

# Nataliya SHAPOVALOVA

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Nationality: Ukrainian

## Current research interests

- Video surveillance and tracking
- Human activity recognition from video
- Stereo vision and 3D scene reconstruction

## Summary of Qualifications

### IT skills:

- Proficient in Computer Vision, Artificial Intelligence and Machine Learning
- Strong programming skills in Matlab, C/C++ (both Linux and Windows)
- Good background in Web design: PHP, HTML/DHTML, XML, PHP, Javascript, CSS, MySQL

### Languages:

- Russian/Ukrainian (mother tongues), English(TOEFL CBT 227), French (DELFB2), Spanish(Basic)

### Personal skills:

- Mobility
- Experience of working in international and multicultural team

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## Education

### Sep 2007 – June 2009 | **Erasmus Mundus MSc “Vision and Robotics” (VIBOT)**

Heriot-Watt University (Edinburgh, Great Britain)

Universitat de Girona (Girona, Spain)

Universite de Bourgogne (Le Creusot, France)

Kungliga Tekniska högskolan (Stockholm, Sweden)

Principal subjects: Signal and Image Processing and Analysis – Robotics – Artificial Intelligence

### Sep 2006 – July 2008 | **Master’s Degree in Computer Science**

National Technical University “KhPI” (Kharkiv, Ukraine)

Principal subjects: Artificial Intelligence – Natural Language Processing – Optimization Systems

### Sep 2002 – July 2006 | **Bachelor’s Degree in Computer Science**

National Technical University “KhPI” (Kharkiv, Ukraine)

Principal subjects: Software Engineering – Intelligent Systems – Web Design

## Awards

Sep 2007 – Sep 2009 | Erasmus Mundus Scholarship of the European Union

Sep 2004 – July 2008 | The Scholarship of the President of Ukraine for the academic excellence and achievements

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## Research activity

### Experience

- 2009 - Master Thesis in Computer Vision and Active Perception Laboratory (KTH, Stockholm, Sweden), supervised by Danica Kragic  
**Topic: “Robust Hands and Head Tracking for the Action & Object Recognition System”**
- 2006 – 2007 | Master Thesis in NTU “KhPI” and Research -&-design institute "Molniya" (Kharkiv, Ukraine), supervised by Alexander Serkov  
**Topic: “Estimation of Electromagnetic Field Pulses Penetrating into Shielded Constructions”**
- Class Projects
  - 3D structure reconstruction from motion
  - Real-time hand tracking and counting fingers (FPGA implementation)
  - Object/scene classification according to the PASCAL Visual Object Classes Challenge 2006

### Conferences

- EUROEM 2008: European Electromagnetics, 21-25 July 2008, Lausanne, Switzerland; report “Estimation of Electromagnetic Field Pulses Penetrating into Shielded Constructions”
- ICYS 2003: International Conference of Young Scientists, 22-27 April 2003, Prague, Czech Republic; report: “Simulation of traffic routing in computer networks by means of Swarm Intelligence”

### Certificates of Authorship

- Software for interactive analysis of experimental data and for reports generation “Processing”
- Software “Estimation of Electromagnetic Field Structure inside Shielded Constructions”

### Publications

- V. I. Kravchenko, V. S. Breslavets, O. A. Serkov, N. Y. Shapovalova, “The Method for Estimation of Electromagnetic Field Structure inside Shielded Constructions,” NTU “KhPI” bulletin, vol. 37, pp. 13-20, Kharkiv, 2006 (in Russian).
- V. I. Kravchenko, O. A. Serkov, N. Y. Shapovalova, “Development of the Model for Analysis and Estimation of Experimental Research Results,” NTU “KhPI” bulletin, vol. 49, pp. 88-91, Kharkiv, 2005 (in Russian).
- N. Y. Shapovalova, I. S. Zykov, ” Simulating of traffic routing in computer networks by means of Swarm Intelligence,” NTU “KhPI” bulletin, vol. 26, pp. 152-156, Kharkiv, 2003 (in Russian).