

## PERSONAL DATA

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 Date of birth: October 9<sup>th</sup> 1982, Heemstede, the Netherlands

## EDUCATION AND QUALIFICATIONS

10/08 – 02/14: **PhD Artificial Intelligence**  
 (expected) *Universiteit van Amsterdam, Intelligent Autonomous Systems Lab*  
 Person detection and tracking using multiple overlapping cameras.  
 Supervisor: Prof. dr. Dariu M. Gavrilă

09/04 – 04/08: **Master Artificial Intelligence**  
*Universiteit van Amsterdam*  
 Master Intelligent Systems, graduation date: April 29, 2008, with honours, grade: 9

09/01 – 09/04: **Bachelor Artificial Intelligence**  
*Universiteit van Amsterdam*

09/95 – 07/01: **High school, pre-university education (VWO)**  
*Atheneum College Hageveld*

Courses and congresses:

2009 - 2011 Several courses on image processing and pattern recognition from the Advanced School for Computing and Imaging (ASCI graduate school)  
 2009 International Computer Vision Summer School (ICVSS '09), Sicily, Italy July 6-11 2009  
 2008 COGNIRON Winter School on Human Robot Interaction (CWSHRI '08), January 21-25, 2008, Lausanne, Zwitserland.  
 2006 Didactic course on "educational skills for information sciences" by the AMSTEL institute to benefit student assistantship  
 2004 Chairmanship course by TAQT coaching bureau  
 Initiate course student councils Universiteit van Amsterdam

## WORKING EXPERIENCE

10/08 - Current: **PhD. Student**

***Person detection and tracking using multiple overlapping cameras***

*Universiteit van Amsterdam*

*Intelligent Autonomous Systems group (IAS)*

The main focus of this thesis is the detection and tracking of multiple persons in complex, cluttered scenes. Tracking and detection is done based on 3D scene reconstructions computed from multiple, overlapping cameras. Furthermore, we use the 3D scene to model persons' appearances and compute their facing direction.

Experience:

- Calibration of multiple cameras and using calibrated cameras for 3D reconstruction
- Knowledge of state-of-the art methods for detecting and tracking people
- Supervising and managing a successful MSc graduation research project (score 8/10)
- TA from 2009 - 2011 for the MSc. level course *Machine Learning: Pattern Recognition*
- Working together with various (international) research partners in multiple national and international projects: *NWO Cassandra, EU FP7 ADABTS, EU FP7 FROG*

- 11/06 - 04/08: **MSc. thesis, graduation project**  
***A Hybrid Algorithm for Tracking and Following People using a Robotic Dog***  
*Universiteit van Amsterdam*  
*Intelligent Autonomous Systems group (IAS)*  
This graduation project has as a goal the creation of a system enabling a robotic dog to autonomously follow a person through a room.  
Graduated April 29, 2008, graded with a 9  
Experience gained, among other things:
- Execution of a full-sized scientific project
  - Independent creation of a research proposal
  - Execution of a solid literature study as the basis of a project
- Goals achieved:
- Improved existing methods, enabled a robot to follow people around.
  - Publication: 3<sup>rd</sup> ACM/IEEE International Conference on Human-Robot Interaction 2008, March 12-15, Amsterdam
  - Interview and demonstration for Dutch television: VPRO Noorderlicht Nieuws, 13-03-08.
- 09/06 - 06/07: **Student assistant for various courses**  
*Universiteit van Amsterdam*  
*Faculty of Science*  
*Bachelors programme Artificial Intelligence*  
Fulfilment of a student assistantship for various courses in the bachelors programme of Artificial Intelligence.  
Experience gained, among other things:
- Guiding and supporting students with the execution of projects and lab courses
  - Creation of lab course assignments as well as creation of assessment criteria for them
  - Grading of students' work
- 06/06 - 09/06: **Technical Intern IBM Extreme Blue 2006**  
*IBM Netherlands*  
Participation in the IBM Extreme Blue 2006 internship as a technical intern. With a group of 4 students, a project was executed for a major Dutch bank.  
Experience gained, among other things:
- Collaboration in a very close, multi-disciplinary team of four students
  - Creation and execution of a project plan
  - Regular conferences with an external customer, at which team members alternately presented new ideas and concepts.
  - Conveying ideas to other people in meetings and presentations
- 09/04 - 09/05: **Vice chairman faculty student council**  
*Universiteit van Amsterdam*  
*Faculty of Science*  
Vice chairman of the faculty's representative advisory body for students  
Experience gained, among other things:
- Presiding of deliberations with the board of the faculty
  - Presiding of student council deliberations
  - Creation of structure and cohesion within a group of 12 members
  - Creation of policy plan and year planning
- 09/03 - 09/04: **Member faculty student council**  
*Universiteit van Amsterdam*  
*Faculty of Science*  
Member of the faculty's representative advisory body for students  
Experience gained, among other things:
- Examination of policy documents as well as advice on policy documents
  - Communication with faculty board and followers
  - PR activities

## PUBLICATIONS

- 2013 - M. Liem and D. M Gavrila, "**A Comparative Study on Multi-Person Tracking using Overlapping Cameras**", in *Proc. of the Int. Conference on Computer Vision Systems, (ICVS 2013)*
- M. Liem and D. M Gavrila, "**Person Appearance Modeling and Orientation Estimation using Spherical Harmonics**", in *Proc. of the IEEE Int. Conference on Automatic Face & Gesture, (FG 2013)*
- 2011 - M. Liem and D. M Gavrila, "**Multi-Person Localization and Track Assignment in Overlapping Camera Views**", in *Proc. of the 33rd Annual Symposium of the German Association for Pattern Recognition, (DAGM 2011)*
- 2009 - M. Liem and D. M Gavrila, "**Multi-person tracking with overlapping cameras in complex, dynamic environments**", in *Proc. of the 20th British Machine Vision Conference, (BMVC 2009)*
- 2008 - M. Liem, A. Visser, and F. Groen, "**A hybrid algorithm for tracking and following people using a robotic dog**", in *Proc. of the 3rd ACM/IEEE international conference on Human robot interaction, (HRI 2008)*
- M. Liem, "**Constructing A Hybrid Algorithm for Tracking and Following People using a Robotic Dog**", MSc Thesis

## INTRESTS AND FURTHER INFORMATION

### Programming languages/Skills

- *C/C++ (good)*
- *Java (good)*
- *Matlab (good)*
- *LaTeX (good)*
- *HTML (reasonable)*
- *php (reasonable)*
- *python (experience)*
- *Mercurial/SVN*

### Languages

- *Dutch (native)*
- *English (fluently)*

### Traits

- *Goal-oriented, accurate and structured worker*
- *Diligence*
- *Strong analytical capacities*
- *Capacities for finding creative solutions*

### Hobby's

- *Music (concerts, festivals)*
- *Computer games*
- *Programming*
- *Photography*