# 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**                                    *Sophia Antipolis, France*

Ph.D. in Computer Science (Computer Vision)                                       *Jan. 2014 - exp. Nov. 2017*

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

**Poznan University of Technology**                                               *Poznan, Poland*

M.Sc. in Computer Science and Engineering                                        *Feb. 2007 - Aug. 2009*

**Poznan University of Technology**                                               *Poznan, Poland*

B.S. in Computer Science and Engineering                                         *Oct. 2004 - Feb. 2007*

## Experience

**INRIA**                                                                        *Sophia Antipolis, France*

PhD Student                                                                       *Feb. 2014 - PRESENT*

- Proposed, implemented and validated several methods for action recognition (multimodal RBG+D desriptor, 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**                                                              *Pittsburgh, PA, USA*

Research Internship                                                              *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**                                                                        *Sophia Antipolis, France*

Research Internship                                                             *Apr. 2013 - Sep. 2013*

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

**Wroclaw University of Technology**                                             *Wroclaw, Poland*

Teaching Assistant                                                              *Apr. 2012 - Mar. 2013*

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

**Poznan University of Technology**                                             *Poznan, Poland*

Research Engineer                                                               *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

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|---|---|
| **Programming** | Python, Matlab, Java, C/C++ |
| **Frameworks** | PyTroch, Scikit-Learn, Numpy, Pandas, Caffe, MatConvNet |
| **Languages** | English (Fluent), French (Intermediate), Russian (Intermediate), German (Beginner), Polish (Native) |

# Mentoring

## Master Students

| | | |
|---|---|---|
| 2017 | **Srijan Das**, co-advised by F. Bremond, Action Recognition | *INRIA* |
| 2017 | **Killian Barrere**, co-advised by F. Bremond, Action Recognition | *INRIA* |

# Professional activities

### Referee and Reviewer
- IEEE Transactions on Multimedia
- British Machine Vision Conference

# Publications

## Journal Articles

Online Recognition of Daily Activities by Color-Depth Sensing and Knowledge Models
Carlos Crispim-Junior, Alvaro Gomez Uria, Carola Strumia, Michal Koperski, Alexandra König, Farhood Negin, Serhan Cosar, Anh Tuan Nghiem, Duc Phu Chau, Guillaume Charpiat, Francois Bremond
*Sensors* vol. 17 (June 2017) p. 1528. 2017

## Conference Proceedings

Groups Re-identification with Temporal Context
Michal Koperski, Slawomir Bak, Peter Carr
*The 2017 ACM on International Conference on Multimedia Retrieval (ICMR)*, 2017, Bucharest, Romania

Action Recognition based on a mixture of RGB and Depth based skeleton
Das Srijan, Michal Koperski, Francois Bremond, Gianpiero Francesca
*The 14th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*, 2017

Semi-supervised understanding of complex activities from temporal concepts
Carlos Fernando Crispim-Junior, Michal Koperski, Serhan Cosar, Francois Bremond
*The 13th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*, 2016, Colorado Springs, United States

Modeling Spatial Layout of Features for Real World Scenario RGB-D Action Recognition
Michal Koperski, Francois Bremond
*The 13th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*, 2016, Colorado Springs, United States

A hybrid framework for online recognition of activities of daily living in real-world settings
Farhood F Negin, Serhan Cosar, Michal F Koperski, Carlos F Crispim-Junior, Konstantinos Avgerinakis, Francois F Bremond
*The 13th IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS)*, 2016, Colorado springs, United States

Generating unsupervised models for online long-term daily living activity recognition
F. Negin, S. Cogar, F. Bremond, M. Koperski
*2015 3rd IAPR Asian Conference on Pattern Recognition (ACPR)*, 2015

Minimizing hallucination in Histogram of Oriented Gradients
Javier Ortiz, Slawomir Bak, Michal Koperski, François Brémond
*The 12th IEEE International Conference on Advanced Video and Signal-based (AVSS)*, 2015, Karlsruhe, Germany

Representing Visual Appearance by Video Brownian Covariance Descriptor for Human Action Recognition
Piotr Bilinski, Michal Koperski, Slawomir Bak, Francois Bremond
*The 11th IEEE International Conference on Advanced Video and Signal-based (AVSS)*, 2014, Seoul, South Korea

3D trajectories for action recognition
M. Koperski, P. Bilinski, F. Bremond
*The 21st IEEE International Conference on Image Processing (ICIP)*, 2014

## PhD thesis

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

## Book Chapters

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