

Michał Koperski

PHD STUDENT AT INRIA

2004, route des Lucioles - BP 93, 06902, Sophia Antipolis Cedex, France

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Education

INRIA, University of Nice Sophia Antipolis

PH.D. IN COMPUTER SCIENCE (COMPUTER VISION)

Sophia Antipolis, France

Jan. 2014 - exp. Nov. 2017

- Advisor: Francois Bremond, INRIA
- Reviewer: Matthieu Cord, University Pierre Marie Curie
- Reviewer: Leonid Sigal, University of British Columbia
- Examiner: Jean-Marc Odobez, IDIAP
- President: Federic Precioso, University of Nice Sophia Antipolis

Poznan University of Technology

M.Sc. IN COMPUTER SCIENCE AND ENGINEERING

Poznan, Poland

Feb. 2007 - Aug. 2009

Poznan University of Technology

B.S. IN COMPUTER SCIENCE AND ENGINEERING

Poznan, Poland

Oct. 2004 - Feb. 2007

Experience

INRIA

PHD STUDENT

Sophia Antipolis, France

Feb. 2014 - PRESENT

- Proposed, implemented and validated several methods for action recognition (multimodal RGB+D descriptor, Brownian Covariance, Spatio-Temporal layout for Fisher Vector) and action detection (Real time Fisher Vector representation),
- Published 9 scientific papers,
- The code of the proposed methods was successfully transferred to Toyota.

Disney Research

RESEARCH INTERNSHIP

Pittsburgh, PA, USA

Jan. 2016 - Apr. 2016

- Supervisors: Peter Carr, Slawomir Bak,
- Proposed cross-view Fisher Vector representation for People Re-Identification,
- Published 1 scientific paper,
- 1 patent request was filed.

INRIA

RESEARCH INTERNSHIP

Sophia Antipolis, France

Apr. 2013 - Sep. 2013

- Supervisor: Francois Bremond,
- Proposed multimodal RGB-D descriptor for action recognition,
- Published 1 scientific paper.

Wroclaw University of Technology

TEACHING ASSISTANT

Wroclaw, Poland

Apr. 2012 - Mar. 2013

- Teaching "Algorithms and Data Structures"
- Teaching "Operating Systems"

Poznan University of Technology

RESEARCH ENGINEER

Poznan, Poland

Jan. 2010 - Apr. 2012

- BirdWatch project at Intelligent Decision Support System Laboratory,
- Implemented and validated bird species detection system for mobile devices (ARM),
- Teaching "Software Engineering"
- Published 1 book chapter.

Skills

Programming Python, Matlab, Java, C/C++

Frameworks PyTorch, Scikit-Learn, Numpy, Pandas, Caffe, MatConvNet

Languages English (Fluent), French (Intermediate), Russian (Intermediate), German (Beginner), Polish (Native)

MASTER STUDENTS

- 2017 **Srijan Das**, co-advised by F. Bremond, Action Recognition [10]
2017 **Killian Barrere**, co-advised by F. Bremond, Action Recognition

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Professional activities

REFEREE AND REVIEWER

- IEEE Transactions on Multimedia
- British Machine Vision Conference

Publications

[1] [5] [10] [8] [3] [7] [9] [2] [4] [6] [11] [12]

JOURNAL ARTICLES

- [1] Carlos Crispim-Junior et al. "Online Recognition of Daily Activities by Color-Depth Sensing and Knowledge Models". In: *Sensors* vol. 17 (June 2017), p. 1528.

CONFERENCE PROCEEDINGS

- [2] Piotr Bilinski et al. "Representing Visual Appearance by Video Brownian Covariance Descriptor for Human Action Recognition". In: *The 11th IEEE International Conference on Advanced Video and Signal-based (AVSS)*. IEEE. Seoul, South Korea, Aug. 2014.
- [3] Carlos Fernando Crispim-Junior et al. "Semi-supervised understanding of complex activities from temporal concepts". In: *The 13th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*. Colorado Springs, United States, Aug. 2016. URL: <https://hal.inria.fr/hal-01398958>.
- [4] M. Koperski, P. Bilinski, and F. Bremond. "3D trajectories for action recognition". In: *The 21st IEEE International Conference on Image Processing (ICIP)*. Oct. 2014, pp. 4176–4180. DOI: 10.1109/ICIP.2014.7025848.
- [5] Michal Koperski, Slawomir Bak, and Peter Carr. "Groups Re-identification with Temporal Context". In: *The 2017 ACM on International Conference on Multimedia Retrieval (ICMR)*. Bucharest, Romania, June 2017.
- [6] Michal Koperski and Francois Bremond. "Modeling Spatial Layout of Features for Real World Scenario RGB-D Action Recognition". In: *The 13th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*. Colorado Springs, United States, Aug. 2016, pp. 44–50. URL: <https://hal.inria.fr/hal-01399037>.
- [7] Farhood F Negin et al. "A hybrid framework for online recognition of activities of daily living in real-world settings". In: *The 13th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*. Colorado springs, United States: IEEE, Aug. 2016. DOI: 10.1109/AVSS.2016.7738021. URL: <https://hal.inria.fr/hal-01384710>.
- [8] F. Negin et al. "Generating unsupervised models for online long-term daily living activity recognition". In: *2015 3rd IAPR Asian Conference on Pattern Recognition (ACPR)*. Nov. 2015, pp. 186–190. DOI: 10.1109/ACPR.2015.7486491.
- [9] Javier Ortiz et al. "Minimizing hallucination in Histogram of Oriented Gradients". In: *The 12th IEEE International Conference on Advanced Video and Signal-based (AVSS)*. Karlsruhe, Germany, Aug. 2015.
- [10] Das Srijan et al. "Action Recognition based on a mixture of RGB and Depth based skeleton". In: *The 14th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*. Aug. 2017, pp. 228–234. DOI: 10.1109/AVSS.2016.7738060.

PHD THESIS

- [11] Michal Koperski. "Human Action Recognition in Videos with Local Representation". PhD thesis. INRIA, University of Nice Sophia-Antipolis, Nov. 2017.

BOOK CHAPTERS

- [12] Jacek Jelonek Lukasz Kirchner Michal Koperski. "Distributed standalone mobile data providers for BirdWatch system". In: NAKOM, 2011. ISBN: 978-83-89529-82-4.