

TOM MATHES

ELECTRICAL ENGINEER (ELECTRONICS)

58, rue de Muhlenbach
2168 Luxembourg
Grand-Duchy of Luxembourg
Tél.: +352 420191 / GSM: +352 021 312548
e-mail: tom.mathes@a3.epfl.ch

Date of birth: August 15th, 1979
Nationality: Luxembourgish
Status: Single
Driving licence: category B

EDUCATION

09/2005	« D.E.A. en Sciences Appliquées », University of Liège (ULg) post-graduate program in computer vision, highest honours - Thesis: <i>Robust Real-Time Object Tracking Using Point Distribution Models</i>
06/2004	« Diplôme d'ingénieur civil électricien, orientation électronique », ULg degree in electrical engineering, specialization in electronics, highest honours « Diplôme d'ingénieur électricien », Swiss Federal Institute of Technology (EPFL) degree in electrical engineering, highest honours - Thesis: <i>Detection of objects using stereovision</i> , computer vision software development for automotive camera applications, in collaboration with Melexis (www.melexis.com) Award for best thesis awarded by the AILg (Association des ingénieurs sortis de l'ULg)
1998 – 2001, 2003 – 2004	Electrical engineering studies at ULg
2001 – 2003	Electrical engineering studies at EPFL (in the context of the <i>student exchange programme</i> TIME, leading to diplomas from both ULg and EPFL)
1991 – 1998	Lycée de Garçons de Luxembourg , G.-D. of Luxembourg, high-school studies

PROFESSIONAL EXPERIENCE

Since 09/2004	Research engineer in computer vision at ULg TRICTRAC project: real-time tracking of people in crowded scenes (www.multitel.be/trictrac/)
02/2003 – 07/2003	Student-assistant in analogical electronics course (Assistance of 1 st and 2 nd year students in their lab sessions)
08/2001	Training period of 3 weeks at Hitec , a luxembourgish company specialized in solutions for automation in production, quality assurance and product development
08/2000	Training period of 2 weeks at Gehl-Jacoby , civil engineering and consulting

LANGUAGES

Luxembourgish:	Mother tongue
French:	Excellent reading, writing and verbal skills
German:	Excellent reading, writing and verbal skills
English:	Excellent reading, writing and verbal skills

SKILLS

- Radiation and antennas, HF circuits design, power electronics, electromechanics, integrated circuit design
- Computer vision, image and speech processing, statistical signal processing, telecommunications
- μ -controllers and real-time programming, cryptography and artificial intelligence
- Non-linear systems, automatics, optics, mechatronics, audio
- Good knowledge of C++, C, Visual Basic, VHDL, Lisp, Php and SQL
- Linux, Word, PowerPoint, Excel, Matlab, Mathematica, LaTeX, Cadence, PSpice

INTERESTS

Playing music (drums and percussion), sports (biking and snowboarding), reading and travelling

Conference papers:

- J.B. Hayet, T. Mathes, J. Czyz, J. Piater, J. Verly, and B. Macq. [A Modular Multi-Camera Framework for Team Sports Tracking](#). In *Proc. of the IEEE Conf. on Advanced Video and Signal based Surveillance (AVSS'05)*, Como, Italy, September 15-16, 2005
- T. Mathes and J. Piater, [Robust Non-Rigid Object Tracking Using Point Distribution Models](#). In *Proc. of the British Machine Vision Conference*, Oxford, UK, September 5-8, 2005

Others:

- T. Mathes, *Robust Non-Rigid Object Tracking Using Point Distribution Models*, DEA Thesis, Liège, Belgium, September 2005
- T. Mathes, *Détection d'Objets Tridimensionnels par des Méthodes de Stéréovision*, Masters Thesis, Liège, Belgium, June 2004
- *Algorithms for Direction of Arrival Estimation in a Smart Antenna (2003)*, semester project, Matlab simulations
- *Conception et implémentation en VHDL sur plateforme FPGA d'un protocole de communication entre 2 circuits RF (2002-2003)*, semester project
- *Analyse et implémentation d'algorithmes de cryptographie (2002)*, semester project
- *Importance d'un portefeuille brevets pour une entreprise high-tech (2002)*, semester project