

CURRICULUM VITAE
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CURRENT APPOINTMENT:

Jan. 2006 – Present, Research Assistant, **Brain Sciences Center**.
Aug. 2009 – Present, Adjunct faculty position, Department of Psychology, St. Cloud State University, Minnesota.

RESEARCH INTERESTS:

Computational Neuroscience, Perception and Action, Motor control, Magnetoencephalography/ Electroencephalography of brain function, Perception & Action, In-Vitro Cell Cultures, Non-invasive Brain Computer Interface, Evolutionary Algorithms, Large-Scale Design Optimization.

EDUCATION:

Aug. 2005 - Present, Ph.D. candidate in Computer Science and Engineering (minor: Cognitive Science), **University of Minnesota**, Minneapolis, MN. current G.P.A.: 3.75/4
Aug. 2003 - May. 2005, M.Sc. in Computer Science, **University of Minnesota**, Minneapolis, MN. G.P.A.: 3.56/4
Aug. 2002 - Sep. 2003, M.Sc. in Production Engineering and Management (division: Production Systems), **Technical University of Crete**, Chania, Greece, G.P.A.: 9.14/10, Rank 1st.
Sep. 1997 - Jul. 2002, Diploma in Production Engineering and Management (5 years of study including Diploma Thesis), **Technical University of Crete**, Chania, Greece, G.P.A.: 8.36/10, Rank 1st.

WORK & RESEARCH EXPERIENCE:

Jan. 2007 - Present: **Performing movements under risk.**, University of Minnesota (UMN), Department of Psychology, National Institute of Health (NHI).
Sep. 2008 - Present: **Physiology of Neuronal Cell Cultures**, University of Minnesota (UMN), Brain Sciences Center.
May. 2008 - Aug. 2008: **Next Generation Spinal Cord Stimulator**, Summer Internship, Medtronic Inc., Minneapolis.
Jan. 2006 - Sep. 2008: **Brain Computer Interface using non-invasive (EEG, MEG) techniques.**, University of Minnesota (UMN), Brain Sciences Center.
Aug. 2003 - May. 2005, **Adaptive Sensing for Instantaneous Gas Release Parameters Estimation**, University of Minnesota (UMN), Jet Propulsion Laboratory (JPL), National Science Foundation (NSF).

Aug. 2003 - May. 2005, **Safe and Precise Landing**, University of Minnesota (UMN), National Aeronautics And Space Administration (NASA), Jet Propulsion Laboratory (JPL).

Sep. 2002 - Jan. 2003, **Development of an Intelligent Autonomous Navigation System for Unmanned Aerial Vehicles**, Members: EADS-3 SIGMA, Technical University of Crete, National Technical University of Athens (NTUA).

Sep. 2002 - Mar. 2003, **Development of a Turbo-Jet Engine for an Unmanned Aerial Platform** Members: EADS-3 SIGMA, Technical University of Crete, Funded by the Greek Secretariat for Research and Technology.

Mar. 1999 - Sep. 2001 - **SEISMOCARE**(Computer Aided Reduction of Seismic Risk with applications in existing cities, town planning and construction), ENVIRONMENT AND CLIMATE 1994-1998, European Commission.

PROFESSIONAL EXPERIENCE:

May. 2008 – Aug. 2008 Summer Intern, **Medtronic Inc.**, Neuromodulation division.
May. 2005 – Jan. 2006 Research Assistant, **Computational Perception and Action Lab.**, Univ. of Minnesota.
Aug. 2003 – Jan. 2005 Research Assistant, **Multiple Autonomous Robotics Systems Lab.**, Univ. of Minnesota.
Sep. 2001 – Aug. 2003 Research Assistant, **Intelligent Systems and Robotics Lab.**, Tech. Univ. of Crete.
Mar. 1999 – Sep. 2001 Research Assistant, **Applied Mechanics Lab.**, Tech. Univ. of Crete.

TEACHING EXPERIENCE:

Sep. 2009 – Present, Adjunct faculty, **Sensation and Perception**, Psychology, St. Cloud State University, MN.
Jan. 2006 – May 2006 Teaching Assistant, **Artificial Intelligence I.**, Computer Science, Univ. of Minnesota.
Sep. 2005 – Dec. 2006 Teaching Assistant, **Comp. Aspects of Matrix Theory.**, Computer Science, Univ. of Minnesota.
Sep. 2005 – Dec. 2006 Teaching Assistant, **Artificial Intelligence I.**, Computer Science, Univ. of Minnesota.
Jan. 2005 – May 2005 Teaching Assistant, **Artificial Intelligence II.**, Computer Science, Univ. of Minnesota.
Jan. 2005 – May 2005 Teaching Assistant, **Computational Vision.**, Computer Science, Univ. of Minnesota.

HONORS:

2006 - **Fellowship** for summer school in Cognitive Neuroscience, Dartmouth

2005 - **National Science Foundation**, ICRA-05 Travel Award.

2005 - **Graduate and Professional Student Assembly (GAPSA)**, UMN, ICRA-05 Travel Award.

2004 - **Greek National Railways**, 2 Awards for ranking 1st in class in graduate program of Production Engineering and Management.

2003 - **Greek National Foundation for Scholarship (IKY)**, Award for ranking 1st in class in graduate program of Production Engineering and Management.

2002 - **Technical University of Crete**, Award for graduating 1st from the Department of Production Engineering and Management.

SOCIETIES MEMBERSHIPS:

IEEE, Society for Neuroscience, Vision Science Society, Cognitive Science Center of University of Minnesota.

SERVICE:

Reviewer:

Elsevier Science, Robotics and Autonomous Systems.
SpringerLink, Autonomous Robots Journal.
IEEE International Symposium on Workload Characterization, 2007.
WOSP/SIPEW International Conference on Performance Engineering, 2010.

Conference Session Chair:

IEEE International Conference on Robotics and Automation (2004).

Registration Officer:

IEEE International Conference on Robotics and Automation (2004).

Student Governance Related Activities:

- 2008 - Present: President of the Hellenic Student Association, University of Minnesota.
- 2007 - 2008: Vice - President of the Hellenic Student Association, University of Minnesota
- 2000 - 2002: President of Student Union Association of Technical University of Crete.
- 2000 - 2002: Member of the Senate of Technical University of Crete.
- 1998 - 2002: Member of the Department Assembly of Production Engineering and Management.
- 1998 - 1999: Member of the Department Assembly of Department of Science.
- 1998 - 1999: Vice - President of Student Union Association of production Engineering and Management.

SCIENTIFIC PUBLICATIONS:

• Journal Articles

V.N. Christopoulos, Paul R. Schrater, “Grasping objects with environmentally induced position uncertainty”, *PLOS Computational Biology* (under revision).

V.N. Christopoulos, Paul R. Schrater, “An optimal feedback control framework for grasping objects with position uncertainty”, (in preparation).

I.K Nikolos, L. Doitsidis, **V.N. Christopoulos**, N. Tsoaveloudis, “Roll Control of Unmanned Aerial Vehicles using Fuzzy Logic”, *WSEAS Transactions on systems, Issue 4, Vol. 2, pp.1039-1047. October 2003.*

• Peer-Reviewed Conference Papers

Vassilios N. Christopoulos, David Lilja, Paul R. Schrater, Apostolos Georgopoulos, “Independent Component Analysis and Evolutionary Algorithms for Building Representative Benchmark Subsets”, in Proc. 2008 IEEE International Symposium on Performance Analysis of Systems and Software, Austin, TX, Apr. 20-22.

Vassilios N. Christopoulos, Paul Schrater, “Handling shape and contact location uncertainty in grasping two-dimensional planar objects”, In Proc. 2007 IEEE/RSJ International Conference on Intelligent Robots and Systems, San Diego, CA, Oct. 29–Nov. 2.

Vassilios N. Christopoulos, Stergios .I. Roumeliotis, “MultiRobot Trajectory Generation for Single Source Explosion Parameter Estimation”, In Proc. 2005 IEEE International Conference on Robotics and Automation, Barcelona, Spain, Apr. 18–22, pp.2814-2820.

Vassilios N. Christopoulos, Stergios I. Roumeliotis, “Adaptive Sensing for Instantaneous Gas Release Parameter Estimation”, In Proc. 2005 IEEE International Conference on Robotics and Automation, Barcelona, Spain, Apr. 18–22, pp. 4461-4467.

Vassilios N. Christopoulos, Ioannis K. Nikolos, “Multi-Objective Optimization using Evolutionary Algorithms in Engineering Design: Part II, Airfoil Design Optimization”, 7th NATIONAL CONGRESS ON MECHANICS, Chania, Greece, Jun. 24–26, 2004.

Vassilios N. Christopoulos, Ioannis K. Nikolos, “Multi-Objective Optimization using Evolutionary Algorithms in Engineering Design: Part I, Methodology Presentation and Benchmark Testing”, 7th NATIONAL CONGRESS ON MECHANICS, Chania, Greece, Jun. 24–26, 2004.

Ioannis Nikolos, **Vassilios Christopoulos**, “Enhanced Evolutionary Algorithm Convergence using Partially Evaluated Population in single and Multiple-Deme implementations”, International Congress on Evolutionary Methods for Design, Optimization and Control, with Applications to Industrial Problems, EUROGEN, Barcelona, 2003.

- **Abstracts**

Vassilios N. Christopoulos and Paul R. Schrater, “Identifying strategies for grasping objects with position uncertainty using empirical cost-to-go functions”, Vision Sciences Society 2008, May 9–14, Naples, FL.

Vassilios N. Christopoulos and Paul Schrater, “Studying human grasping under position uncertainty of 3 dimensional objects”, Society for Neuroscience 2007, San Diego, CA., Nov. 3–7.

Vassilios N. Christopoulos and Paul Schrater, “Effects of Shape and Contact Location Uncertainty on Grasp Quality”, Presidential Symposium on Neuroscience 2006, The Adaptive Brain, Minnesota, Sep. 14–15.

- **Dissertations**

Master Thesis: “Multi Robot Trajectory Generation for Parameter Estimation of an Instantaneous Gas Release”, Department of Computer Science and Engineering, University of Minnesota, MN, May 2005.

Master Thesis: “Development of Single and Multiobjective Optimization Techniques using Evolutionary Algorithms for Design Optimization”, Department of Production Engineering and Management, Technical University of Crete, Chania, Dec. 2003.

Diploma Thesis: “Preliminary Design of a Turbojet Engine for the Propulsion of an Unmanned Aerial Vehicle (U.A.V.)”, Department of Production Engineering and Management, Technical University of Crete, Chania, Jul. 2002.

- **Technical Reports**

Vassilios N. Christopoulos, Paul Schrater, “Effects of Shape and Contact Location Uncertainty on Grasp Quality”, University of Minnesota, Tech. Report, May 2006.

COMPUTER SKILLS:

Programming Languages: C, Fortran 90, Visual Basic 6.0, LISP, SQL.

Operating Systems: Windows 95/98/2000/NT, Linux (Red hat).

Mathematical Software: MATLAB, Mathematica

CAD Software: Pro - Engineer.

Microsoft Office (Word, Excel, PowerPoint, etc).

OTHER SKILLS:

Machine Tools: Lathe, Milling Machine, CNC.

REFERENCES:**Apostolos Georgopoulos** (PhD Advisor)

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Paul R. Schrater (PhD Advisor)

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