.

[B18]   Spanoudakis P., N. C. Tsourveloudis, G. Koumartzakis, A. Krahtoudis, T. Karpouzis, I. Tsinaris, "Evaluation of a 2-speed Transmission on Electric Vehicle's Energy Consumption", Proceedings of the *2014 IEEE International Electric Vehicles Conference*, Florence, Italy, 17-19 December 2014.