

# KONSTANTINOS PAPOUTSAKIS

PhD candidate, Computer Science  
University of Crete

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**Specialization:** Computational Vision, Machine Learning, Human Robot Interaction, Robotics

**Residence:** Heraklion, Greece  
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**Nationalities:** Greek  
**Marital Status:** married

## Education

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### 2014 – now. PhD in Computer Science Department, University of Crete (Computational Vision)

Advisor: Prof. Antonis Argyros. Computer Science Department, University of Crete (UOC), Greece and Computational Vision & Robotics Laboratory, ICS, Foundation for Research and Technology - Hellas, Greece

**Title:** “Computational vision-based methods for understanding activities of humans and their interaction with objects in videos”.

### 2008 – 2010. Master of Science in Computer Science Department, University of Crete, Greece

Title: “Vision-based object tracking and segmentation in a closed loop”.

Advisor: Prof. Antonis Argyros. Diploma score: 9.5/10

### 2002 – 2007. Diploma in Computer Engineering & Informatics, School of Engineering, University of Patras, Greece

Diploma Thesis: New Algorithms for Mining Order Preserving Association Rules using Markov Models & Applications. Advisor: Prof. Christos Makris, Diploma score: 7.78/10

**Contribution to EU-funded research projects during the PhD studies:** FP7-IP-288533

**Robohow.Cog**, FP7-IP-215821 **GRASP**, FP7-288146 **HOBBIT**, FP7-ICT-2011 **WEARHAP**, H2020-ICT-2016-2017 **Co4Robots (H2020)**.

## Scientific Publications

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Stats based on [Google Scholar profile](#) (9/2019): 279 citations, h-index 7, i10-index 6.

Total peer-reviewed scientific publications: 9 conference papers, 7 journal papers.

### In scientific journals

C. Panagiotakis, [K. Papoutsakis](#) and A.A. Argyros, "A Graph-based Approach for Detecting Common Actions in Motion Capture Data and Videos", *Pattern Recognition*, Elsevier, vol. 79, pp. 1-11, (July 2018).

M.Bajones, D.Fischinger, A.Weiss, D.Wolf, T.Körtner, M.Weninger, [K.Papoutsakis](#), et.al "A Year of Field Trials with the Hobbit Robot", *Journal at ACM Transactions on Human-Robot Interaction (THRI)* (2018).

M. Bajones, D. Fischinger, A. Weiss, D. Wolf, T. Kortner, [K. Papoutsakis](#), et.al. "Hobbit - Providing Fall Detection and Prevention for the Elderly in the Real World", *Journal of Robotics*, Hindawi, (2018).

D. Kosmopoulos, [K. Papoutsakis](#) and A.A. Argyros, "A framework for online segmentation and classification of modeled actions performed in the context of unmodeled ones", *IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)*, IEEE, July 2017.

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D. Fischinger, P. Einramhof, K. Papoutsakis, et.al. "Hobbit, a care robot supporting independent living at home: First prototype and lessons learned", *Robotics and Autonomous Systems* 2014.

K. Papoutsakis, A.A. Argyros, "Integrating tracking with fine object segmentation", (*IMAVIS*) *Image and Vision Computing*, 2013, Volume 31, Issue 10, pp. 771-785.

## In proceedings of refereed conferences and workshops

K. Papoutsakis, A.A. Argyros. "Unsupervised and Explainable Assessment of Video Similarity". *British Machine Vision Conference (BMVC 2019)*, Cardiff, UK, September 2019.

V. Manousaki, K. Papoutsakis and A.A. Argyros, "Evaluating Method Design Options for Action Classification based on Bags of Visual Words", In *International Conference on Computer Vision Theory and Applications (VISAPP 2018)*, Scitepress, pp. 185-192, Madeira, Portugal, January 2018.

K. Papoutsakis, C. Panagiotakis and A.A. Argyros, "Temporal Action Co-Segmentation in 3D Motion Capture Data and Videos", In *IEEE Computer Vision and Pattern Recognition (CVPR 2017)*, IEEE, pp. 2146-2155, Honolulu, Hawaii, USA, July 2017.

M. Foukarakis, I. Adami, D. Ioannidi, A. Leonidis, D. Michel, A. Qammaz, K. Papoutsakis, M. Antona and A.A. Argyros, "A Robot-based Application for Physical Exercise Training", In *International Conference on Information and Communication Technologies for Ageing Well and e-Health (ICT4AWE 2016)*

D. Kosmopoulos, K. Papoutsakis, A.A. Argyros, "Segmentation and classification of actions in the context of unmodeled actions", *British Machine Vision Conference (BMVC 2014)*, Nottingham, UK, Sep. 1-4, 2014.

D. Michel, K. Papoutsakis, A.A. Argyros, "Gesture recognition for the perceptual support of assistive robots", *International Symposium on Visual Computing (ISVC 2014)*.

D. Fischinger, P. Einramhof, W. Wohlkinger, K. Papoutsakis, et.al. "Hobbit - The Mutual Care Robot", *ASROB-2013, IEEE/RSJ International Conference on Intelligent Robots and Systems*, November 2013, Japan.

K. Papoutsakis, P. Padeleris, et.al. "Developing visual competencies for socially assistive robots: the HOBBIT approach", in *Proceedings of Workshop on Robotics in Assistive Environments (RasEnv 2013)*, in conjunction with **PETRA 2013**, Greece.

K. Papoutsakis, A.A. Argyros, "Object tracking and segmentation in a closed loop", in *Proceedings of the International Symposium on Visual Computing, ISVC'2010*.

**Patent application** D. Michel, K. Papoutsakis, A. Argyros (FORTH), GESTURE RECOGNITION APPARATUSES, METHODS AND SYSTEMS FOR HUMAN-MACHINE INTERACTION. U.S. provisional patent application No. 62/051,271, 16/09/2014.

## Work Experience

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**2014 – pres., Postgraduate scholar (PhD candidate)** - *Computational Vision & Robotics Lab* - ICS, FORTH, Greece.

**2012– 2014, Software Research Engineer** - *Computational Vision & Robotics Lab* - ICS, FORTH, Greece

**2008 – 2010, Postgraduate scholar (M.Sc candidate)**- *Computational Vision & Robotics Lab* - ICS, FORTH, Greece

## Peer reviewing - Teaching Experience

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**Teaching Assistantship as postgraduate student** (2014-today, per academic semester) in the Computer Science Department, School of Sciences and Technology, University of Crete, Greece.

CS472 Computer Vision, CS587 Neural Networks and Deep Learning, CS573 Discrete Optimization Methods in Computer Vision, CS118 Data structures, CS118 Discrete Mathematics, CS472 Theory of Computation

**Served as reviewer:** IEEE Computer Vision and Pattern Recognition (CVPR), IEEE International Conference on Computer Vision (ICCV), British Machine Vision Conference (BMVC), IEEE International Conference on Automatic Face Gesture Recognition (FG), Pervasive Technologies Related to Assistive Environments (PETRA). European Signal Processing Conference (EUSIPCO).

## AWARDS & SCHOLARSHIPS

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- Awarded the honorary [Maria Michail Manassaki Bequest Fellowship](#), academic year 2017-2018. The fellowship is granted annually to exceptional Ph.D. candidates of the University of Crete.
- Honourable nomination and participation in the [Roche Continents 2019 program](#) (Invited 100 talented PhD candidates from across Europe).
- **Graduate Research Scholarships**, ICS, FORTH, during PhD (2014 - now) and MSc (2008-2010).

## Misc.

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**Languages**                      Greek, English, German.

## Referees:

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**Antonis Argyros**, Professor, Computer Science Department, University of Crete.  
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**Dimitrios Kosmopoulos**, Professor, Computer Engineering & Informatics, University of Patras.  
dkosmo@ceid.upatras.gr, <http://culturetechlab.culture.uwg.gr>

**Costas Panagiotakis**, Associate Professor in Department of Business Administration (Ag.Nikolaos), Technological Educational Institute, Crete, [cpanag@ics.forth.gr](mailto:cpanag@ics.forth.gr) <https://sites.google.com/site/costaspanagiotakis/>