

RESEARCH PUBLICATIONS

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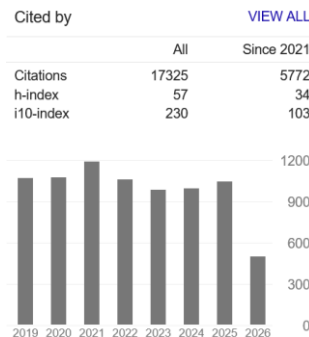
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BOOKS AND EDITED BOOKS

1. H. Liu, D. Liu, Y. Wan, K. P. Valavanis, F. L. Lewis, Robust Formation Control for Multiple Unmanned Aerial Vehicles, ISBN 9781032149400, CRC Press 2023 (Available December 2022).
2. M. Michailidis, K. P. Valavanis, M. J. Rutherford, Nonlinear Control of Fixed-Wing UAVs with Time-Varying and Unstructured Uncertainties, Springer 2020.
3. K. Kanistras, K. P. Valavanis, M. J. Rutherford, Foundations of Circulation Control Based Small-Scale Unmanned Aircraft: A Comprehensive Methodology from Concept to Design and Experimental Testing, Springer, 2018.
4. K. P. Valavanis, G. J. Vachtsevanos (Editors and authors of multiple Chapters), Handbook of Unmanned Aerial Vehicles (UAVs), Five Volumes, ISBN 978-90-481-9706-4, Springer, 2015. (*Now translated into Chinese*)
5. K. P. Valavanis (Editor), Unmanned Aircraft Systems: The Current State of the Art, Springer, 2013.
6. K. P. Valavanis (Editor), Recent Developments in Unmanned Aircraft Systems, Springer, 2012.
7. K. Dalamagkidis, K. P. Valavanis, L. A. Piegler, On Integrating Unmanned Aircraft Systems into the National Airspace System: Issues, Challenges, Operational Restrictions, Certification, and Recommendations, *International Series on Intelligent Systems, Control and Automation: Science and Engineering*, Volume 54, Springer, 2nd Edition, 2012.
8. K. P. Valavanis (Editor), Unmanned Aerial Vehicles, Springer, 2011.
9. I. A. Raptis, K. P. Valavanis, Linear and Nonlinear Control of Small-Scale Unmanned Helicopters, *International Series on Intelligent Systems, Control and Automation: Science and Engineering*, Volume 45, Springer 2011. (*Also translated and published in Chinese*).
10. K. P. Valavanis, R. Beard, P. Oh, A. Ollero, L. Piegler, H. D. Shim, Editors, Unmanned Aircraft Systems – 2nd International Symposium on Unmanned Aerial Vehicles, UAV'09, Springer, 2010.
11. K. P. Valavanis (Editor), Applications of Intelligent Control to Engineering Systems, *International Series on Intelligent Systems, Control and Automation: Science and Engineering*, Volume 39, Springer, 2009.

12. K. P. Valavanis, P. Oh, L. A. Piegl, Editors, Unmanned Aircraft Systems - International Symposium on Unmanned Aerial Vehicles, UAV'08, Springer, 2009.
13. K. Dalamagkidis, K. P. Valavanis, L. A. Piegl, On Integrating Unmanned Aircraft Systems in to the National Airspace System: Issues, Challenges, Operational Restrictions, Certification, and Recommendations, *International Series on Intelligent Systems, Control and Automation: Science and Engineering*, Volume 36, Springer, 2009.
14. G. Atsalakis, K. Valavanis, K. Zopounidis, Stock Market Forecasting Techniques (in Greek), Klidarithmos (ISBN 978-960-461-121-8), 2008.
15. K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, *International Series on Intelligent Systems, Control and Automation: Science and Engineering*, Volume 33, Springer, 2007.
16. J. Balic, K. P. Valavanis, N. C. Tsourveloudis, E. Ioannidis, Intelligent Manufacturing Systems: Programming and Control, University of Maribor Publications, 2003.
17. B. Siciliano, K. P. Valavanis (Editors), Control Problems in Robotics and Automation, Lecture Notes in Control and Information Sciences, Vol. 230, Springer-Verlag, 1998.
18. K. P. Valavanis, G. N. Saridis, Intelligent Robotic Systems: Theory, Design and Applications, Kluwer Academic Publishers, 1992.

BOOK CHAPTERS

1. K. Kanistras, P. C. Saka, M. J. Rutherford, and K. P. Valavanis, *A Circulation Control System for Enhanced Aircraft Performance*, in Encyclopedia of Robotics, M. H. Ang Jr., O. Khatib and B. Siciliano, Eds., Springer. https://doi.org/10.1007/978-3-642-41610-1_68-1.
2. J. Alvarenga, N. I. Vitzilaios, M. J. Rutherford, K. P. Valavanis. *Modeling and Frequency-domain Parameter Identification of a Small-scale Flybarless Unmanned Helicopter*, Encyclopedia of Aerospace Engineering, DOI: 10.1002/9780470686652.eae1155, John Wiley & Sons, Ltd, 2016.
3. K. P. Valavanis, G. J. Vachtsevanos, *Handbook Introduction*, in K. P. Valavanis, G. J. Vachtsevanos (Editors), Handbook of Unmanned Aerial Vehicles, Springer, 2015.
4. K. P. Valavanis, G. J. Vachtsevanos, *The Future of Unmanned Aviation*, in K. P. Valavanis, G. J. Vachtsevanos (Editors), Handbook of Unmanned Aerial Vehicles, Springer, July 2014.
5. G. J. Vachtsevanos, K. P. Valavanis, *Military and Civilian UAVs*, in K. P. Valavanis, G. J. Vachtsevanos (Editors), Handbook of Unmanned Aerial Vehicles, Springer, July 2014.
6. A. Moses, M. J. Rutherford, K. P. Valavanis, *A Scalable RADAR-based Sense-and-Avoid System for Unmanned Aircraft*, in K. P. Valavanis, G. J. Vachtsevanos (Editors), Handbook of Unmanned Aerial Vehicles, Springer, July 2014.
7. K. Kanistras, G. Martins, M. J. Rutherford, K. P. Valavanis, *A Survey of Unmanned Aerial Vehicles (UAVs) for Traffic Monitoring*, in K. P. Valavanis, G. J. Vachtsevanos (Editors), Handbook of Unmanned Aerial Vehicles, Springer, July 2014.
8. G. Limnaios, N. C. Tsourveloudis, K. P. Valavanis, book Chapter, *Introduction in Sense and Avoid in UAS: Research and Applications*, P. Angelov, Editor, J. Wiley, 2012.
9. G. Atsalakis, K. P. Valavanis, C. Zopounidis, D. Nezis, *Time Series Based House Sale Value Market Forecasting Using Genetically Evolved Neural Networks*, in J. Wang and S. Wang (Editors) Business Intelligence in Economic Forecasting: Technologies and Techniques, pp: 265-282, Information Science Reference, 2010.
10. R. Garcia, L. Barnes, K. P. Valavanis, *Design of a Hardware, and Software Architecture for Unmanned Systems: A Modular Approach*, in K. P. Valavanis (Editor), Applications of Intelligent Control to Engineering Systems, ISCA, Volume 39, Springer, 2009.
11. M. Kontitsis, K. P. Valavanis, *Designing a Real-time Vision System for Small Unmanned Rotorcraft: A Minimal and Cost-effective Approach*, in K. P. Valavanis (Editor), Applications of Intelligent Control to Engineering Systems, ISCA, Volume 39, Springer, 2009.

12. A. Tsalatsanis, K. P. Valavanis, A. Yalcin, *UGV Localization Based on Fuzzy Logic and Extended Kalman Filtering*, in K. P. Valavanis (Editor), Applications of Intelligent Control to Engineering Systems, ISCA, Volume 39, Springer, 2009.
13. K. P. Valavanis, M. Kontitsis, *A Historical Perspective on Unmanned Aerial Vehicles*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
14. I. A. Raptis, K. P. Valavanis, *Airplane Basic Equations of Motion and Open-Loop Dynamics*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
15. M. Castillo-Effen, C. Castillo, W. Moreno, K. P. Valavanis, *Control Fundamentals of Small Helicopters: A Survey*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
16. W. Alvis, C. Castillo, M. Castillo-Effen, W. Moreno, K. P. Valavanis, *A Tutorial Approach to Small Unmanned Helicopter Controller Design for Non-aggressive Flights*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
17. I. K. Nikolos, N. C. Tsourveloudis, K. P. Valavanis, *Evolutionary Algorithm Based Path Planning for Multiple UAV Cooperation*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
18. R. D. Garcia, K. P. Valavanis, *A Modular On-Board Processing System for Small Unmanned Vehicles*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
19. K. P. Valavanis, G. J. Vachtsevanos, P. J. Antsaklis, *The Road Ahead*, in K. P. Valavanis (Editor), Advances in Unmanned Aerial Vehicles: State of the Art and the Road to Autonomy, ISCA, Volume 33, Springer, 2007.
20. N. Tsourveloudis, L. Doitsidis, K. Valavanis, "Autonomous Navigation of Unmanned Vehicles: A Fuzzy Logic Perspective", Cutting Edge Robotics, pp: 291-310 (ISBN 3-386611-038-3), 2005.
21. J. A. Katsigiannis, P. S. Georgilakis, A. T. Souflaris, K. P. Valavanis, "Diagnosing Transformer Faults with Petri Nets", Lecture Notes in Artificial Intelligence, Springer, Vol. LNAI 3025, pp. 420-431, May 2004. (Initially presented at the Third Hellenic Conference on Artificial Intelligence, Samos, Greece.)
22. N. D. Hatzigargyriou, N. A. Fountas, K. P. Valavanis, "Petri Net Models in the Restoration of Power Systems Following System Collapse", in C. T. Leondes (Editor) Knowledge Based Systems: Techniques and Applications, Vol. 4, pp: 1190-1223, Academic Press, 2001.
23. S. R. Malladi, K. P. Valavanis, M. C. Mulder, "Control and Coordination of a Redundant Manipulator", in Intelligent Control Systems: Theory and Applications, pp: 702-731, M. M. Gupta and N. K. Sinha (Editors), IEEE Press, 1995.
24. K. P. Valavanis, S. G. Tzafestas, "Expert Systems in Intelligent Robotics and Control", in Expert Systems in Engineering Applications, pp: 259-268, S. Tzafestas (Editor), Springer Verlag, 1993.
25. A. I. Kokkinaki, K. P. Valavanis, S. Tzafestas, "A Survey of Expert System Tools and Engineering Based Expert Systems", in Expert Systems in Engineering Applications, pp: 367-378, S. Tzafestas (Editor), Springer Verlag, 1993.
26. S. Tzafestas, A. I. Kokkinaki, K. P. Valavanis, "An Overview of Expert Systems", in Expert Systems in Engineering Applications, pp: 2-24, S. Tzafestas (Editor), Springer Verlag, 1993.
27. K. P. Valavanis, C. A. Jacobson, "On the Four - Parameter Controller Based Manipulator Payload Variation Detection and Accommodation", in Applied Control, Current Trends and Modern Methodologies, pp: 595-637, S. Tzafestas (Editor), Marcel Dekker, 1993.
28. G. Seetharaman, K. P. Valavanis, "Modeling of Multisensory Robotic Systems with Failure Diagnostic Capabilities", in An Introduction to Intelligent and Autonomous Control, pp: 349-369, P. J. Antsaklis and K. M. Passino (Editors), Kluwer Academic Publishers, 1993.

29. K. P. Valavanis, G. N. Saridis, "*Information Theoretic Modeling of Robotic and Automation Systems*", in Control and Dynamic Systems; Manufacturing and Automation Systems: Techniques and Technologies, Part 4 of 5, Volume 48, pp: 387-416, C. T. Leondes (Editor), Academic Press, 1991.
30. K. P. Valavanis, G. N. Saridis, "*Knowledge Based Architectural Models for Intelligent Robotic Systems*", in Advances in Automation and Robotics, Vol. 2, pp: 1-19, G. N. Saridis (Editor), JAI Press, 1991.
31. K. P. Valavanis, "*Theory and Design of Intelligent Robotic Systems*", in Intelligent Robotic Systems, pp: 45-83, S. G. Tzafestas (Editor), Marcel Dekker, 1991.
32. M. B. Leahy, Jr., K. P. Valavanis, "*Dynamics Based Control of Robotic Manipulators*", in Intelligent Robotic Systems, pp: 245-281, S. G. Tzafestas (Editor), Marcel Dekker, 1991.
33. G. N. Saridis, K. P. Valavanis, "*On the Real-Time Control of Intelligent Robotic Systems*", in Digital Techniques in Simulation Communication and Control, pp: 463-469, S. G. Tzafestas (editor), Elsevier Science Publishers, B. V. (North Holland), IMACS, 1985. (Conference reprint paper.)

REFEREED SERIAL TRANSACTION/JOURNAL PAPERS

1. Sopegno L., Martini S., Fagiolini A., Livreri P., Cirrincione G., Valavanis K. P., *Transformer-Augmented Deep Reinforcement Learning for UAV Navigation*, Journal of Intelligent and Robotic Systems, Springer Nature (revised) – to appear, December 2026.
2. S. C. Barakou, C. S. Tzafestas and K. P. Valavanis, *Hybrid Geometric Computed Torque Control of a Quadrotor with an Attached 2-DOF Robotic Arm*, MDPI - Drones, 10(4), 274, 2026, <https://doi.org/10.3390/drones10040274> (Issue Front Page).
3. S. Martini, M. Stefanovic, K. P. Valavanis, *Koopman-Based Rigid Body Dynamics Modeling and Control: A Quadrotor Case Study*, Journal of Guidance, Control, and Dynamics, 17 pages (2026), <https://doi.org/10.2514/1.G009677>.
4. G. Ghione, V. Randazzo, G. Cirrincione, K. P. Valavanis, E. Pasero, M. Badami, *A Framework for Safe Reinforcement Learning in Battery Storage Scheduling under Partial Observability*, IEEE Transactions on Industry Applications, 11 pages (2026), DOI: [10.1109/TIA.2026.3689466](https://doi.org/10.1109/TIA.2026.3689466).
5. S. C. Barakou, C. S. Tzafestas, and K. P. Valavanis, *A Review of Real-Time Implementable Cooperative Aerial Manipulation Systems*, MDPI-Drones, 2024, 8, 196, <https://doi.org/10.3390/drones8050196>.
6. L. Sopegno, S. Martini, S. Pedone, A. Fagiolini, M. J. Rutherford, M. Stefanovic, A. Rizzo, P. Livieri, K. P. Valavanis, *An Advanced Hexacopter for Mars Exploration: Attitude Control and Autonomous Navigation*, IEEE Transactions on Aerospace and Electronic Systems, 2024, DOI [10.1109/TAES.2024.3365667](https://doi.org/10.1109/TAES.2024.3365667).
7. S. Sonmez, M. J. Rutherford, K. P. Valavanis, *A Survey of Offline and Online Learning-Based Algorithms for Multirotor UAVs*, MDPI-Drones, 2024, 8, 116, <https://doi.org/10.3390/drones8040116>.
8. I. D. Du Mutel de Pierrepont Franzetti, R. Parin, E. Capello, M. J. Rutherford, K. P. Valavanis, *Ground, Ceiling and Wall Effect Evaluation of Small Quadcopters in Pressure-controlled Environments*, Journal of Intelligent and Robotic Systems, 110:125 (2024), <https://doi.org/10.1007/s10846-024-02155-7>.
9. S. Martini, K. P. Valavanis, M. Stefanovic, M. J. Rutherford, A. Rizzo, *Correction to the Euler Lagrange Multirotor Model with Euler Angles Generalized Coordinates*, Journal of Intelligent and Robotic Systems, 110:17 (2024), <https://doi.org/10.1007/s10846-023-02040-9>.
10. S. Sonmez, M. J. Rutherford, K. P. Valavanis, *A Survey of Offline- and Online-Learning-Based Algorithms for Multirotor UAVs*, MDPI, Drones 2024, 8, 116, <https://doi.org/10.3390/drones8040116>.
11. M. Cheng, H. Liu, Y. Wan, K. P. Valavanis, F. L. Lewis, *Data-Driven Optimal Formation-Containment Control for a Group of Spacecrafts Subject to Switching Topologies*, IEEE Transactions on Aerospace and Electronic Systems, Vol. 59, No. 5, October 2023.

12. L. Sopegno, P. Livieri, M. Stefanovic, K. P. Valavanis, *Thrust Vector Control System for a Finless Rocket: Controller Comparison*, MDPI, Machines, 2023, 11, <https://doi.org/10.3390/machines11030394>.
13. W. Zhao, H. Liu, K. Valavanis, F. Lewis, *Fault-Tolerant Formation Control for Heterogeneous Vehicles via Reinforcement Learning*, IEEE Transactions on Aerospace and Electronic Systems, Vol. 58, Issue 4, 2796-2806, August 2022.
14. G. Aiello, K. P. Valavanis, A. Rizzo, *3D Real-Time Energy Efficient Path Planning for a Fleet of Fixed-Wing UAVs*, Journal of Intelligent and Robotic Systems, July 2022.
15. A. Z. Alsheibi, K. P. Valavanis, A. Iqbal, M. N. Aman, *Speech Enhancement Framework with Noise Suppression Using Block Principal Component Analysis*, MDPI – Acoustics, 4, 441–459, 2022, <https://doi.org/10.3390/acoustics4020027>.
16. D. Sartori, F. Quagliotti, M. J. Rutherford, K. P. Valavanis, *Design and Development of a Backstepping Controller Autopilot for Fixed-wing UAVs*, The Aeronautical Journal, published online July 2021, <https://doi.org/10.1017/aer.2021.53>.
17. D. Liu, H. Liu, F. L. Lewis, K. P. Valavanis, *Robust Time-varying Formation Control for Tail-sitters in Flight Mode Transitions*, IEEE Transactions on Systems, Man, and Cybernetics: Systems, 51 (7): 4102-4111, July 2021.
18. D. Liu, H. Liu, and K. P. Valavanis, *Fully Distributed Time-Varying Formation Control for Multiple Uncertain Missiles*, IEEE Transactions on Aerospace and Electronic Systems, 57 (3): 1646-1656, June 2021.
19. E. Petavratzis, L. Moysis, C. Volos, I. Stouboulos, H. Nistazakis, K. P. Valavanis, *A Chaotic Path Planning Generator Enhanced by a Memory Technique*, Robotics and Autonomous Systems, 143 (2021), <https://doi.org/10.1016/j.robot.2021.103826>.
20. W. Gu, K. P. Valavanis, M. J. Rutherford, A. Rizzo, *UAV Model-based Flight Control with Artificial Neural Networks: A Survey*, Journal of Intelligent and Robotic Systems, Vol. 100, Issue 3-4, December 2020.
21. H. Liu, Y. Wang, F. L. Lewis, and K. P. Valavanis, *Robust Formation Tracking Control for Multiple Quadrotors Subject to Switching Topologies*, IEEE Transactions on Control of Network Systems, 7 (3): 1319-1329, September 2020.
22. H. Liu, T. Ma, F. L. Lewis, and K. P. Valavanis, *Robust Time-varying Formation Control for a Set of Quadcopters with Switching Interaction Communication Topology*, IEEE Transactions on Vehicular Technology, 69 (7): 6880-6890, July 2020.
23. H. Liu, Y. Tian, F. L. Lewis, Y. Wan, K. P. Valavanis, *Robust Formation Flying Control for a Team of Satellites Subject to Nonlinearities and Uncertainties*, Aerospace Science and Technology, 95, 1-9, December 2019.
24. E. K. Petavratzis, C. K. Volos, L. Moysis, I. N. Stouboulos, H. E. Nistazakis, G. S. Tombras, and K. P. Valavanis, *An Inverse Pheromone Approach in a Chaotic Mobile Robot's Path Planning Based on a Modified Logistic Map*, Technologies 2019, 7, 84; doi:10.3390/technologies7040084.
25. W. Zhao, H. Liu, F. L. Lewis, K. P. Valavanis, X. Wang, *Robust Visual Servoing Control for Ground Target Tracking of Quadrotors*, IEEE Transactions on Control Systems Technology, Vol. 28, No. 5, 1980-1987, September 2020.
26. H. Liu, Y. Tian, F. L. Lewis, Y. Wan, K. P. Valavanis, *Robust Formation Tracking Control for Multiple Quadrotors under Aggressive Maneuvers*, Automatica, 105, 179–185, July 2019.
27. M. Michailidis, K. P. Valavanis, M. J. Rutherford, *A Survey of Controller Designs for NextGen UAVs: The Challenge of Uncertain Aerodynamic Parameters*, International Journal of Control, Automation and Systems (To be published).
28. H. Dong, S. Gao, B. Ning, T. Tang, Y. Li, K. P. Valavanis, *Error-Driven Nonlinear Feedback Design for Fuzzy Adaptive Dynamic Surface Control of Nonlinear Systems with Prescribed Tracking Performance*, IEEE Transactions on SMC: Systems, Vol. 50, No. 3, 1013-1023, March 2020.

29. M. Agha, K. Kanistras, M. J. Rutherford, K. P. Valavanis, *Mathematical Model derivation of an Unmanned Circulation Control Aerial Vehicle*, Journal of Control Theory and Applications, Vol. 18, No. 1, pp: 4-21, February 2020.
30. K. Kanistras, P. C. Saka, K. P. Valavanis, and M. J. Rutherford, *Wind Tunnel Investigation of a Circulation Control Wing with Dual Radius Flaps*, Journal of Aircraft, published Online first, February 28, 2018 - <https://doi.org/10.2514/1.C034208>.
31. K. P. Valavanis, *The Entropy-Based Approach to Modeling and Evaluating Autonomy and Intelligence of Robotic Systems*, Journal of Intelligent & Robotic Systems, 30th Year Anniversary Issue, Volume 91, Issue 1, pp: 7-22, July 2018.
32. A. Benini, M. J. Rutherford, K. P. Valavanis, *Experimental Evaluation of Real-Time GPU-based Pose Estimation System for Rotary Wing UAVs*, Journal of Control Theory and Technology, Vol. 16, Number 2, pp:145-159, May 2018.
33. C. Rosen, K. Kanistras, P. C. Saka, K. P. Valavanis, and M. J. Rutherford, *System Identification and Controller Implementation of a Centrifugal Compressor for Circulation Control Applications*, Journal of Intelligent & Robotic Systems, Vol. 91, No. 3-4, pp: 629-650, September 2018.
34. J. Alvarenga, N. I. Vitzilaios, K. P. Valavanis, and M. J. Rutherford. *Survey of Unmanned Helicopter Model-based Navigation and Control Techniques*. Journal of Intelligent & Robotic Systems, Vol. 80, No. 1, pp. 87–138, Oct. 2015.
35. G. S. Atsalakis, E. E. Protopapadakis, K. P. Valavanis, *Stock Market Forecasting in Turbulent Market Periods Using Neuro-Fuzzy Systems*, Operational Research – An International Journal, Doi: 10.1007/s12351-015-0197-6.
36. K. P. Valavanis, G. J. Vachtsevanos, P. J. Antsaklis, *Technology and Autonomous Mechanisms in the Mediterranean: From Ancient Greece to Byzantium*, IEEE Control Systems Magazine, Vol.34, No. 6, pp: 110-119, December 2014.
37. D. Sartori, F. Quagliotti, M. J. Rutherford, K. P. Valavanis, *Implementation and Testing of a Backstepping Controller Autopilot for Fixed-wing UAVs*, Journal of Intelligent and Robotic Systems, Vol. 76, No. 3-4, pp: 505-525, December 2014.
38. A. Elkady, J. Joy, T. Sobh, K. Valavanis, *Modular Design: A Plug and Play Approach to Sensory Modules, Actuation Platforms, and Task Descriptions for Robotics and Automation Applications*, Journal of Intelligent and Robotic Systems, Vol. 75, No. 2, pp: 271-289, August 2014.
39. A. Moses, M. J. Rutherford, M. Kontitsis, K. P. Valavanis, *UAV-borne X-band Radar for MAV Collision Avoidance*, Robotica, Vol. 32, Issue 01, pp: 97-114, January 2014.
40. A. Elkady, J. Joy, T. Sobh, K. Valavanis, “*A Structured Approach for Modular Design in Robotics and Automation Environments*”, Journal of Intelligent and Robotic Systems, Vol. 72, No. 1, pp: 5–19, October 2013.
41. I. A. Raptis, K. P. Valavanis, G. J. Vachtsevanos, *Linear Tracking Control for Small-Scale Unmanned Helicopters*, IEEE Transactions on Control Systems Technology, Vol. 20, No. 4, pp: 995-1010, July 2012.
42. Goncalo Martins, Alistair Moses, Matt Rutherford, Kimon Valavanis, *Enabling Intelligent Unmanned Vehicles through XMOS Technology*, Journal of Defense Modeling and Simulation: Applications, Methodology, Technology, Vol. 9 No 1, pp: 71-82, January 2012.
43. K. Dalamagkidis, K. P. Valavanis, L. A. Piegl, “*Nonlinear Model Predictive Control with Neural Network Optimization for Autonomous Autorotation of Small Unmanned Helicopters*”, IEEE Transactions on Control Systems Technology, Vol. 19, No. 4, pp: 818-831, July 2011.
44. I. A. Raptis, K. P. Valavanis, W. Moreno, “*A Novel Nonlinear Backstepping Controller Design for Helicopters Using the Rotation Matrix*”, IEEE Transactions on Control Systems Technology, Vol. 19, No. 2, pp: 465-473, March 2011.
45. A. Tsalatsanis, A. Yalcin, and K. P. Valavanis, “*Dynamic Task Allocation in Cooperative Robot Teams: A Limited Lookahead Control Policy*”, Robotica, Vol. 30, Issue 05, pp: 721-730, September 2012.

46. M. H. Mahoor, R. Godzdzank, K. Dalamagkidis, K. P. Valavanis, "*Vision-Based Landing of Light Weight Unmanned Helicopters on a Smart Landing Platform*", Journal of Intelligent and Robotic Systems, Special Issue on UAVs, Vol. 61, No. 1-4, pp: 251-265, March 2011.
47. G. Atsalakis, K. Valavanis, "*Surveying Stock Market Forecasting Techniques – Part I: Conventional Methods*" Journal of Computation Optimization in Economics and Finance, Vol. 2, No. 1, 2010.
48. G. Atsalakis, K. Valavanis, "*Forecasting Stock Trends Using a Combined Technical Analysis and Neuro-Fuzzy Based Approach*", Journal of Financial Decision Making, Vol. 6, No. 1, pp: 79-94, 2010.
49. L. E. Barnes, M. A. Fields, K. P. Valavanis, "*Swarm Formation Control Utilizing Elliptical Surfaces and Limiting Functions*", IEEE Transactions on Systems, Man and Cybernetics, Part B, Vol. 39, No. 6, pp:1434-1445, December 2009.
50. A. Monteriù, P. Asthana, K. P. Valavanis and S. Longhi, "*Real-Time Model-Based Fault Detection and Isolation for UGVs*", Journal of Intelligent and Robotic Systems, Vol. 56, No. 4, pp: 425-439, November 2009.
51. I. Raptis, K. P. Valavanis, A. Kandel, W. Moreno, "*System Identification for a Miniature Helicopter at Hover Using Fuzzy Models*", Journal of Intelligent and Robotic Systems, Vol. 56, No. 3, pp: 345-362, October 2009.
52. L. A. Piegl, K. Rajab, V. Smarodzinava, K. P. Valavanis, "*Using a Biarc Filter to Compute Curvature Extremes of NURBS Curves*", Engineering with Computers (Springer), Vol. 25, No. 4, pp: 379-387, 2009.
53. I. Raptis, K. P. Valavanis, W. Moreno, "*System Identification and Discrete Nonlinear Control of Miniature Helicopters Using Backstepping*", Journal of Intelligent and Robotic Systems, Vol. 55, No. 2-3, pp: 223-243, July 2009.
54. L. A. Piegl, K. Rajab, V. Smarodzinava, K. P. Valavanis, "*Fault-tolerant Computing in a Knowledge-Guided NURBS Environment*", Computer-Aided Design and Applications, 6(6), pp: 809-823, 2009.
55. G. Atsalakis, K. P. Valavanis, "*Forecasting Stock Market Short-Term Trends Using a Neuro-Fuzzy Based Methodology*", Expert Systems with Applications, Vol. 36, Issue 7, pp: 10696-10707, September 2009.
56. G. Atsalakis, K. Valavanis, "*Surveying Stock Market Forecasting Techniques – Part II: Soft Computing Methods*", Expert Systems with Applications, Vol. 36, Issue 3, pp: 5932-5941, 2009.
57. R. D. Garcia, K. P. Valavanis, "*The Implementation of an Autonomous Helicopter Testbed*", Journal of Intelligent and Robotic Systems, Vol. 54, No. 1-3, pp: 423-454, March 2009 – also published as a Book Chapter.
58. K. Dalamagkidis, K. P. Valavanis, L. A. Piegl, "*On Unmanned Aircraft Systems Issues, Challenges and Operational Restrictions Preventing Integration into the National Airspace System*", Progress in Aerospace Sciences, Elsevier, 44 (2008), pp: 503-519.
59. S. Ioannou, K. Dalamagkidis, K. P. Valavanis and E. K. Stefanakos, "*Improving Endurance and Range of a UGV with Gimballed Landing Platform for Launching Small Unmanned Helicopters*", IEEE Transactions on System, Man and Cybernetics Part C, Applications and Reviews, Vol. 53, pp: 399–416, June 26, 2008.
60. K. Dalamagkidis, K. P. Valavanis, L. A. Piegl, "*Current Status and Future Perspectives for Unmanned Aircraft System Operations in the US*", Journal of Intelligent and Robotic Systems, Vol. 52, No. 2, pp: 313-327, June 2008.
61. M. Castillo-Effen, K. P. Valavanis, W. A. Moreno, M. A. Labrador, "*Adapting Sequential Monte-Carlo Estimation to Cooperative Localization in Wireless Sensor Networks*", International Journal of Ad Hoc & Sensor Wireless Networks, Vol. 5, No. 1-2, pp: 27-46, 2008.
62. D. Ernst, K. Valavanis, J. Craighead, "*Unmanned Vehicle Controller Design, Evaluation and Implementation: From MATLAB to Printed Circuit Board*", Journal of Intelligent and Robotic

- Systems, Vol. 49, No. 1, pp: 85-108, May 2007.
63. L. Barnes, W. Alvis, M. Fields, K. Valavanis, W. Moreno, "Heterogeneous Swarm Formation Control with Potential Fields Formed by Bivariate Normal Functions" International Journal on Systems Science and Applications, Vol. 2, No. 4, pp: 346-359, February 2007.
 64. A. Tsalatsanis, K. Valavanis, N. Tsourveloudis, "Mobile Robot Navigation Using Sonar and Range Measurements from Uncalibrated Cameras", Journal of Intelligent and Robotic Systems, Vol. 48, No. 2, pp: 253-284, February 2007.
 65. A. Tsalatsanis, K. Valavanis, A. Yalcin, *Vision Based Target Tracking and Collision Avoidance for Mobile Robots*, Journal of Intelligent and Robotic Systems, Vol. 48, No. 2, pp: 285-304, February 2007.
 66. R. Garcia, K. P. Valavanis, "Improving and Miniaturizing an On-board Processing System for Small Unmanned Vehicles", Unmanned Systems, Vol. 24, No. 5, pp: 36-39, September / October 2006 (Invited).
 67. C. L. Castillo, W. Alvis, M. Castillo-Effen, W. Moreno, K. Valavanis, "Small Unmanned Helicopter Simplified and Decentralized Optimization-based Controller Design for Non-Aggressive Flights", International Journal on Systems Science and Applications International Journal on Systems Science and Applications, Vol. 1, No. 3 pp: 303-315, 2006.
 68. K. P. Valavanis, L. Doitsidis, M. Long, R. R. Murphy, "Validation of a Distributed Field Robot Architecture Integrated with a MATLAB Based Control Theoretic Environment: A Case Study of Fuzzy Logic Based Robot Navigation", IEEE Robotics and Automation Magazine, Vol. 13, No. 3, pp: 93-107, September 2006.
 69. P. S. Spanoudakis, N. C. Tsourveloudis, K. P. Valavanis, "Design Considerations of a Prototype VTOL Robotic Vehicle through Market Survey Data Collection", Journal of Intelligent and Robotic Systems, Vol. 46, No. 4, pp: 339-364, August 2006.
 70. P. S. Georgilakis, J. A. Katsigiannis, K. P. Valavanis, A. T. Souflaris, "A Systematic Stochastic Petri Net Based Methodology for Transformer Fault Diagnosis" Journal of Intelligent and Robotic Systems, Vol. 45, No. 2, pp: 181-201, February 2006.
 71. G. J. Tsinarakis, K. P. Valavanis, N. C. Tsourveloudis, "Modeling, Analysis, Synthesis and Performance Evaluation of Multi-Operational Production Systems with Modular Hybrid Petri Nets" IEEE Transactions on Automation Sciences and Engineering, Vol. 3, No. 1, pp: 29-46, January 2006.
 72. K. Valavanis, M. Kontitsis, R. Garcia, "A Vision System for Small Unmanned VTOL Vehicles with Strict Payload Limitations", Unmanned Systems, Vol. 23, No. 6, November / December 2005 (Invited).
 73. M. Kontitsis, R. Garcia, K. Valavanis, "Design, Implementation and Testing of a Vision System for Small Unmanned Vertical Take-off and Landing Vehicles with Strict Payload Limitations", Journal of Intelligent and Robotic Systems, Vol. 44, No. 2, pp: 139-159, October 2005.
 74. G. J. Tsinarakis, K. P. Valavanis, N. C. Tsourveloudis, "Modular Petri Net Based Modeling, Analysis, Synthesis and Performance Evaluation of Random topology Production Systems" Journal of Intelligent Manufacturing Systems, 16, 67-92, 2005.
 75. V. Kanakakis, K. P. Valavanis, N. C. Tsourveloudis, "Fuzzy Logic Based Navigation of Autonomous Underwater Vehicles", Journal of Intelligent and Robotic Systems, Vol. 40, No. 1, pp: 45-88, May 2004.
 76. S. Ioannidis, N. C. Tsourveloudis, K. P. Valavanis, "Fuzzy Supervisory Control of Manufacturing Systems", IEEE Transactions on Robotics and Automation, Vol. 20, No. 3, 379-389, June 2004.
 77. I. K. Nikolos, K. P. Valavanis, N. C. Tsourveloudis, A. N. Kostaras, "3-D Evolutionary Algorithm Based Off-line / On-line Path Planner for UAV Navigation", IEEE Transactions on System, Man and Cybernetics, Part B, Vol. 33, No. 6, pp: 898-912, December 2003.
 78. J. Aekaterinidis, K. Kostoulakis, L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, "An Interface System for Real-Time Mobile Robot Environment Mapping using Sonar Sensors," WSEAS

- Transactions on Systems, Vol. 4, No. 2, pp. 927-933, October 2003.
79. P. Spanoudakis, L. Doitsidis, N. C. Tsourveloudis, K. P. Valavanis, "*Vertical Take-Off and Landing Vehicle Market Overview*", Unmanned Systems, Vol. 21, No. 5, pp: 14-18, September / October 2003. **(Invited)**
 80. M. Matijasevic, D. Gracanin, K. Valavanis, I. Lovrek, "*A Framework for Multi-User Distributed Virtual Environments*", IEEE Transactions on Systems, Man and Cybernetics, Vol. 32, Part B, No. 4, pp: 416-429, August 2002.
 81. N. Tsourveloudis, K. P. Valavanis, "*On the Measurement of Enterprise Agility*", Journal of Intelligent and Robotic Systems, Vol. 33, No. 3, pp: 329-342, March 2002.
 82. R. Kolluru, K. Valavanis, S. Smith, N. 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, January 2002.
 83. I. K. Nikolos, N. C. Tsourveloudis, K. P. Valavanis, "*Evolutionary Algorithm Based Off-line Path Planner for UAV Navigation*", Automatika 42 (3-4), pp: 143-150, 2001.
 84. N. Tsourveloudis, 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, August 2001.
 85. T. Fukuda, R. Michelin, V. Potkonjak, S. Tzafestas, K. Valavanis, M. Vukobratovic, "*How far Away is Artificial Man*", IEEE Robotics and Automation Magazine, Vol. 8, No. 1, pp: 66-73, March 2001.
 86. K. P. Valavanis, T. Hebert, R. Kolluru, N. Tsourveloudis, "*Mobile Robot Navigation in 2-Dynamic Environments Using Electrostatic Potential Fields*", IEEE Transactions on Systems, Man and Cybernetics, Vol. 30, No. 2, Part A, pp: 187-196, March 2000.
 87. R. Kolluru, K. P. Valavanis, N. Tsourveloudis, S. Smith, "*Design Fundamentals of a Reconfigurable Robotic Gripper System*", IEEE Transactions on System, Man and Cybernetics, Vol. 30, No. 2, Part A, pp: 181-187, March 2000.
 88. N. Tsourveloudis, R. Kolluru, K. P. Valavanis, D. Gracanin, "*Suction Control of a Robotic Gripper: A Neuro-Fuzzy Approach*", Journal of Intelligent and Robotic Systems, Vol. 27, No. 3, pp: 215-235, March 2000.
 89. M. Matijasevic, K. Valavanis, D. Gracanin, I. Lovrek, "*Application of a Distributed Networked Virtual Environment to Mobile Robot Teleoperation Over the Internet*", Journal of Machine Intelligence and Robotic Control, Vol. 1, No. 1, 11-26, 1999.
 90. N. Tsourveloudis, K. Valavanis, R. Kolluru, and I. Nikolos, "*Position and Suction Control of a Reconfigurable Robotic Gripper*", Journal of Machine Intelligence and Robotic Control, Vol. 1, No. 2, 53-62, 1999.
 91. D. Gracanin, K. Valavanis, N. Tsourveloudis, M. Matijasevic, "*Virtual Reality for Navigation and Control of Underwater Vehicles*" IEEE Robotics and Automation Magazine, Vol. 6, No. 2, pp: 53-62, June 1999 **(Invited)**.
 92. N. A. Fountas, N. D. Hatziaergyriou, K. P. Valavanis, "*A Novel Framework for the Process Control of the Restoration of Electrical Industrial Systems*", Journal of Electric Power Systems Research, Vol. 50, No. 3, pp: 163-167, June 1999.
 93. G. Paschos, K. P. Valavanis, "*A Color Texture Based Visual Monitoring System for Automated Surveillance*", IEEE Transactions on Systems, Man and Cybernetics, Vol. 29, No. 2, Part C, pp: 298-307, May 1999.
 94. D. Gracanin, K. Valavanis, M. Matijasevic, "*Virtual Environment Testbed for Autonomous Underwater Vehicles*" Control Engineering Practice, an IFAC Journal, Vol. 6, No. 5, pp: 653-660, October 1998.
 95. R. Kolluru, K. P. Valavanis, "*Modeling, Analysis and Performance Evaluation of a Robotic Gripper System for Limp Material Handling*", IEEE Transactions on Systems, Man and Cybernetics, Vol. 28B, No. 3, pp: 480-486, June 1998.
 96. T. Hebert, K. P. Valavanis, R. Kolluru, "*A Real-Time, Hierarchical Sensor-Based Robotic System*

- Architecture*", Journal of Intelligent and Robotic Systems, Vol. 21, No. 1, pp: 1-27, January 1998.
97. K. P. Valavanis, D. Gracanin, M. Matijasevic, R. Kolluru, G. Demetriou, "Control Architectures for Autonomous Underwater Vehicles", IEEE Control Systems Magazine, Vol. 17, No. 6, pp: 48-64, December 1997.
 98. N. A. Fountas, N. D. Hatzigargyriou, K. P. Valavanis, "A Systematic Petri Net-Based Methodology for Power System Restoration", International Journal of Engineering Intelligent Systems for Electrical Engineering and Communications, Vol. 5, No. 3, pp: 167-176, September 1997.
 99. Y. Zhang, K. P. Valavanis, "A Sensor-Based 3-D Potential Panel Method for Robot Motion Planning", Robotica, Vol. 15, Part 4, pp: 421-434, July/August 1997.
 100. S. Ramaswamy, K. P. Valavanis, S. Barber, "Petri Net Extensions for the Development of MIMO Net Models of Automated Manufacturing Systems", Journal of Manufacturing Systems, Vol. 16, No. 3, pp: 175-191, June/July 1997.
 101. N. A. Fountas, N. D. Hatzigargyriou, K. P. Valavanis, "Hierarchical Time-Extended Petri Nets as a Generic Tool for Power System Restoration", (paper 96 SM 514-0 PWRs Denver CO, July/August 96), IEEE Transactions on Power Systems, Vol. 12, No. 2, pp: 837-843, May 1997.
 102. D. Gracanin, K. P. Valavanis, S. A. Smith, T. Williams, A. Steward, "Implementation of a Dynamic Scheduler to Apparel-CIM Systems", Journal of Intelligent Manufacturing, Vol. 8, No. 2, pp: 67-81, April 1997.
 103. A. I. Kokkinaki, K. P. Valavanis, "Error Specification, Monitoring and Recovery in Computer Integrated Manufacturing: An Analytic Approach", IEE Proceedings on Control Theory and Applications, Vol. 143, No. 6, pp: 499-508, November 1996.
 104. A. I. Kokkinaki, K. P. Valavanis, "A Distributed Planning System for Computer Integrated Manufacturing Systems", Journal of Intelligent Manufacturing, Vol. 7, No. 4, pp: 293-309, August 1996.
 105. K. P. Valavanis, J. Zheng, G. Paschos, "A Total Color Difference Measure for Segmentation in Color Images", Journal of Intelligent and Robotic Systems, Vol. 16, No. 3, pp: 269-313, July 1996.
 106. S. Ramaswamy, K. P. Valavanis, "Hierarchical Time Extended Petri Nets (H-EPN's) Based Error Identification and Recovery for Multilevel Systems", IEEE Transactions on Systems, Man and Cybernetics, Vol. 26, No. 1, pp: 164-175, February 1996.
 107. Y. Zhang, K. P. Valavanis, "Sensor-Based 2-D Potential Panel Method for Robot Motion Planning", Robotica, Vol. 14, Part 1, pp: 81-89, January/February 1996.
 108. R. Kolluru, K. P. Valavanis, A. Steward, M. J. Sonnier, "A Flat Surface Robotic Gripper for Handling Limp Material", IEEE Robotics and Automation Magazine, Vol. 2, No. 3, pp: 19-26, September 1995.
 109. A. I. Kokkinaki, K. P. Valavanis, "On the Comparison of AI and DAI Based Planning Techniques for Automated Manufacturing Systems", Journal of Intelligent and Robotic Systems, Vol. 13, No. 3, pp: 201-245, July 1995.
 110. D. Gracanin, P. Srinivasan, K. P. Valavanis, "Parameterized Petri Nets and Their Application to Planning and Coordination in Intelligent Systems", IEEE Transactions on Systems, Man and Cybernetics, Vol. 24, No. 10, pp: 1483-1497, October 1994.
 111. S. Ramaswamy, K. P. Valavanis, "Modeling Analysis and Simulation of Failures in a Materials Handling System with Extended Petri Nets", IEEE Transactions on System, Man and Cybernetics, Vol. 24, No. 9, pp: 1358-1373, September 1994.
 112. K. P. Valavanis, A. I. Kokkinaki, S. Tzafestas, "Knowledge Based (Expert) Systems in Engineering Applications: A survey", Journal of Intelligent and Robotic Systems, Vol. 10, No. 2, pp: 113-145, June 1994.
 113. K. P. Valavanis, S. Ramaswamy, S. Landry, "Extended Petri Net-Based Modeling, Analysis and Simulation of an Intelligent Materials Handling System", Journal of Intelligent and Robotic Systems, Vol. 10, No. 1, pp: 79-108, May 1994.
 114. T. M. Sobh, K. P. Valavanis, D. Gracanin, J. C. Owen, "A Subject - Indexed Bibliography of Discrete Event Dynamic Systems", IEEE Robotics and Automation Magazine, Vol. 1, No. 2, pp: 14-20, June

- 1994.
115. S. Malladi, K. P. Valavanis, M. C. Mulder, "On the Validation of a Sensor Based Control System for a 4-Joint 6-DOF Redundant Manipulator Using the Minimum Effort Factor Control Approach", Journal of Robotic Systems, Vol. 11, No. 1, pp: 21-40, January-February 1994.
 116. J. Zheng, K. P. Valavanis, J. Gauch, "Noise Removal from Color Images", Journal of Intelligent and Robotic Systems, Vol. 7, No. 3, pp: 257-285, June 1993.
 117. K. P. Valavanis, T. B. Larsson, S. P. Gardner, "PD and PID Model Based Control Stability Analysis of the PUMA - 560 Robot Manipulator Under Model Mismatch", Journal of Intelligent and Robotic Systems, Vol. 7, No. 2, pp: 233-254, April 1993.
 118. K. P. Valavanis, S. Surka, "Cooperative Grouping Processes for Edge Segmentation", Journal of Intelligent and Robotic Systems, Vol. 5, No. 2, pp: 177-192, April 1992.
 119. S. Surka, K. P. Valavanis, "A Cellular Automata Model for Edge Relaxation", Journal of Intelligent and Robotic Systems, Vol. 4, No. 4, pp: 379-391, December 1991.
 120. K. P. Valavanis, C. A. Jacobson, B. Gold, "Integration Control and Failure Detection with Application to the Robot Payload Variation Problem", Journal of Intelligent and Robotic Systems, Vol. 4, No. 2, pp: 145-173, June 1991.
 121. K. P. Valavanis, H. Stellakis, "A General Organizer Model for Robotic Assemblies and Intelligent Robotic Systems", IEEE Transactions on Systems, Man and Cybernetics, Vol. 21, No. 2, pp: 302-317, March/April 1991.
 122. K. P. Valavanis, G. N. Saridis, "Probabilistic Modeling of Intelligent Robotic Systems", IEEE Transactions of Robotics and Automation, Vol. 7, No. 1, pp: 164-171, February 1991.
 123. H. Stellakis, K. P. Valavanis, "Fuzzy Logic Based Formulation of the Organizer of an Intelligent Robotic System", Journal of Intelligent and Robotic Systems, Vol. 4, No. 1, pp: 1-24, March 1991.
 124. K. P. Valavanis, S. J. Carelo, "An Efficient Planning Technique for Robotic Assemblies and Intelligent Robotic Systems", Journal of Intelligent and Robotic Systems, Vol. 3, No. 4, pp: 321-347, Winter 1990.
 125. K. P. Valavanis, "On the Hierarchical Modeling, Analysis and Simulation of Flexible Manufacturing Systems Using Extended Petri Nets", IEEE Transactions on Systems, Man and Cybernetics, Vol. 20, No. 1, pp: 94-110, January/February 1990.
 126. M. B. Leahy, K. P. Valavanis, G. N. Saridis, "Evaluation of Dynamic Models for PUMA Robot Control", IEEE Journal of Robotics and Automation, Vol. 5, No. 2, pp: 242-245, April 1989.
 127. K. P. Valavanis, P. H. Yuan, "Hardware and Software for Hierarchical Intelligent Robotic Systems", Journal of Intelligent and Robotic Systems, Vol. 1, No. 4, pp: 343-373, 1989.
 128. K. P. Valavanis, G. N. Saridis, "Information Theoretic Modeling of Intelligent Robotic Systems", IEEE Transactions on Systems, Man and Cybernetics, Vol. 18, No. 6, pp: 852-872, November/December 1988.
 129. G. N. Saridis, K. P. Valavanis, "Analytical Design of Intelligent Machines", Automatica, Vol. 24, No. 2, pp: 123-133, February 1988.
 130. M. B. Leahy, L. M. Nugent, K. P. Valavanis, G. N. Saridis, "Efficient PUMA Manipulator Jacobian Calculation and Inversion", Journal of Robotic Systems, Vol. 4, No. 2, pp: 185-197, April 1987.

REFEREED CONFERENCE AND SYMPOSIUM PAPERS

1. E. Todde, S. Martini, A. Rizzo, K. P. Valavanis, *Residual Koopman-Based Model Predictive Control of Quadrotors*, 2026 International Conference on Unmanned Aircraft Systems, ICUAS '26, June 2026, Corfu, Greece.
2. J. (Nino) Liu, K. P. Valavanis, *Conservative Cost-Aware SAC-Lagrangian for Safe UAV Autonomous Navigation*, 2026 International Conference on Unmanned Aircraft Systems, ICUAS '26, June 2026, Corfu, Greece.
3. Al Homsy M., Messaoudi S., Fagiolini A., Cirrincione G., Valavanis K. P., Sopegno L., *Deep Reinforcement Learning for Hexacopter Control Under Payload Collection and Release*,

- Proceedings, 2026 International Conference on Unmanned Aircraft Systems, ICUAS '26, June 2026, Corfu, Greece.
4. L. Sopegno, G. Cirrincione, S. Martini, M. Rutherford, P. Livreri, K. P. Valavanis, *Transformer-based Physics Informed Proximal Policy Optimization for UAV Autonomous Navigation*, Proceedings, 2025 International Conference on Unmanned Aircraft Systems, ICUAS '25, May 2025, Charlotte, NC, USA.
 5. S. Barakou, C. Tzafestas, K. P. Valavanis, *Control Strategies for Real-Time Aerial Manipulation with Multi-DOF Arms: A Survey*, Proceedings, 2025 International Conference on Unmanned Aircraft Systems, ICUAS '25, May 2025, Charlotte, NC, USA.
 6. S. Martini, E. Todde, M. Stefanovic, M. Rutherford, A. Rizzo, K. P. Valavanis, *Koopman-Based Model Predictive Control of Quadrotors*, Proceedings, 2025 International Conference on Unmanned Aircraft Systems, ICUAS '25, May 2025, Charlotte, NC, USA.
 7. S. Martini, S. Sonmez, M. Stefanovic, M. Rutherford, K. P. Valavanis, *Koopman-Based Reinforcement Learning for LQ Control Gains Estimation of Quadrotors*, Proceedings, 2025 International Conference on Unmanned Aircraft Systems, ICUAS '25, May 2025, Charlotte, NC, USA.
 8. C. Ramos, K. P. Valavanis, M. Rutherford, *Understanding the Physical Design of Multi-Domain UAV Systems*, Proceedings, 2025 International Conference on Unmanned Aircraft Systems, ICUAS '25, May 2025, Charlotte, NC, USA.
 9. Martini, S., Mennea, S. M., Mihalkov, M., Rizzo, A., Valavanis, K. P., Sornioti, A., Montanaro, U., *Design and HIL Testing of Enhanced MRAC Algorithms to Improve Tracking Performance of LQ-strategies for Quadrotor UAVs*, Proceedings, 20th International Conference on Automation Science and Engineering (CASE), August 2024, Italy (IEEE Explore).
 10. Martini, S., Valavanis, K. P., Stefanovic, M., Rizzo, A., Rutherford, M. J., *Koopman-Based Reduced Order Controller Design for Quadrotors*, Proceedings, 2024 International Conference on Unmanned Aircraft Systems, Chania, Crete, Greece, June 2024 (IEEE Explore).
 11. Sonmez, S., Martini, S., Rutherford, M. J. and Valavanis, K. P., *Reinforcement Learning Based PID Parameter Tuning and Estimation for Multirotor UAVs*, Proceedings, 2024 International Conference on Unmanned Aircraft Systems, Chania, Crete, Greece, June 2024 (IEEE Xplore).
 12. Sopegno, L., Pedone, S., Livreri, P., Rutherford, M. J., Valavanis, K. P., *Evaluation and Comparison of State and Disturbance Observers for a Terrestrial Hexacopter*, Proceedings, 2024 International Conference on Unmanned Aircraft Systems, Chania, Crete, Greece, June 2024 (IEEE Xplore).
 13. S. Barakou, C. S. Tzafestas, K. P. Valavanis, *A Survey of Modeling and Control Approaches for Cooperative Aerial Manipulation*, Proceedings, 2024 International Conference on Unmanned Aircraft Systems, Chania, Crete, Greece, June 2024 (IEEE Xplore).
 14. S. Barakou, C. Tzafestas, K. P. Valavanis, *Real-Time Applicable Cooperative Aerial Manipulation: A Survey*, 2023 International Conference on Unmanned Aircraft Systems, ICUAS 2023, Warsaw, Poland, June 6-9, 2023.
 15. N. Sarantinoudis, G. Arampatzis, N. C. Tsourveloudis, K. P. Valavanis, *Unmanned Aerial Vehicles and Livestock Management: an application in Western Crete*, 2023 International Conference on Unmanned Aircraft Systems, ICUAS 2023, Warsaw, Poland, June 6-9, 2023.
 16. S. Martini, M. Stefanovic, A. Rizzo, M. J. Rutherford, P. Livreri, and K. P. Valavanis, *A Benchmark Framework for Testing, Evaluation, and Comparison of Quadrotor Linear and Nonlinear Controllers*, 2023 International Conference on Unmanned Aircraft Systems, ICUAS 2023, Warsaw, Poland, June 6-9, 2023.
 17. S. Kanso, M. S. Jha, K. Valavanis, and D. Theilliol, *Battery Health Based Remaining Mission Time Prediction of UAV in Closed Loop*, 2023 International Conference on Unmanned Aircraft Systems, ICUAS 2023, Warsaw, Poland, June 6-9, 2023.
 18. S. Martini, A. Rizzo, M. Stefanovic, P. Livreri, M. J. Rutherford, K. P. Valavanis, *Koopman*

Operator Based Modeling and Control of Quadrotor, IUTAM Symposium on Optimal Guidance and Control for Autonomous Systems, Hawaii, March 15-17, 2023.

19. L. Sopegno, P. Livreri, K. P. Valavanis, *Using UAVs for Future Mission on Mars*, 2022 International Aerospace Conference (IAC), September 2022.
20. L. Sopegno, P. Livreri, M. Stefanovic, K. P. Valavanis, *Linear Quadratic Regulator: A Simple Thrust Vector Control System for Rockets*, 30th Mediterranean Conference on Control and Automation (MED), June-July 2022.
21. S. Martini, S. Sonmez, A. Rizzo, M. Stefanovic, M. J. Rutherford, K. P. Valavanis, *Euler-Lagrange Modeling and Control of Quadrotor UAV with Aerodynamic Compensation*, 2022 International Conference on Unmanned Aircraft Systems, June 2022.
22. L. Sopegno, K. P. Valavanis, P. Livreri, *Development of the Mars Ascent Vehicle for Mars Return Mission Purpose*, 2022 IEEE Aerospace Conference, March 2022.
23. G. Aiello, K. P. Valavanis and A. Rizzo, *3D Real-Time Energy Efficient Path Planning for a Fleet of Fixed-Wing UAVs*, Proceedings, 2021 International Conference on Unmanned Aircraft Systems, Athens, Greece, June 2021.
24. G. Allasia, A. Rizzo, K. Valavanis, *Quadrotor UAV 3D Path Planning with Optical-Flow-based Obstacle Avoidance*, 2021 International Conference on Unmanned Aircraft Systems, Athens, Greece, June 2021.
25. I. Kafetzis, L. Moysis, C. Volos, I. Stouboulos and K. Valavanis, *Area Surveillance Using a UAV with Mounted Chaotic Camera*, 2021 International Conference on Unmanned Aircraft Systems, Athens, Greece, June 2021.
26. E. Petavratzis, C. Volos, A. Ouannas, H. Nistazakis, K. Valavanis and I. Stouboulos, *A 2D Discrete Chaotic Memristive Map and Its Application in Robot's Path Planning*, Proceedings, MOCAS, Thessaloniki, Greece, July 2021.
27. M. N. Alghanim, M. Qasim, K. P. Valavanis, M. J. Rutherford, M. Stefanovic, *Comparison of Controller Performance for UGV-Landing Platform Self-Leveling*, Proceedings, 28th Mediterranean Conference on Control and Automation, St. Rafael, France, June/September 2020.
28. M. N. Alghanim, M. Qasim, K. P. Valavanis, M. J. Rutherford, M. Stefanovic, *Passivity-Based Adaptive Controller for Dynamic Self-Leveling of a Custom-Built Landing Platform on Top of a UGV*, Proceedings, 28th Mediterranean Conference on Control and Automation, St. Rafael, France, June/September 2020.
29. W. Gu, D. Hu, L. Cheng, Y. Cao, A. Rizzo, K. Valavanis, *Autonomous Wind Turbine Inspection using a Quadrotor*, Proceedings, 2020 International Conference on Unmanned Aircraft Systems, Athens, Greece, June/September 2020.
30. L. Moysis, E. Petavratzis, C. Volos, H. Nistazakis, I. Stouboulos, K. P. Valavanis, *A Chaotic Path Planning Method for 3D Area Coverage Using Modified Logistic Map and a Modulo Tactic*, Proceedings, 2020 International Conference on Unmanned Aircraft Systems, Athens, Greece, June / September 2020.
31. L. Sopegno, K. P. Valavanis, M. J. Rutherford, L. Casalino, *Mars Sample Return Mission: Mars Ascent Vehicle Propulsion Design*, Proceedings, IEEE Aerospace Conference, Montana, March 2020.
32. M. A. Alghanim, K. P. Valavanis, M. J. Rutherford, *Modeling, Control, and Wheel-Terrain Interaction Dynamics of the UGV Argo J5*, Proceedings, European Control Conference, Naples, June 2019.
33. M. G. Michailidis, M. Agha, M. J. Rutherford, K. P. Valavanis, *A Software in the Loop (SIL) Kalman and Complementary Filter Implementation on X-Plane for UAVs*, Proceedings, 2019 ICUAS, Atlanta, GA, June 2019.
34. P. Pannozzi, K. P. Valavanis, M. J. Rutherford, G. Guglieri, M. Scanavino, F. Quagliotti, *Urban Monitoring of Smart Communities Using UAS*, Proceedings, 2019 ICUAS, Atlanta, GA, June 2019.

35. W. Gu, K. P. Valavanis, M. J. Rutherford, A. Rizzo, *A Survey of Artificial Neural Networks with Model-based Control Techniques for Flight Control of Unmanned Aerial Vehicles* Proceedings, 2019 ICUAS, Atlanta, GA, June 2019.
36. E. K. Petavratzis, C. K. Volos, I. N. Stouboulos, H. E. Nistazakis, K. G. Kyritsi, K. P. Valavanis, *Coverage Performance of a Chaotic Mobile Robot Using an Inverse Pheromone Model*, Proceedings, International Conference on Modern Circuits and Systems Technologies, Thessaloniki, May 2019.
37. G. J. Vachtsevanos, K. P. Valavanis, *A Novel Approach to Integrated Vehicle Health Management*, Proceedings, NATO AVT – 305 Meeting, Athens, Greece, December 2018.
38. M. G. Michailidis, K. Kanistras, M. Agha, M. J. Rutherford, K. P. Valavanis, *Nonlinear Control of Fixed-Wing UAVs with Time-Varying Aerodynamic Uncertainties Via μ -Synthesis*, Proceedings, 57th IEEE Conference on Decision and Control, December 2018, Miami, FL.
39. H. Liu, X. Dong, F. L. Lewis, Y. Wan, K. Valavanis, *Robust Formation Control for Multiple Quadrotors Subject to Nonlinear Dynamics and Disturbances*, Proceedings, 14th IEEE International Conference on Control and Automation, June 12-15, Anchorage, Alaska (**Best Paper Award**).
40. H. Liu, Y. Tian, F. L. Lewis, Y. Wan, K. Valavanis, *Robust Formation Control for a Team of Satellites*, Proceedings, International Conference on Unmanned Aircraft Systems, Dallas, TX, June 2018.
41. S. A. Conyers, M. J. Rutherford, K. P. Valavanis, *An Empirical Evaluation of Ceiling Effect for Small-Scale Rotorcraft*, Proceedings, International Conference on Unmanned Aircraft Systems, Dallas, TX, June 2018.
42. S. A. Conyers, M. J. Rutherford, K. P. Valavanis, *An Empirical Evaluation of Ground Effect for Small-Scale Rotorcraft*, Proceedings, 2018 IEEE International Conference on Robotics and Automation, Brisbane, Australia, May 2018.
43. M. G. Michailidis, K. Kanistras, M. Agha, M. J. Rutherford, K. P. Valavanis, *Robust Nonlinear Control of the Longitudinal Flight Dynamics of a Circulation Control Fixed Wing Unmanned Aerial Vehicle*, Proceedings, 56th IEEE Conference on Decision and Control, December 2017, Australia.
44. M. G. Michailidis, K. Kanistras, M. Agha, M. J. Rutherford, K. P. Valavanis, *A Controller Design Framework for a NextGen Circulation Control Based UAV*, Proceedings, 2017 IEEE Conference on Control Technology and Applications (CCTA), August 2017, Hawaii.
45. C. Rosen, K. Kanistras, P. C. Saka, K. P. Valavanis and M. J. Rutherford, *Design and Development of a Control Scheme for the UC²AV: Unmanned Circulation Control Aerial Vehicle*, AIAA Modeling and Simulation Technologies Conference, SciTech Conference, Dallas, 2017.
46. M. Agha, K. Kanistras, P. C. Saka, K. P. Valavanis, and M. J. Rutherford, *Simulation Method for Estimating Aerodynamics Characteristics of a Circulation Control UAV*, 2017 AIAA Aviation Conference, Denver, 2017.
47. S. Ioannou, K. Dalamagkidis, E. Stefanakos, K. P. Valavanis, P. Wiley, *Runtime, Capacity and Discharge Current Relationship for Lead Acid and Lithium Batteries*, Proceedings, 24th Mediterranean Conference on Control and Automation, Athens, Greece, June 2016.
48. S. Ioannou, K. Dalamagkidis, E. Stefanakos, K. P. Valavanis, P. Wiley, *Modeling, Simulation and Validation of the Electrical Power Consumption of Mobile Ground Vehicles*, Proceedings, 24th Mediterranean Conference on Control and Automation, Athens, Greece, June 2016.
49. J. Dai, A. Benini, H. Lin, P. J. Antsaklis, M. J. Rutherford and K. P. Valavanis - *Learning-based Formal Synthesis of Cooperative Multi-Agent Systems with an Application to Robotic Coordination*, Proceedings, 24th Mediterranean Conference on Control and Automation, Athens, Greece, June 2016.
50. A. Benini, M. J. Rutherford, K. P. Valavanis, *Real-time, GPU-based Pose Estimation of a UAV for Autonomous Takeoff and Landing*, Proceedings, 2016 IEEE International Conference on Robotics and Automation, Stockholm, Sweden, May, 2016.

51. K. Kanistras, P. C. Saka, K. P. Valavanis and M. J. Rutherford. UC²AV: Unmanned Circulation Control Aerial Vehicle for Short Takeoff and Enhanced Payload. *Proceedings, 34th Applied Aerodynamics Conference, Aviation*, Washington, DC, 2016.
52. P. C. Saka, K. Kanistras, K. P. Valavanis and M. J. Rutherford. Development of a Framework for a Circulation Control-Based Unmanned Aerial Vehicle. *Proceedings, IEEE Aerospace Conference*, Montana, 2016.
53. J. Alvarenga, N. Vitzilaios, M. J. Rutherford, K. P. Valavanis, *Scaled Control Performance Benchmarks and Maneuvers for Small-scale Unmanned Helicopters*, Proceedings, 2015 IEEE Conference on Decision and Control, Osaka, Japan, 2015.
54. K. Kanistras, P. C. Saka, K. P. Valavanis, N. I. Vitzilaios and M. J. Rutherford. Design and Development of an Air Supply Unit for Circulation Control Wing-Based UAVs. *Proceedings, IEEE Aerospace Conference*, Montana, 2015.
55. K. Kanistras, P. C. Saka, K. P. Valavanis, N. I. Vitzilaios and M. J. Rutherford. Low Speed Wind Tunnel Investigation of a Circulation Control Wing for Enhanced Lift. *Proceedings, AIAA AVIATION*, Dallas, TX, 2015.
56. S. A. Conyers, N. Vitzilaios, M. J. Rutherford, K. P. Valavanis. *A Mobile Self-Leveling Landing Platform for VTOL UAVs*. Proceedings, 2015 IEEE International Conference on Robotics and Automation, ICRA 2015, May 26-30, Seattle, WA.
57. A. Bittar, N. I. Vitzilaios, M. J. Rutherford, K. P. Valavanis. *An integrated framework for cooperative ground and aerial vehicle missions utilizing MATLAB and X-Plane*. Proceedings, 9th Annual IEEE International Systems Conference, April 13-16, Vancouver, British Columbia, CA.
58. F. M. Mbithi, N. I. Vitzilaios, M. J. Rutherford and K. P. Valavanis, *A Propulsion System for Low-Speed Maneuvering Underwater Vehicles*, Proceedings, 2014 International Conference on Intelligent Unmanned Systems (ICIUS 2014).
59. K. Kanistras, M. J. Rutherford, N. Vitzilaios, K. P. Valavanis, “*Experimental Study of Circulation Control Wings at Low Reynolds Numbers*”, AIAA Aviation and Aeronautics Forum and Exposition, Atlanta, June 2014.
60. K. Kanistras, M. J. Rutherford, K. P. Valavanis, “*Development of a Circulation Control Wing for UAVs*”, 2014 IEEE Aerospace Conference, Montana, March 2014.
61. G. Martins, M. J. Rutherford, K. P. Valavanis, *Coordination-free Deterministic Communication for Embedded System using the BBC Encoding*, Proceedings of the 21st Mediterranean Conference on Control and Automation, June 2013, Crete, Greece.
62. H. Boussalis, K. Valavanis, D. Guillaume, F. Pena, J. Alvarenga, *Control of a Simulated Wing Structure with Multiple Segmented Control Surfaces*, Proceedings of the 21st Mediterranean Conference on Control and Automation, June 2013, Crete, Greece.
63. K. Kanistras, G. Martins, M. J. Rutherford, K. P. Valavanis, *A Survey of Unmanned Aerial Vehicles (UAVs) for Traffic Monitoring*, Proceedings of the 2013 International Conference on Unmanned Aircraft Systems, Atlanta, GA, May 2013.
64. D. S. Efstathiou, A. K. Petrou, P. Spanoudakis, N. C. Tsourveloudis, and K. P. Valavanis, *Recent Advances on the Energy Management of a Hybrid Electric Vehicle*, Digital Proceedings of the 20th Mediterranean Conference on Control and Automation, Barcelona, Spain, July 2012.
65. G. Martins, D. Lacey, A. Moses, M. J. Rutherford, K. P. Valavanis, *A Case for I/O Response Benchmarking of Microprocessors*, IEEE Industrial Electronics Society, IECON 2012, ÉTS, Montréal, Canada, October 2012.
66. R. Godzdanek, M. J. Rutherford, K. P. Valavanis, *Improving Endurance of Autonomous Aerial Vehicles through Intelligent Service-Station Placement*, Digital Proceedings of the IEEE International Conference in Robotics and Automation, Minneapolis, MN, May 2012.
67. C. Brune, T. Dityam, J. Girwar-Nath, K. Kanistras, G. Martins, A. Moses, I. Samonas, J. L. St. Amour, M. J. Rutherford, K. P. Valavanis, *Enabling Civilian Applications of Unmanned Teams*

- Through Collaboration, Cooperation and Sensing*, SPIE Defense, Security and Sensing, Proceedings of SPIE 8387, 83870D, 2012.
68. R. DeLyser, K. P. Valavanis, *Development and Accreditation of a Mechatronic Systems Engineering Option within Electrical Engineering Programs*, Digital Proceedings of the IEEE Multi-Conference on Systems and Control, Denver, CO, September 2011.
 69. A. Moses, M. J. Rutherford, K. P. Valavanis, *Radar-Based Detection and Identification for Miniature Air Vehicles*, Digital Proceedings of the IEEE Multi-Conference on Systems and Control, Denver, CO, September 2011.
 70. I. A. Raptis, K. P. Valavanis, *Velocity and Heading Tracking Control For Small-Scale Unmanned Helicopters*, Digital Proceedings of the IEEE American Control Conference (ACC), San Francisco, CA, June/July 2011.
 71. R. Godzdanter, M. J. Rutherford, K. P. Valavanis, *ISLANDS: A Self-Leveling Launch Platform for Autonomous Miniature UAVs*, Digital Proceedings of the IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), Budapest, Hungary, June 2011.
 72. G. Martins, M. J. Rutherford, K. P. Valavanis, *Search Methodologies for Node Recovery in Robotic Swarms*, Digital Proceedings of the 19th Mediterranean Conference on Control and Automation, Corfu, Greece, June 2011.
 73. A. Moses, M. J. Rutherford, K. P. Valavanis, *UAV-borne X-band Radar for MAV Collision Avoidance*, SPIE Defense, Security and Sensing, SPIE 8045, 80450U, 2011.
 74. A. Tsalatsanis, A. Yalcin, K. Valavanis, *Optimized Task Allocation in Cooperative Robot Teams*, CD-ROM Proceedings, 17th Mediterranean Conference on Control and Automation, pp:270-275, Greece, June 2009.
 75. L. Barnes, M. A. Fields, K. Valavanis, *A Bar Magnet Approach to Controlling Multirobot Systems*, CD-ROM Proceedings, 17th Mediterranean Conference on Control and Automation, pp:416-421, Greece, June 2009 (Invited).
 76. I. A. Raptis, K. Valavanis, W. Moreno, *Nonlinear Backstepping Control Design for Miniature Helicopters Using the Rotation Matrix*, CD-ROM Proceedings, 17th Mediterranean Conference on Control and Automation, pp:1227-1232, Greece, June 2009.
 77. K. Dalamagkidis, K. P. Valavanis, L. A. Piegl, *Autonomous Autorotation of Unmanned Rotorcraft using Nonlinear Model Predictive Control*, CD-ROM Proceedings, 2nd International Symposium on Unmanned Aerial Vehicles, Reno, NV, June 2009.
 78. Castillo-Effen, M., Castillo, C. L., Moreno, W. A., Valavanis, K. P., "Robustification of Decentralized PID Control for Small Unmanned Rotorcraft", CD-ROM Proceedings, IEEE/RSJ International Conference on Intelligent Robots and Systems, San Diego, California, Oct. – Nov. 2007.
 79. K. P. Valavanis, G. J. Vachtsevanos, P. J. Antsaklis, "Technology and Autonomous Mechanisms in the Mediterranean: From Ancient Greece to Byzantium", CD-ROM Proceedings, European Control Conference, Kos, Greece, July 2007.
 80. R. D. Garcia, K. P. Valavanis, "On-Board Processing Systems for Small Unmanned Vehicles", CD-ROM Proceedings, European Control Conference, Kos, Greece, July 2007.
 81. A. Monteriù, P. Asthana, K. Valavanis, S. Longhi, "Residual Generation Approaches in Navigation Sensors Fault Detection Applications", CD-ROM Proceedings, European Control Conference, Kos, Greece, July 2007.
 82. M. Castillo-Effen, C. Castillo, W. Moreno, K. P. Valavanis, "A comparative Study of Classical / Intelligent Controllers for Non-Aggressive Flight of Small Unmanned Helicopters" Proceedings, Workshop on Networked Distributed Systems for Intelligent Sensing and Control, Kalamata, Greece, June 2007.
 83. Tsalatsanis, A., Valavanis, K. P., Kandel, A., Yalcin, A., "Multiple Sensor Based UGV Localization Using Fuzzy Extended Kalman Filtering", CD-ROM Proceedings, 15th Mediterranean Conference on Control and Automation, MED'07, June 27-29, 2007, Athens, Greece.

84. Castillo, C. L., Moreno, W., Valavanis, K. P. "*Unmanned Helicopter Waypoint Trajectory Tracking Using Model Predictive Control*", CD-ROM Proceedings, 15th Mediterranean Conference on Control and Automation, MED'07, June 27-29, 2007, Athens, Greece.
85. Barnes, L., Fields, M. A., Valavanis, K. "*Unmanned Ground Vehicle Swarm Formation Control Using Potential Fields*", CD-ROM Proceedings, 15th Mediterranean Conference on Control and Automation, MED'07, June 27-29, 2007, Athens, Greece.
86. Alvis, W., Murthy, S., Valavanis, K., Moreno, W., Katkoori, S. "*FPGA Based Flexible Autopilot Platform for Unmanned Systems*", CD-ROM Proceedings, 15th Mediterranean Conference on Control and Automation, MED'07, June 27-29, 2007, Athens, Greece.
87. Puri, A., Valavanis, K. P., Kontitsis, M., "*Statistical Profile Generation for Traffic Monitoring Using Real-time UAV-based Traffic Video Data*", CD-ROM Proceedings, 15th Mediterranean Conference on Control and Automation, MED'07, June 27-29, 2007, Athens, Greece.
88. Moneriù, A., Asthana, P., Valavanis, K., Longhi, S., "*Model-Based Sensor Fault Detection and Isolation for Unmanned Ground Vehicles: Experimental Validation (Part I)*", CD-ROM Proceedings, IEEE International Conference on Robotics and Automation, Roma, Italy, 10-14 April, 2007.
89. Moneriu, A., Asthana, P., Valavanis, K., Longhi, S., "*Model-Based Sensor Fault Detection and Isolation for Unmanned Ground Vehicles: Experimental Validation (Part II)*", CD-ROM Proceedings, IEEE International Conference on Robotics and Automation, Roma, Italy, 10-14 April, 2007.
90. Puri, A., Valavanis, K., Kontitsis, M., "*Generating Traffic Statistical Profiles Using Unmanned Helicopter-Based Video Data*", CD-ROM Proceedings, IEEE International Conference on Robotics and Automation, Roma, Italy, 10-14 April 2007.
91. Lin, P-S., Puri, A., Hagan, L., Valavanis, K., "*Automatic Transformation of Video Image Data from UAVs into Traffic Information for Simulation Model Calibration*", Proceedings 13th ITS World Congress, London, October 2006.
92. Tsalatsanis, A., Yalcin, A., Valavanis, K.P., "*Automata-based Supervisory Controller for a Mobile Robot Team*", Proceedings, 3rd IEEE Latin American Robotic Council, Chile, October 2006.
93. Valavanis, K., "*Unmanned Vehicle Navigation and Control: A Fuzzy Logic Perspective*", Proceedings of the IEEE Conference on Evolutionary Fuzzy Systems, UK, September 2006.
94. Castillo-Effen, M., Moreno, W.A., Labrador, M.A., Valavanis, K.P., "*Adapting Sequential Monte-Carlo Estimation to Cooperative Localization in Wireless Sensor Networks*", Proceedings of the 3rd IEEE International Conference on Mobile Ad-Hoc and Sensor System (MASS 2006), Workshop on Localized Communication and Topology Protocols for Ad Hoc Networks (LOCAN 2006), August 2006.
95. Barnes, L., Alvis, W., Fields, M. A., Valavanis, K., Moreno, W., "*Heterogeneous Swarm Formation Control Using Bivariate Normal Functions to Generate Potential Fields*", Proceedings of the IEEE Workshop on Distributed Intelligent Systems: Collective Intelligence and Its Applications (DIS'06), Prague, June 2006.
96. Barnes, L.E., Alvis, W., Fields, M., Valavanis, K., Moreno, W., "*Swarm Formation Control with Potential Fields Formed by Bivariate Normal Functions*", CD-ROM Proceedings, 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 2006.
97. Tsalatsanis, A., Valavanis, K., Yalcin, A., "*Vision Based Target Tracking and Collision Avoidance for Mobile Robots*", Proceedings International Conference and Artificial Intelligence, Vol. 2, pp 652-658, Las Vegas, June 2006.
98. Ernst, D., Valavanis, K., Craighead, J., "*Automated Process for Unmanned Systems Controller Implementation Using MATLAB*", CD-ROM Proceedings, 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 2006.

99. Monteriu, A., Asthana, P., Valavanis, K., Longhi, S., "*Experimental Validation of a Real-Time Sensor-Based Fault Detection and Isolation System for Unmanned Ground Vehicles*", CD-ROM Proceedings, 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 2006.
100. Dalamagkidis, K., Ioannou, S., Valavanis, K. P., Stefanakos, E., "*A Mobile Landing Platform for Miniature Vertical Take-Off and Landing Vehicles*", CD-ROM Proceedings, 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 2006.
101. S. Ioannou, K. Dalamagkidis, K. P. Valavanis, E. K. Stefanakos, P. H. Wiley, "*On Improving Endurance of Unmanned Ground Vehicles: The ATRV-Jr Case Study*", CD-ROM Proceedings, 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 2006.
102. A. Tsalatsanis, K. Valavanis, N. Tsourveloudis, *Mobile Robot Navigation Using Sonar and Range Measurements from Uncalibrated Cameras*, CD-ROM Proceedings, 14th Mediterranean Conference on Control and Automation, Ancona, Italy, June 2006.
103. R. D. Garcia, K. P. Valavanis, M. Kontitsis, "*A Multiplatform On-Board Processing System for Miniature Unmanned Vehicles*" CR-ROM Proceedings, IEEE International Conference on Robotics and Automation, Orlando, Florida, May 2006.
104. C. Castillo, W. Alvis, M. Castillo-Effen, K. Valavanis, W. Moreno, *Small Scale Helicopter Analysis and Controller Design for Non-Aggressive Flights*, CD-ROM Proceedings, IEEE International Conference on SMC, Hawaii, October 2005.
105. M. Castillo-Effen, W. Alvis, C. Castillo, K. P. Valavanis, W. Moreno, *Modeling and Visualization of Multiple Autonomous Heterogeneous Vehicles*, CD-ROM Proceedings, IEEE International Conference on SMC, Hawaii, October 2005.
106. M. Kontitsis, K. P. Valavanis, R. Garcia, "*A Simple Low-Cost Vision System for Small Unmanned VTOL Vehicles*", CD-ROM Proceedings, IEEE/RSJ International Conference on Intelligent Robots and Systems, Canada, August 2005.
107. G. Tsinarakis, N. Tsourveloudis, K. P. Valavanis, "*Studying Multi assembly Machine Production Systems with Hybrid Timed Petri Nets*", CD-ROM Proceedings, IEEE Conference on Automation Science and Engineering, Canada, August 2005.
108. L. Doitsidis, A. L. Nelson, K. P. Valavanis, M. T. Long, R. R. Murphy, "*Experimental Validation of a MATLAB Based Control, Architecture for Multiple Robot Outdoor Navigation*", CD-ROM Proceedings, Mediterranean Conference on Control and Automation, Cyprus, June 2005.
109. G. J. Tsinarakis, N. C. Tsourveloudis, and K. P. Valavanis, "*Petri Net Modeling of Routing and Operation Flexibility in Production Systems*", CD-ROM Proceedings, Mediterranean Conference on Control and Automation, Cyprus, June 2005.
110. G. Vachtsevanos, B. Ludington, J. Reimann, P. Antsaklis, K. Valavanis, "*Modeling and Control of Unmanned Aerial Vehicles – Current Status and Future Directions*", Proceedings, Workshop on Modeling and Control of Complex Systems, Cyprus, July 2005 (**Invited**).
111. M. T. Long, A. Gage, R. Murphy, K. Valavanis, "*A Distributed Field Robot Architecture for UGV-UAV Navigation and Control*", Proceedings, 32nd Annual Symposium and Exhibition on AUVSI's Unmanned Systems – North America, Baltimore, June 2005.
112. K. P. Valavanis, M. Kontitsis, R. Garcia, "*Design, Implementation and Testing of a Vision System for Small Unmanned VTOL Vehicles*", Proceedings, 32nd Annual Symposium and Exhibition on AUVSI's Unmanned Systems – North America, Baltimore, June 2005.
113. M. Long, A. Gage, R. Murphy and K. Valavanis, "*Application of the Distributed Field Robot Architecture to a Simulated Demining Task*", CD-ROM Proceedings of IEEE ICRA 2005, Barcelona, Spain, April 19-22, 2005.
114. A. L. Nelson, L. Doitsidis, M. T. Long, K. P. Valavanis, and R. R. Murphy, "*Incorporation of MATLAB into a Distributed Behavioral Robotics Architecture*", CD-ROM Proceedings, IEEE / RSJ IROS 2004, Japan, September 2004.
115. N. Aldawoodi, R. Perez, W. Alvis, K. P. Valavanis, "*Developing Automated Helicopter Models Using Simulated Annealing and Genetic Search*", Proceedings of the Genetic and Evolutionary Computation

Conference, Seattle WA, June 2004.

116. L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, M. Kontitsis, "*A Framework for Fuzzy Logic Based UAV Navigation and Control*", CD-ROM Proceedings, IEEE-ICRA 2004, pp: 4041-4046, New Orleans, April 2004.
117. M. Kontitsis, N. Tsourveloudis, K. P. Valavanis, "*A UAV Vision System for Airborne Surveillance*", CD-ROM Proceedings, IEEE-ICRA 2004, pp: 77-83, New Orleans, April 2004.
118. P. Spanoudakis, N. Tsourveloudis, K. P. Valavanis, "*Design Specifications for an Unmanned VTOL*", CD-ROM Proceedings, IEEE-ICRA 2004, pp: 3616-3621, New Orleans, April 2004.
119. G. Tsinarakis, K. P. Valavanis, "*Modular Hybrid Petri Nets for Studying Multi-Operational Production Systems Where Parts Follow Multiple Alternative Processes*", CD-ROM Proceedings, IEEE-ICRA 2004, pp: 547-553, New Orleans, April 2004.
120. G. Tsinarakis, K. P. Valavanis, N. C. Tsourveloudis, "*Studying Multi-Operational Production Systems with Modular Hybrid Petri Nets*", CD-ROM Proceedings, IEEE / RSJ IROS, pp: 3028-3034, Las Vegas, October / November 2003.
121. J. A. Katsigiannis, K. P. Valavanis, N. Bilalis, P. S. Georgilakis, A. T. Souflaris, G. A. Dalaviras, A. G. Mayrogiorgos, D. G. Paparigas, "*Transformer Fault Diagnosis Modeling Using Petri Nets*", Proceedings, IEEE ISAP (Intelligent System Applications to Power Systems), Lemnos, Greece, August / September 2003.
122. L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, "*On Motion Control of Unmanned Skid Steering Vehicles*", Proceedings, 7th WSEAS International Conference on Systems, Corfu, Greece, July, 2003.
123. M. C. Kontitsis, N. C. Tsourveloudis, K. P. Valavanis, "*A UAV Based Automated Surveillance System*", CD-ROM Proceedings of the 11th Mediterranean Conference on Control and Automation, Rhodes, Greece, June 2003.
124. J. Aekaterinidis, K. Kostulakis, L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, "*An Interface System for Real-Time Mobile Robot Environment Mapping Using Sonar Sensors*", Proceedings, 4th WSEAS International Conference on Fuzzy Sets and Fuzzy Systems (FSFS'03), Athens, Greece, May 2003.
125. G. Tsinarakis, K. P. Valavanis, N. C. Tsourveloudis, "*Modular Petri Net Based Modeling, Analysis and Synthesis of Dedicated Production Systems*", CD-ROM Proceedings of the IEEE International Conference on Robotics and Automation, pp: 3559-3564, Taipei, Taiwan, 2003.
126. L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, "*Fuzzy Logic Based Software Control Architecture for a Skid Steering Vehicle*", Proceedings of the Third International Workshop on Robot Motion and Control, pp: 279-284, Bukowy Dworek, Poland, November 2002.
127. L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, "*Fuzzy Logic Based Autonomous Skid Steering Vehicle Navigation*", CD-ROM Proceedings of the IEEE International Conference on Robotics and Automation, Washington D.C., May 2002.
128. S. Ioannidis, N. C. Tsourveloudis, K. P. Valavanis, "*Supervisory Control of Multiple-Part-Type Production Networks*", CD-ROM Proceedings of the 10th Mediterranean Conference on Control and Automation, session TUA 5-1, Lisbon, Portugal, July 2002.
129. K. Nikolos, K. P. Valavanis, N. C. Tsourveloudis, A. N. Kostaras, "*3-D Evolutionary Algorithm Based Off-line / On-line Path Planner for UAV Navigation*", CD-ROM Proceedings of the 10th Mediterranean Conference on Control and Automation, session THA 7-1, Lisbon, Portugal, July 2002.
130. L. Doitsidis, K. P. Valavanis, N. C. Tsourveloudis, "*Fuzzy Logic Based Autonomous Skid Steering Vehicle Navigation*", CD-ROM Proceedings of the IEEE International Conference on Robotics and Automation, Washington D.C., May 2002.
131. V. Kanakakis, N. C. Tsourveloudis, K. P. Valavanis, "*Design and Testing of a Fuzzy Logic Controller for an Autonomous Underwater Vehicle*", CD-ROM Proceedings of the IARP International Workshop on Underwater Robotics for Sea Exploration and Environmental Monitoring, Rio de Janeiro, Brazil, October 2001.

132. A. Gvozdanovic, D. Simic, U. Visek, M. Matijasevic, K. Valavanis, D. Huljenic, "*Petri Net Based Modeling of Application Layer Traffic Characteristics*", Proceedings of EUROCON 2001 – International Conference on Trends in Communications, Vol. 2, pp: 424-427, Bratislava, Slovak Republic, July 2001.
133. M. Miljanac, V. Spisic, K. P. Valavanis, "*Petri Net Based Analysis of a Distributed Cooperative Multi Agent System with Two Types of Agents Employing a Shared Communication Channel*", Proceedings of the Conference on Telecommunications, ConTel'01, pp: 205-211, Zagreb, Croatia, June 2001.
134. K. Nikolos, N. Tsourveloudis, K. Valavanis, "*Evolutionary Algorithms Based 3-D Path Planning for UAV Navigation*", CD-ROM Proceedings of the 9th Mediterranean Conference on Control and Automation, Dubrovnik, Croatia, June 2001.
135. Puksec, M. Opsenica, D. Frank, V. Maricic, K. P. Valavanis, I. Lovrek, "*Petri Net Based Modeling and Simulation of Email Alert System*", Proceedings of the 10th Mediterranean Electrotechnical Conference (MELECON 2000), pp: 49-52, Nicosia, Cyprus, May 2000.
136. M. Matijasevic, D. Gracanin K. P. Valavanis, I. Lovrek, "*Towards QoS Specification for Distributed Virtual Environments*", Proceedings of the 10th Mediterranean Electrotechnical Conference (MELECON 2000), pp: 132-135, Nicosia, Cyprus, May 2000.
137. R. Kolluru, K. P. Valavanis, S. Smith, 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, April 2000.
138. M. Matijasevic, D. Gracanin K. P. Valavanis, I. Lovrek, "*Interconnection Model for Networked Virtual Reality Applications*", Proceedings of the 24th IEEE Annual Conference on Local Computer Networks (LCN'99), pp: 52-61, Boston, MA, October 1999.
139. M. Matijasevic, D. Gracanin K. P. Valavanis, I. Lovrek, "*A Framework for Multi-User Distributed Virtual Environments: A Telerobotics Applications*", Proceedings of the 7th IEEE International Conference on Emerging Technologies and Factory Automation – ETFA'99, pp: 449-458, Barcelona, Spain, October 1999.
140. D. Gracanin, M. Matijasevic, N. Tsourveloudis, K. P. Valavanis, "*Virtual Reality Testbed for Mobile Robots*", Proceedings of the 1999 International Symposium on Industrial Electronics, Vol. 1, pp: 293-297, Bled, Slovenia July 1999.
141. R. Sandri, K. P. Valavanis, N. Sandri, "*Petri Net Based Modeling and Simulation of Distributed Cooperative Multiagent Systems*", Proceedings of the Conference on Telecommunications, ConTel'99, pp: 267-275 Zagreb, Croatia, June 1999.
142. N. Tsourveloudis, K. Valavanis, D. Gracanin, M. Matijasevic, "*On the Measurement of Agility in Manufacturing Systems*", CD-ROM Proceedings of the European Symposium on Intelligent Techniques (ESIT'99), Crete, Greece, June 1999.
143. N. Tsourveloudis, D. Gracanin, K. P. Valavanis, "*Design and Testing of a Navigation Algorithm for a Shallow Water AUV*", Proceedings of the IEEE/OES Conference OCEANS'98, pp: 342-346, Nice, France, October 1998.
144. D. Gracanin, M. Matijasevic, N. Tsourveloudis, K. P. Valavanis, "*Virtual Reality Simulation Testbed for Underwater Environments*", Proceedings of the IEEE/OES Conference OCEANS'98, pp: 1392-1396, Nice, France, October 1998.
145. N. A. Fountas, K. P. Valavanis, "*A Model-Based Intelligent System Technique for Power Systems*", Proceedings of IMACS – Circuits, Systems and Computers Conference, Piraeus, Greece, October 1998.
146. T. Hebert, K. P. Valavanis, "*Navigation of an Autonomous Vehicle Using an Electrostatic Potential Field*", Proceedings of the IEEE Conference on Control Applications (CCA'98), pp: 1328-1332, Trieste, Italy, September 1998.
147. T. Hebert, N. Tsourveloudis, K. P. Valavanis, "*Fuzzy Control of Autonomous Vehicle Navigation Utilizing Electrostatic Potential Fields*", Proceedings of the IEEE Conference on Control Applications (CCA'98), pp: 658-662, Trieste, Italy, September 1998.

148. N. Tsourveloudis, R. Kolluru, K. P. Valavanis, "Fuzzy Control of a Suction-Based Robotic Gripper System", pp: 653-657, Proceedings of the IEEE Conference on Control Applications (CCA'98), Trieste, Italy, September 1998.
149. N. A. Fountas, K. P. Valavanis, N. Hatziaargyriou, "An Efficient PC-Based Environment for Power System Studies – Application to the Restoration Problem", Proceedings of the 8th IFAC/IFORS/IMACS/IFIP Symposium on Large Scale Systems: Theory and Applications, pp: 674-679, University of Patras, Greece, July 1998.
150. N. Tsourveloudis, D. Gracanin, M. Matijasevic, K. P. Valavanis, "Virtual Environment Based Training Tool for Power Plant Fault Detection", Proceedings of the IEEE Workshop on Design, Testing and Applications, WDTA'98, pp: 163-166, Dubrovnik, Croatia, June 1998.
151. C. Veltsos, K. P. Valavanis, D. Gracanin, "Automating the Petri Net Based Modeling and Analysis of Complex Dynamic Systems", Proceedings of the IEEE Workshop on Design, Testing and Applications, WDTA'98, pp: 73-76, Dubrovnik, Croatia, June 1998.
152. L. Cahut, K. P. Valavanis, H. Delic, "Sonar Resolution-Based Environment Mapping", Proceedings of the IEEE International Conference in Robotics and Automation, pp: 2541-2547, Leuven, Belgium, May 1998.
153. G. A. Demetriou, K. P. Valavanis, "A State Configured Sensor Based Control Architecture for an Autonomous Underwater Vehicle", CD-ROM Proceedings of the 5th IEEE Mediterranean Conference on Control and Systems, paper TA1-1, Paphos, Cyprus, July 1997.
154. D. Gracanin, M. Matijasevic, K. P. Valavanis, "Virtual Environment Testbed for Underwater Robotic Applications", Proceedings of the 8th International Conference on Advanced Robotics ICAR'97, pp: 793-797, Monterey, CA, USA, July 1997.
155. C. Veltsos, K. P. Valavanis, "Modeling of Complex Dynamic Systems with Agents and Actions", Proceedings of the Conference on Telecommunications, ConTel'97, pp: 303-313, Zagreb, Croatia, June 1997.
156. D. Gracanin, K. P. Valavanis, G. Demetriou, R. Kolluru, "Development of a Virtual Reality Testbed and AUV Control Architecture for Coastal / Shallow Water Environments", Proceedings of COSU'97 Coastal Ocean Space Utilization, Vol. 2, pp: 305-320, Singapore, May 1997.
157. R. Kolluru, K. P. Valavanis, T. Hebert, "A Robotic Gripper System for Limp Material Manipulation: Modeling, Analysis and Performance Evaluation", CD-ROM Proceedings of the IEEE International Conference in Robotics and Automation, pp: 310-316, Albuquerque, NM, USA, April 1997.
158. T. Hebert, K. P. Valavanis, R. Kolluru, "A Robotic Gripper System for Limp Material Manipulation: Hardware and Software Development and Integration", CD-ROM Proceedings of the IEEE International Conference in Robotics and Automation, pp: 15-21, Albuquerque, NM, USA, April 1997.
159. P. Valavanis, D. Gracanin, "A Visual Monitoring System: A Virtual Reality and Multimedia Perspective", Proceedings of the Broadband and Multimedia Workshop, B&MW, pp: 47-61, Zagreb, Croatia, November 1996.
160. Y. Zhang, K. P. Valavanis, "A Sensor - Based 3-D Potential Panel Method for Robot Motion Planning", Proceedings of the Fourth IEEE Mediterranean Symposium on New Directions in Control and Automation, pp: 364-369, Chania, Crete, Greece, June 1996.
161. G. Demetriou, M. Talley, D. Gracanin, K. P. Valavanis, "A Virtual Reality Environment for Real-Time Telerobot Control: The AdeptOne/AdeptThree Case Study", Proceedings of the Fourth IEEE Mediterranean Symposium on New Directions in Control and Automation, pp: 370-374, Chania, Crete, Greece, June 1996.
162. A. Fountas, N. D. Hatziaargyriou, K. P. Valavanis, "An Extended Petri Nets Approach for the Formulation of Power Systems Restoration Guidelines", Proceedings of the Fourth IEEE Mediterranean Symposium on New Directions in Control and Automation, pp: 201-206, Chania, Crete, June 1996.

163. G. Paschos, K. P. Valavanis, "*A Color Texture Based Visual Monitoring System for Automated Surveillance*", Proceedings of the IEEE Symposium on Autonomous Underwater Vehicle Technology, pp: 354-361, Monterey, CA, June 1996.
164. P. Valavanis, R. Kolluru, T. Hebert, A. R. Steward, M. Sonnier, "*Design of a Robotic Gripper System for Automated Deformable Material Manipulation*", Proceedings of the World Automation Congress (WAC'96): Robotic and Manufacturing Systems, Vol. 3, pp: 407-414, Montpellier, France, May 1996.
165. D. Gracanin, K. P. Valavanis, S. Smith, T. Williams, A. R. Steward, "*A Dynamic Resource Allocation System for Computer Integrated Manufacturing Systems*", Proceedings of the World Automation Congress, (WAC'96): Robotic and Manufacturing Systems, Vol. 3, pp: 313-318, Montpellier, France, May 1996.
166. S. Ramaswamy, K. P. Valavanis, S. Barber, "*Model Development of MIMO Nets: A H-EPN Based Approach*", Proceedings of the 34th IEEE Conference on Decision and Control, pp: 897-904, New Orleans, LA, USA, December 1995.
167. P. Valavanis, M. A. Bayoumi, "*A Control System Architecture for an Autonomous Underwater Vehicle*", Proceedings of the International Program Development in Undersea Robotics and Intelligent Control (URIC), pp: 185-191, Lisbon, Portugal, March 1995. (Invited paper)
168. G. Paschos, K. P. Valavanis, "*Chromatic Measures for Color Texture Description and Analysis*", Proceedings of the 10th IEEE International Symposium on Intelligent Control, pp: 319-325, Monterey, CA, USA, August 1995.
169. R. Kolluru, K. P. Valavanis, A. R. Steward, M. Sonnier, "*A Sensor-Based Robotic Gripper for Limp Material Handling*", Proceedings of the Third IEEE Mediterranean Symposium on Control and Automation, Vol. 1., pp: 68-76, Limassol, Cyprus, June 1995.
170. A. I. Kokkinaki, K. P. Valavanis, "*Error Specification, Tracking and Recovery in Computer Integrated Manufacturing Systems*", Proceedings of the Third IEEE Mediterranean Symposium on Control and Automation, Vol. 1, pp: 187-194, Limassol, Cyprus, June 1995.
171. S. Ramaswamy, K. P. Valavanis, "*On the Construction and Analysis of MIMO Subnet Structures*", Proceedings of the International Conference on Automation, Robotics and Computer Vision ICARCV'94, pp: 2144-2148, Singapore, November 1994.
172. C. S. Edara, K. P. Valavanis, "*Dynamic Parameter Identification and Joint Torque Decomposition of the AdeptOne Robot for Real-Time Control*", Proceedings of the International Conference on Automation, Robotics and Computer Vision ICARCV'94, pp: 1482-1486, Singapore, November 1994.
173. A. I. Kokkinaki, K. P. Valavanis, A. Maida, "*Distributed Real-time Planning for an Automated Manufacturing Environment*", Proceedings of the International Conference on Automation, Robotics and Computer Vision, ICARCV'94, pp: 312-316, Singapore, November 1994.
174. D. Gracanin, P. Srinivasan, K. P. Valavanis, "*Parameterized Petri Nets: Properties and Applications to Automated Manufacturing Systems*", Proceedings of the 2nd IEEE Mediterranean Symposium on New Directions in Control and Automation, pp: 48-55, Chania, Crete, Greece, June 1994.
175. S. Ramaswamy, K. P. Valavanis, P. Srinivasan, A. Steward, "*A Coordination Level H-EPN Based Error Recovery Model for Hierarchical Systems*", Proceedings of the 2nd IEEE Mediterranean Symposium on New Directions in Control and Automation, pp: 56-61, Chania, Crete, Greece, June 1994.
176. T. Williams, D. Gracanin, K. P. Valavanis, A. Steward, "*Real-Time Scheduling in an Event Driven Virtual Environment*", Proceedings of the Conference on Advances in Modeling and Simulation, U.S. Army Missile Command, RD-AS-94-13, pp: 3-12, Redstone Arsenal, AL, USA, April 1994.
177. S. Ramaswamy, K. P. Valavanis, "*Integrated Control and Diagnostics in DEDS with Hierarchical Time Extended Petri Nets*", Proceedings of the AAAI'94 Spring Symposium Series, Symposium on Detecting and Resolving Errors in Manufacturing Systems, pp: 121-128, Stanford, CA, USA, March 1994. (Invited Paper).

178. D. Gracanin, K. P. Valavanis, P. Srinivasan, "*A Parameterized Petri Net Model for the Organization Level of Intelligent Robotic Systems*", Proceedings of the Joint IEEE/IFAC Symposium on Computer Aided Control System Design, pp: 39-46, Tucson, AZ, USA, March 1994.
179. S. Ramaswamy, K. P. Valavanis, P. Srinivasan, A. Steward, "*Extended Petri Nets for Real-Time Control of Automated Manufacturing Systems*", Proceedings of the Fifth Annual Academic Research Conference, pp: 13.1-13.8, Lafayette, LA, USA, February 1994.
180. S. R. Malladi, K. P. Valavanis, "*A Multi-Processor Architecture to Control a Sensor Based Multi-Jointed Robotic Appendage*", Proceedings of the Workshop on Computer Architectures for Machine Perception, pp: 370-375, New Orleans, LA, USA, December 1993. (Poster Paper).
181. D. Gracanin, P. Srinivasan, K. P. Valavanis, "*Time and Error Recovery with Parameterized Petri Nets*", Proceedings of the 8th IEEE International Symposium on Intelligent Control, pp: 291-297, Chicago, IL, USA, August 1993.
182. S. R. Malladi, K. P. Valavanis, M. C. Mulder, "*Sensor Based Motion Control and Coordination of a Redundant Manipulator*", Proceedings of the IEEE Mediterranean Symposium on New Directions in Control Theory and Applications, 9 pages, Chania, Crete, Greece, June 1993.
183. S. R. Malladi, K. P. Valavanis, M. C. Mulder, "*Trajectory Generation for a Sensor Based Redundant Manipulator*", Proceedings of the IEEE Mediterranean Symposium on New Directions in Control Theory and Applications, 10 pages, Chania, Crete, Greece, June 1993.
184. P. Valavanis, M. A. Bayoumi, "*A VLSI Based Architecture for Plan Formulation and Organization in Multisensory Robotic Systems*", Proceedings of the IEEE Mediterranean Symposium on New Directions in Control Theory and Applications, 3 pages, Chania, Crete, Greece, June 1993. (Extended Summary).
185. S. Ramaswamy, K. P. Valavanis, "*Modeling, Analysis and Simulation of Failures in a Materials Handling System with Extended Petri Net*", Proceedings of the IEEE International Conference on Robotics and Automation, pp: 323-330, Atlanta, GA, USA, May 1993.
186. D. Gracanin, P. Srinivasan, K. P. Valavanis, "*Fundamentals of Parameterized Petri Nets*", Proceedings of the IEEE International Conference on Robotics and Automation, pp: 584-591, Atlanta, GA, USA, May 1993.
187. S. Ramaswamy, K. P. Valavanis, S. P. Landry, "*Modeling, Analysis and Simulation of a Materials Handling System with Extended Petri Nets*", Proceedings of the 31st IEEE Conference on Decision and Control, pp: 1665-1672, Tucson, AZ, USA, December 1992.
188. S. Malladi, K. P. Valavanis, M. C. Mulder, "*On the Validation of a Sensor Based Robot Control System Using the Minimum Effort Factor Control Approach*", Proceedings of the 31st IEEE Conference on Decision and Control, pp: 1399-1405, Tucson, AZ, USA, December 1992.
189. S. Malladi, M. C. Mulder, K. P. Valavanis, Y. Zhang, "*Behavior of a Minimum Effort Control Algorithm for a Multi - Jointed Robotic Arm*", Proceedings of the 7th IEEE International Symposium on Intelligent Control, pp: 34-41, Glasgow, UK, August 1992.
190. B. Alhalabi, M. Bayoumi, K. Valavanis, "*A General-Purpose VLSI Chip for Robot Axis Motion Controller*", Proceedings of the IEEE International Symposium on Circuits and Systems, San Diego, CA, USA, May 1992.
191. G. Seetharaman, M. Bayoumi, K. P. Valavanis, M. Mulder, "*VLSI Architectures for Stereo Image Sensors*", Proceedings of the Workshop on Computer Architecture for Machine Perception, pp: 373-384, Paris, France, December 1991.
192. G. Seetharaman, K. P. Valavanis, "*Diagnostic Intelligence Mechanisms for Multisensory Robotic Systems*", Proceedings of the 30th IEEE Conference on Decision and Control, pp: 1889-1890, Brighton, England, December 1991. (Invited, short paper).
193. J. Zheng, K. P. Valavanis, J. Gauch, "*Decorrelation of Color Images Using Total Color Difference*", Proceedings of the SPIE Conference on Visual Communication and Image Processing, Boston, MA, USA, November 1991.

194. J. Zheng, K. P. Valavanis, J. Gauch, "*The Suppression of Speckles in Color Images*", Proceedings of the SPIE Conference on High Speed Architectures and Systems in Machine Vision, Boston, MA, USA, November 1991.
195. J. Zheng, K. P. Valavanis, J. Gauch, "*Object Extraction for Color Robotic Vision Systems*", Proceedings of the 6th IEEE International Symposium on Intelligent Control, pp: 449-456, Arlington, VA, USA, August 1991.
196. K. P. Valavanis, G. Seetharaman, M. Bayoumi, M. Mulder, "*On a Distributed Intelligence Materials Handling System*", Proceedings of the IFAC International Symposium on Distributed Intelligence Systems, pp: 217-222, Arlington, VA, USA, August 1991.
197. K. P. Valavanis, "*An Intelligent Robotic System with Low Level Diagnostic Intelligence Capabilities*", Proceedings of the 13th IMACS World Congress Special Sessions, Dublin, Ireland, July 1991. (Short paper)
198. K. P. Valavanis, "*Stability Analysis of the PUMA Robot Under Model Mismatch*", Proceedings of the 13th IMACS World Congress Special Sessions, Dublin, Ireland, July 1991. (Short paper)
199. C. A. Protopapas, B. K. Papadias, A. V. Machias, K. P. Valavanis, "*Introduction to Intelligent Power Systems*", Proceedings of the Third International Symposium on Expert System Applications to Power Systems, Tokyo, Japan, April 1991.
200. K. P. Valavanis, J. Zheng, J. Gauch, "*On Impulse Noise Removal in Color Images*", Proceedings of the IEEE International Conference on Robotics and Automation, pp: 144-149, Sacramento, CA, USA, April 1991.
201. H. Stellakis, K. P. Valavanis, "*Fuzzy Logic Based Modeling of the Organizer of Intelligent Robotic Systems*", Proceedings of the 29th IEEE Conference on Decision and Control, Hawaii, December 1990.
202. K. P. Valavanis, T. B. Larsson, S. P. Gardner, "*Stability Evaluation of the PUMA - 560 Robot Arm Under Model Mismatch*", Proceedings of the SPIE Conference in Intelligent Robotics in Space, Boston, MA, USA, November 1990. (Invited paper)
203. J. Zheng, K. P. Valavanis, J. Gauch, "*The Object Extraction Using Color Information in Computer Vision*", Proceedings of the International Conference on Automation, Robotics and Computer Vision, ICARCV, Singapore, September 1990.
204. M. Kokar, C. Anderson, T. Dean, K. Valavanis, W. Zadrozny, "*Knowledge Representations for Learning Control*", Proceedings of the 5th IEEE International Symposium on Intelligent Control, pp: 389-399, Philadelphia, PA, USA, September 1990.
205. C. A. Jacobson, K. P. Valavanis, "*Review of the 4 - Parameter Controller Approach for FDI Problems*", Proceedings of the 5th IEEE International Symposium on Intelligent Control, pp: 577-582, Philadelphia, PA, USA, September 1990.
206. K. P. Valavanis, G. N. Saridis, "*A Review of Intelligent Control Based Methodologies for the Modeling and Analysis of Hierarchically Intelligent Systems*", Proceedings of the 5th IEEE International Symposium on Intelligent Control, pp: 15-20, Philadelphia, PA, USA, September 1990.
207. K. P. Valavanis, S. J. Carelo, "*Efficient Organization Level Planning for Robotic Assemblies and Intelligent Robotic Systems*", Proceedings of the IEEE American Control Conference, June 1990.
208. K. P. Valavanis, C. A. Jacobson, B. Gold, "*An Application of the 4 - parameter Controller to the Robot Payload Variation Problem*", Proceedings of the 28th IEEE Conference on Decision and Control, pp: 2658-2663, Tampa, FL, USA, December 1989.
209. P. Yuan, K. P. Valavanis, "*Design of an Intelligent Robotic System Organizer via Expert System Techniques*", Proceedings of the SPIE/Intelligent Controls Conference, pp: 121-135, Cambridge, MA, USA, November 1988.
210. P. Yuan, K. P. Valavanis, "*Design of an Intelligent Robotic System Using Microprocessor Based Configuration and Logic Design Techniques*", Proceedings of the 3rd IEEE International Symposium on Intelligent Control, pp: 615-622, Arlington, VA, USA, August 1988.
211. K. P. Valavanis, "*Knowledge Based (Expert) Systems versus Intelligent Machines*", Proceedings of IMACS 88, Paris, France, July 1988.

212. J. S. Ahuja, K. P. Valavanis, "*Modified Petri Nets for Comprehensive Modeling of Flexible Manufacturing Systems*", Proceedings of IMACS 88, Paris, France, July 1988.
213. J. S. Ahuja, K. P. Valavanis, "*A Hierarchical Modeling Methodology for Flexible Manufacturing Systems Using Extended Petri Nets*", Proceedings of the 1988 International Conference on Computer Integrated Manufacturing, pp: 350-356, RPI, Troy, NY, USA, May 1988.
214. K. P. Valavanis, G. N. Saridis, "*Information Theoretic Modeling of Intelligent Robotic Systems, Part I: The Organization Level*", Proceedings of the 26th IEEE Conference on Decision and Control, pp: 618-626, Los Angeles, CA, USA, December 1987.
215. K. P. Valavanis, G. N. Saridis, "*Information Theoretic Modeling of Intelligent Robotic Systems, Part II: The Coordination and Execution Levels*", Proceedings of the 26th IEEE Conference on Decision and Control, pp: 627-633, Los Angeles, CA, USA, December 1987.
216. G. N. Saridis, K. P. Valavanis, "*On the Theory of Intelligent Controls*", Proceedings of the SPIE/Intelligent Controls Conference, pp: 488-495, Boston, MA, USA, November 1987.
217. G. N. Saridis, K. P. Valavanis, "*Software and Hardware of Intelligent Robots*", Proceedings of the Workshop on Telerobotics, pp: 241-249, Pasadena, CA, USA, January 1987.
218. G. N. Saridis, K. P. Valavanis, "*Mathematical Formulation of the Organization Level of an Intelligent Machine*", Proceedings of the IEEE Robotics and Automation Conference, pp: 267-272, San Francisco, CA, USA, April 1986.
219. M. B. Leahy, K. P. Valavanis, G. N. Saridis, "*The Effects of Dynamic Models on Robot Control*", Proceedings of the IEEE Robotics and Automation Conference, pp: 49-54, San Francisco, CA, USA, April 1986.
220. M. B. Leahy, L. M. Nugent, K. P. Valavanis, G. N. Saridis, "*Efficient Dynamics for a PUMA-600*", Proceedings of the IEEE Robotics and Automation Conference, pp: 519-524, San Francisco, CA, USA, April 1986.
221. K. P. Valavanis, G. N. Saridis, "*Architectural Models for Intelligent Machines*", Proceedings of the 25th IEEE Conference on Decision and Control, Athens, Greece, December 1986.
222. P. Bonissone, K. P. Valavanis, "*A Comparative Study of Different Approaches to Qualitative Physics Theories*", Proceedings of the 2nd Conference on Artificial Intelligence Applications, pp: 236-243, Miami, FL, USA, December 1985.
223. G. N. Saridis, K. P. Valavanis, "*Analytical Design of Intelligent Machines*", Proceedings of the SYROCO Conference, Barcelona, Spain, November 1985.
224. G. N. Saridis, K. P. Valavanis, "*Information Theoretic Approach for Knowledge Engineering and Intelligent Machines*", Proceedings of the IEEE American Control Conference, pp: 1098-1103, Boston, MA, USA, June 1985.
225. K. P. Valavanis, M. B. Leahy, G. N. Saridis, "*Real-Time Evaluation of Robot Control Methods*", Proceedings of the IEEE Robotics and Automation Conference, pp: 644-649, St. Louis, MO, March 1985.
226. K. P. Valavanis, G. N. Saridis, "*On the Comparison of Robot Control Methods by Simulation*", Proceedings of the Optimization Days, Montreal, Canada, May 1984.
227. G. N. Saridis, K. P. Valavanis, "*Intelligent Robotic Control*", Proceedings of the IEEE MELECON Conference, C10.04, Athens, Greece, May 1983.
228. G. N. Saridis, K. P. Valavanis, "*Application of Optimal Control Theory to the Unimation PUMA Arm*", Proceedings of the IEEE Conference on Systems Man and Cybernetics, pp: 253-256, Seattle, WA, October 1982. (Invited)