

Alexandros Lioulemes

CONTACT INFORMATION	Ph.D. candidate Department of Computer Science & Engineering University of Texas at Arlington Arlington, TX 76019	alexandros.lioulemes@mavs.uta.edu 817-724-5743 Personal Webpage Google Scholar
SUMMARY	Passionate about teaching, researching in the Heracleia Lab and gaining knowledge and experience as a senior lecturer at the CSE@UTA	
RESEARCH INTERESTS	My current research interests lie on the area of: <ul style="list-style-type: none">• Robot-based Rehabilitation utilizing Smart Assessment and Adaptive Training• Autonomous Robot Perception for Safe Human-Robot Collaboration in Assistive and Industrial Environments	
EDUCATION	University of Texas at Arlington , Arlington, TX Ph.D., Safe Physical Human-Robot Interaction for Smart Rehabilitation <i>Expected:</i> Fall 2017 <ul style="list-style-type: none">• Fillia Makedon, Jenkins Garrett Distinguished Professor The Institute of Informatics and Telecommunications (IIT) , Athens, Greece Research Fellow, Human-Robot Interaction and Collaboration <i>Attended:</i> Summer 2013, 2014 & 2015 <ul style="list-style-type: none">• Vangelis Karkaletis, Research Director at IIT in NCSR Demokritos University of Ioannina , Hpeiros, Greece M.Sc., Robotic Vision, Epipolar Geometry, July 2013 <ul style="list-style-type: none">• Thesis Topic: <i>Image-based Robot visual homing/navigation</i>• Advisors: Christophoros Nikou, Associate Professor B.Sc., Image Processing, Object tracking, October 2011 <ul style="list-style-type: none">• Thesis Topic: <i>Real-time object tracking using a mobile robot</i>• Advisors: Christophoros Nikou, Assistant Professor	
RESEARCH EXPERIENCE	Graduate Research Assistant "HERACLEIA" Human-Centered Computing Laboratory University of Texas at Arlington, Department of Computer Science & Engineering Director: Dr. Fillia Makedon	Spring 2014 to Fall 2016
	Research Fellow Robotic Vision National Center of Scientific Reseach "DEMOKRITOS", Greece Roboskel Laboratory Supervisors: Dr. Vangelis Karkaletsis and Dr. Stasinios Konstantopoulos	August 2013 to Fall 2015
	Research Assistant Mobile and flying robots University of Ioannina, Department of Computer Science and Engineering, Greece Robotic Laboratory Supervisors: Dr. Konstantinos Blekas and Dr. Christophoros Nikou	September 2010 to May 2013

TEACHING
EXPERIENCE

Project Teaching Assistant Fall 2016
Human-Computer Interaction
University of Texas at Arlington, Department of Computer Science & Engineering
Instructors: Dr. Fillia Makedon

Teaching Assistant Spring 2016
Senior Design
University of Texas at Arlington, Department of Computer Science & Engineering
Instructors: Dr. Christopher D. McMurrough

Teaching Assistant Fall 2013 to Fall 2014
Algorithms and Data Structure
University of Texas at Arlington, Department of Computer Science & Engineering
Instructors: Dr. Vangelis Metsis, Dr. Vassilis Athitsos and Dr. Adnan Khan

Teaching Assistant Fall 2012
Computer Graphics
University of Ioannina, Department of Computer Science
Instructors: Dr. Ioannis Fudos

WORKING
EXPERIENCE

Robotics Software Engineer Summer 2016 Internship
Technology, Inc.
Research and Development Engineer for the "Proficio" Rehabilitation Robotic Device
(Therapy you can feel)
Barrett Technology, 73 Chapel Street Newton, MA 02458 USA

Software Developer Summer 2011 Internship
Business Solution, Inc
Back-end developer for Enterprise Resource Planning (ERP) systems
Agias Marinas 25, Ioannina 452 21, Greece

JOURNAL
PUBLICATIONS

1. **Alexandros Lioulemes**, Michail Theofanidis, Konstantinos Tsiakas, Maher Abujelala, Chris Collander, Bill W. Townsend, Fillia Makedon, "Magni-Dynamics: A Vision-based Human Upper-Limb kinematic and dynamic analysis for Rehabilitation and Vocational Applications", International Journal of Biomedical and Biological Engineering Vol:4, No:4, 2017.

PAPER
PUBLICATIONS

1. Konstantinos Tsiakas, Maher Abujelala, **Alexandros Lioulemes**, Fillia Makedon, "An Intelligent Interactive Learning and Adaptation Framework for Robot-Based Vocational Training", IEEE Symposium Series in Computational Intelligence (SSCI), IEEE, December 2016.
2. **Alexandros Lioulemes**, Michail Theofanidis, Fillia Makedon, "Quantitative Analysis of the Human Upper-Limb Kinematic Model for Robot-based Rehabilitation Applications", 12th Conference on Automation Science and Engineering (CASE), IEEE, August 2016.
3. Benjamin Chebaa, **Alexandros Lioulemes**, Maher Abujelala, Dylan Ebert, Eric Becker, Fillia Makedon, "Multimodal Analysis of Serious Game for Cognitive and Physiological Assessment", The 1st Workshop on Human Behaviour Monitoring, Interpretation and Understanding (NOTION), International Conference on Pervasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2016.

4. **Alexandros Lioulemes**, Michalis Papakostas, Shawn N. Gieser, Theodora Toutountzi, Maher Abujelala, Sanika Gupta, Christopher Collander, Christopher D. McMurrrough, Fillia Makedon, “A Survey of Sensing Modalities for Human Activity, Behavior, and Physiological Monitoring”, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2016.
5. Michail Theofanidis, **Alexandros Lioulemes**, Fillia Makedon, “A Motion and Force Analysis System for Human Upper-limb Exercises”, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2016.
6. Srujana Gattupalli, **Alexandros Lioulemes**, Shawn N. Gieser, Paul Sassaman, Vasilis Athitsos, Fillia Makedon, “MAGNI: A Real-time Robot-assisted Game-based Tele-Rehabilitation System”, International Conference on Human-Computer Interaction, (HCII), Toronto, August 2016.
7. **Alexandros Lioulemes**, Paul Sassaman, Shawn N. Gieser, Vangelis Karkaletsis, Fillia Makedon, Vangelis Metsis, “Self-Managed Patient-Game Interaction Using the Barrett WAM Arm for Motion Analysis”, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2015.
8. **Alexandros Lioulemes**, Nikos Sarafianos, Theodoros Giannakopoulos, Vangelis Karkaletsis, “A Two-Step Identification Method for Human-Robot Interaction in Assistive Environments” The 5th Workshop on Robotics in Assistive Environments, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2015.
9. Scott Phan, **Alexandros Lioulemes**, Cyril Lutterodt, Fillia Makedon, Vangelis Metsis. “Guided Physical Therapy Through the Use of the Barrett WAM Robotic Arm.”, IEEE International Symposium on Haptic Audio-Visual Environments and Games, (HAVE) , Dallas TX, October 2014.
10. Alexandros Papangelis, Georgios Galatas, Konstantinos Tsiakas, **Alexandros Lioulemes**, Dimitrios Zikos, Fillia Makedon, “Dialogue System for Ensuring Safe Rehabilitation.” International Conference on Human-Computer Interaction, (HCII), Crete Greece, (6) 2014: 349-358.
11. **Alexandros Lioulemes**, Georgios Galatas, Vangelis Metsis, Gian luca Mariottini, Fillia Makedon, “Safety Challenges in using AR.Drone to collaborate with humans in indoor environments.” The 4th Workshop on Robotics in Assistive Environments, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Rhodes Island Greece, May 2014.

POSTER PAPERS

1. Maher Abujelala, **Alexandros Lioulemes**, Paul Sassaman, Fillia Makedon, “Robot-aided Rehabilitation using Force Analysis”, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2015.
2. Christopher D. McMurrrough, **Alexandros Lioulemes**, Scott Phan, Fillia Makedon, “3D Mapping of Visual Attention for Smart Rehabilitation”, International Conference on PErvasive Technologies Related to Assistive Environments, (PETRA), Corfu Island Greece, July 2015.
3. **Alexandros Lioulemes**, Scott Phan, Christopher D. McMurrrough, Fillia Makedon, “Robotic-based Vocational Assessment”, IEEE International Conference on Technologies for Practical Robot Applications, (TePRA) , Boston MA, May 2015.

PROFESSIONAL
SERVICES

1. Reviewer for the Intelligent Service Robotics Journal (JIST)
2. Reviewer for the International Conference on Pervasive Technologies Related to Assistive Environments (PETRA)
3. Reviewer for the Conference on Human Factors in Computing Systems (CHI)

DOCTORAL
CONSORTIA

1. **Alexandros Lioulemes**, “Adaptive User and Haptic Interfaces for Smart Assessment and Training”, ACM Conference on Intelligent User Interfaces, (IUI), Sonoma CA, March 2016 .
2. **Alexandros Lioulemes**, “Robot-assisted Rehabilitation for Smart Assessment and Training”, IEEE International Conference on Healthcare Informatics, (ICHI), Dallas TX, October 2015.
3. **Alexandros Lioulemes**, “Using Haptic and Vision sensing for Human-Robot Interaction.”, IEEE International Symposium on Haptic Audio-Visual Environments and Games, (HAVE) , Dallas TX, October 2014.
4. **Alexandros Lioulemes**, “Safe Human-Robot Interaction Methods”, International Conference on Pervasive Technologies Related to Assistive Environments, (PETRA), Rhodes Greece, June 2014.

RESEARCH
PROJECTS

1. Franziska Kirstein, Giorgos Kalpaktoglou, Nikolaos Sarafianos, **Alexandros Lioulemes**, “RoboCoffee: Robot serves coffee.”, National Center of Scientific Research - Demokritos, International Research-Centered Summer School in Cognitive Systems and Interactive Robotics, Data and Content Analysis, Athens Greece, July 2014.
2. Konstantinos Tsiakas, **Alexandros Lioulemes**, Athanasia Sapountzi, “Multi-sensor robot perception.”, National Center of Scientific Research - Demokritos, International Research-Centered Summer School in Cognitive Systems and Interactive Robotics, Data and Content Analysis, Athens Greece, July 2013.

AWARDS

Travel Awards

- IUI Conference 2016, Dallas - San Francisco “NSF” March 2016
- PETRA Conference 2015, Dallas - Athens “NCSR Demokritos” July 2015
- PETRA Conference 2014, Athens - Rhodes, “NSF” May 2014
- Ph.D. Scholarship, Athens - Dallas, “NCSR Demokritos” August 2013

Graduate Student Awards — University of Texas at Arlington

- Doctoral Consortium Award, (IUI) conference “NSF” March 2016
- Doctoral Consortium Award, (ICHI) conference “NSF” October 2015
- Doctoral Consortium Award, (HAVE) conference “NSF” October 2014
- STEM Tuition Fellowship Fall 2013

Undegraduate Student Awards — University of Ioannina

- Honored talk December 2011
 - B.Sc. graduation ceremony student with the highest GPA in the class.

TRAINING
RESEARCH
CERTIFICATIONS

1. Human Subjects Protection Training (HSP)
2. Responsible Conduct in Research (RCR)

COMPUTER
SKILLS

Programming Languages

- C, C++, C#, Java, Python

Web tools

- HTML, CSS, JavaScript, PHP, JSP, iWeb

Integrated development environment

- MATLAB, Unity3D, Eclipse, NetBeans, Visual Studio .NET

Content Management System

- Joomla, Wordpress

Adobe

- Photoshop, Flash, Dreamweaver

Markup

- L^AT_EX, T_EX

Operating Systems

- Linux, Mac OS X, Windows

Robotic systems

- ROS, Libbarrett, Aria, OpenRAVE

ACADEMIC
REFERENCES

Dr. Fillia Makedon

Jenkins Garrett Distinguished Professor
Director of Heracleia Laboratory
University of Texas at Arlington

Phone: +01 817-272-3605
E-mail: makedon@uta.edu

Dr. Bill Townsend

President & CEO of Barrett Technology
Director of Barrett Medical
Massachusetts Institute of Technology, Artificial Intelligence Laboratory

Phone: +01 617-252-9000
E-mail: makedon@uta.edu

Dr. Vangelis Karkaletsis

Professor
Research Director at IIT in NCSR Demokritos
Institute of Informatics and Telecommunications (IIT), Athens-Greece

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Dr. Christophoros Nikou

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University of Ioannina, Greece

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