Nikolaos Agadakos

Graduate Student
Computer Science Department
Stevens Institute of Technology

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Education

- **MSc in Computer Science**
  Department of Computer Science, Stevens Institute of Technology (Expected Fall 2018)
  Involvement in 2 projects:

  1. Development of a semi-autonomous robotic wheelchair for people with severe disabilities, leveraging SVM's for preference learning.

  2. Developed a method attempting to leverage spatial information to improve disparity maps.

  Supervisor: Associate Prof. Philippos Mordohai.
  Grade: 3.6/4

- **MSc in Telecommunications Engineering**
  Department of Electronic and Computer Engineering, Technical University of Crete, Chania, Greece, October, 2015.
  Thesis: "Design and Implementation of a Lightweight, Cross-Layer, Frequency-Hopping, Interference-Agile, Self-Organized WSN."
  Supervisor: Associate Prof. Aggelos Bletsas.
  Grade: 9.416/10

- **Electronics and Computer Engineering Diploma** (5-year program)
  Department of Electronic and Computer Engineering, Technical University of Crete, Chania, Greece, December. 2012.
  Thesis: "Low Cost, low power cross layer Medium Access Control and Routing protocol design for ad-hoc networks."
  Supervisor: Assistant Prof. Aggelos Bletsas.
  GPA: 7.15/10.0.

Awards and Distinctions

- *Student Scholarship Award, Stevens Institute of Technology.*

- *Student Fellowship Award, Eurobank, awarded to the best students in Greece.*
  Athens. 2005-2006.

RESEARCH INTERESTS

- Machine Learning and Deep Learning, their foundational theory and their applications especially in solving novel problems.

- Computer Vision and Robotics.

- Technology in Biomedical Applications

- Wireless Sensor Networks for Environmental, Urban and Medical applications.

RESEARCH EXPERIENCE

- 2016 - 2018, Research Assistant, Stevens Institute of Technology.

- 2013 - 2015, Research Assistant: Distributed Communications Systems(DISCO), Technical University of Crete.

TEACHING EXPERIENCE

- 2013(Spring) Teaching Assistant, Telecommunications Systems II

- 2014(Spring) Teaching Assistant, Telecommunications Systems II

- 2014(Fall) Teaching Assistant, Synthesis of Telecommunications Systems

PUBLICATIONS

- Yizhe Chang, Mohammed Kutbi, Nikolaos Agadakos, Bo Sun, Philippos Mordohai ; "A Shared Autonomy Approach for Wheelchair Navigation Based on Learned User Preferences," *A Shared Autonomy Approach for Wheelchair Navigation Based on Learned User Preferences.*

- N. Agadakos and Aggelos Bletsas, "Design and Implementation of a Lightweight, Cross-Layer, Frequency-Hopping, Interference-Agile, Self-Organized WSN," submitted in EWSN, 2016.

- Alevizos, P.N. ; Fasarakis-Hilliard, N.; Tountas, K. ; Agadakos, N. ;Kargas, N. ; Bletsas, A. ; "Channel coding for increased range bistatic backscatter radio: Experimental results," *RFID Technology and Applications Conference (RFID-TA), 2014 IEEE*, Tampere, Finland, Sep. 2014.

Technical Skills

- Embedded Systems: Real-time systems design and applications development (SiLabs C8051 MCU, TI/Chipcon Embedded Radios), Hardware.
- Familiarity Neural Networks Training frameworks: Tensorflow, **PyTorch** (Have Trained MNIST character recognition and Cats Dogs Classification Networks)

- Known Programming Languages: Python, C/C++, C#, Java, MySQL, UNIX shell scripting, VHDL.

- Application Software: TeX (LaTeX, BibTeX)

- Computer Aided Design Tools: Eagle, Magic.

- Software Development Tools: Mathworks MATLAB, Microsoft Visual Studio, Eclipse IDE, Silicon IDE.

- Familiarity in Electronics Design

- Operating Systems: Linux, Microsoft Windows.

Selected coursework

Graduate

- Machine Learning
  Instructor: P. Mordohai, Grade: A.

- Computer Vision
  Instructor: E. Dunn, Grade: A.

- Detection Estimation Theory
  Textbook: Principles of Signal Detection and Parameter Estimation Theory, by Bernard C. Levy.
  Instructor: A. Bletsas, Grade: 8.5/10.0.

- Introduction to Inference and Graphical Models.
  Textbook: Probabilistic Graphical Models Principles and Techniques, by D. Koller.
  Instructor: A. Bletsas, Grade: 8.5/10.0

- Information Theory.
  Textbook: Elements of Information Theory, by Thomas M. Cover and Joy A. Thomas.
  Instructor: A. Liavas, Grade: 8.5/10.0.

- Distributed Systems of Autonomous Agents.
  Textbook: Class Notes, by N. Matsatsinis.
  Instructor: N. Matsatsinis, Grade: 10.0/10.0.

Undergraduate

- Operating Systems.
  Textbook: Modern Operating Systems, by Tanenbaum.
  Instructor: V.Samoladas, Grade: 9.0/10.0

- Analysis and Design (Synthesis) of Telecom Modules.
  Textbook: RF Microelectronics, by B. Razavi.
  Instructor: A. Bletsas, Grade: 9.5/10.0.

LANGUAGES

- English   Excellent, University of Michigan, Certificate of Proficiency in English.
  University of Cambridge, Certificate of Proficiency in English
  TOEFL score: 109
- Greek   Native Speaker.

OTHER INTERESTS - EXTRA CURRICULAR ACTIVITIES

- RoboCar development
- History, Literature, Human Studies.
- Study of Mathematics, in particular Probability and Linear Algebra.
- Traveling and Physical Activities(especially Weightlifting, Grappling), Socializing, Dancing, Role-playing games.

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References

- **Phillipos Mordohai** (Stevens MSc Advisor)
  Associate Professor, Computer Science Department
  Stevens Institute of Technology
  Hoboken, New Jersey, , USA
  e-mail: `Philippos.Mordohai@stevens.edu`

- **Aggelos Bletsas** (Diploma Thesis Supervisor, MSc Advisor)
  Associate Professor, Telecommunications Department
  School of Electronics and Computer Engineering
  Technical University of Crete
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