

Jérôme GUENARD

+336.74.15.38.42

jerome.guenard@enseeiht.fr

<http://guenard.perso.enseeiht.fr/>

27 years old



| Topics of expertise | | | |
|---------------------|------------------------|-------------------------|-------------------|
| 3D Reconstruction | Projective Geometry | Tracking | L-systems |
| Plants Modeling | | Image Processing | Calibration |
| | Segmentation | Quadrics Reconstruction | |
| Skeletonisation | Analysis-by-Synthesis | | Bundle Adjustment |

EDUCATION

2012-2013:

ATER (Lecturer)

ENSEEIHT (Electrical Engineering, Electronics, Computer Science, Hydraulics and Telecommunications National Superior School of Engineering) - Toulouse (FRANCE).

2009-2013:

Ph.D. Student in Computer Vision

VORTEX team - IRIT (Computer Research Institute in Toulouse)

Complementation of geometric reconstructions of natural objects from one or more images

In the context of:

-VINNEO project: vines characterization from images with 12 companies and laboratories.

-SODIMEL project: estimation of the volume of a vine grape from images.

Ph.D. Supervisor: Vincent CHARVILLAT, Professor, IRIT, University of Toulouse.

Ph.D. Advisors: Géraldine MORIN, Assistant Professor, IRIT, University of Toulouse.

Pierre GURDJOS, Research Engineer, IRIT, University of Toulouse.

2008: Master MIGS (Mathematics for Computer Graphics and Statistics)

University of Burgundy - Dijon (FRANCE).

2006: Mathematics Licence (Bachelor in mathematics)

University of Burgundy - Dijon (FRANCE).

2005: Science and Technology DEUG

University of Burgundy - Dijon (FRANCE).

2003: Science Bachelor (end of High School Exam)

Fourier Institute - Auxerre (FRANCE).

WORK EXPERIENCE

Oct. 2013 – Present:

R&D Engineer – FITTINGBOX company
Toulouse (FRANCE).

Augmented reality, Kinect sensor (matlab, C-C++)

Oct. 2008 – Jul. 2009:

R&D Engineer – SODIMEL company – IRIT laboratory
Toulouse (FRANCE).

software development, creation of a stereovision device (C-C++)

Apr. 2008 – Sept. 2008:

Master Thesis for SODIMEL company in Vortex team - IRIT
Toulouse (FRANCE).

Volume estimation of vine grapes using binocular vision.

PUBLICATIONS

International Conferences:

- ISVC 2013:** Reconstructing Plants in 3D from a Single Image using Analysis-by-Synthesis
Jérôme Guénard, Géraldine Morin, Frédéric Boudon, Vincent Charvillat
International symposium on Visual Computing – Rethymnon – GREECE
- MMCS 2012:** Realistic Plant Modeling from Images based on Analysis-by-Synthesis
Jérôme Guénard, Géraldine Morin, Frédéric Boudon, Vincent Charvillat
Mathematical Methods for Curves and Surfaces – Oslo - NORWAY
- ACCV 2009:** Multiple View Reconstruction of a Quadric of Revolution from its Occluding Contours
Pierre Gurdjos, Vincent Charvillat, Géraldine Morin, Jérôme Guénard
Asian Conference of Computer Vision – Xi'an – CHINA – full paper

International Journals:

- PAMI 2013:** *in preparation*
Reconstruction of Quadrics of Revolution from Occluding Contours
Jérôme Guénard, Géraldine Morin, Pierre Gurdjos, Vincent Charvillat

International Workshop :

- Worshop Kyushu-Toulouse :**
Analysis-by-Synthesis for Natural Scene Generation
Jérôme Guénard, Géraldine Morin, Pierre Gurdjos, Vincent Charvillat
Toulouse – FRANCE

National Conferences:

- ORASIS 2011:** Reconstruction de modèles virtuels de vignes à partir d'images
Jérôme Guénard, Géraldine Morin, Frédéric Boudon, Pierre Gurdjos, Vincent Charvillat
Praz-sur-Arly – FRANCE – full paper
- AFIG 2010:** Modélisation de vignes à partir d'une séquence d'images
Jérôme Guénard, Charlotte Giron, Géraldine Morin, Pierre Gurdjos, Frédéric Boudon,
Vincent Charvillat
Dijon – FRANCE – full paper
- AFIG 2009:** De la Reconstruction de Quadriques de Révolution à partir d'Images à la Complémentation d'Objets Naturels
Jérôme Guénard, Géraldine Morin, Pierre Gurdjos, Vincent Charvillat
Arles – FRANCE – full paper

TEACHING

- Modeling and Rendering.
Practical Work, ENSEEIHT, 2012, 2013
- Image Processing (Feature points extraction, Homography computation).
Practical Work, ENSEEIHT, 2011, 2012, 2013
- Project Supervision: From 2D to 3D (Images acquisition, Calibration, Feature points detection, Matching, Triangulation, Mesh, 3D Printing).
ENSEEIHT, 2013
- C (programming language), Shell (computing), Unix System
Practical Work, ENSEEIHT, 2013
- Java (Programming Language)
Practical Work, ENSEEIHT, 2013
- Shell (computing) introduction.
Practical Work, ENSEEIHT, 2012
- Project supervision: Dynamic Crowd Simulator (Delaunay mesh, applying forces, remeshing, GUI).
Practical Work, ENSEEIHT, 2011
- Geometric Modeling (Interpolation, Bézier, B-spline Curves and Surfaces).
Practical Work, ENSEEIHT, 2010
- Image Processing (Feature points extraction, Homography computation).
Practical Work, ENSEEIHT, 2010

- Learning (Linear regression, Classification Method, Cross-Validation).
Practical Work, ENSEEIHT, 2009

REWARDS and ADMINISTRATIVE CHARGES

- Rewarded with INP'INNOV price for involvement in the VINNEO project.
- In charge of project management (VINNEO and SODIMEL): experimentations in vine plots (France, Spain, Italy, Chili), meetings preparation, reporting.
- Organization of Apro'Doc (<http://www.aprodoc.org/>) which aims to bring together businesses and young researchers in science.
- Participated in the organization of CORESA (French conference on signal processing).
- Humanitarian Mission (South Africa 2009) to care kids and help them to get access to education.
- MASTER degree with honnors.

COMPUTER SCIENCE COMPETENCES

- Programming languages: C, C++, Shell, Python, Java.
- Libraries: Opencv, OpenGL, GSL, Minpack.
- Mathematical software: Matlab, Maple, R.
- Others: Latex, Beamer, Kile, L-Py (Plants Modeling Software), ssh, svn, vpn.

LANGUAGES

- French: native language.
- English: fluent.
- Spanish: basic knowledge .

PERSONAL INTERESTS

- Traveling (Chile, South Africa, China, Reunion Island, Canary Islands, Argentina, ...) - Humanitarian Mission (South Africa 2009) - Couchsurfing.
- Running (Marathon, Half Marathon, 10km, relays) - Tennis – Underwater diving (CMAS first level).
- Reading (novels) - Movies (action, fantasy, thriller ...) - Music (piano) - Poker.