

Romanou Melodou 7  
Athens 11471  
Greece

Tel: +30 210 3847240  
+30 6973 069908  
email: ilias\_k@central.ntua.gr  
ilias.kalisperakis@gmail.com

## Curriculum Vitae

Ilias Kalisperakis, Surveying Engineer, PhD

---

### Personal

- Date of Birth: 7/4/1978
- Place of Birth: Athens, Greece

### Graduate Studies

- Surveying Engineer, Department of Rural & Surveying Engineering, National Technical University of Athens. October 2001.

### Post Graduate Studies

- PhD Thesis in Photogrammetry. Department of Rural & Surveying Engineering, National Technical University of Athens  
Dissertation: "*Epipolar Geometry in Projective and Euclidean Space*". March 2010.

### Scientific Publications

- 2011. A Structured-Light approach for the reconstruction of complex objects. Kalisperakis I., Grammatikopoulos L., Karras G., Petsa E., XXIII International CIPA Symposium, Prague, Czech Republic, September 12 - 16, 2011.
- 2011. Automatic point cloud generation and registration with a stereovision slit-scanner. A. Prokos, I. Kalisperakis, G. Karras, 4th International Workshop 3D-ARCH 2011 "3D Virtual Reconstruction and Visualization of Complex Architectures", 2-4 March, Trento, Italy.
- 2010. Self Adaptive Background Modeling for Identifying Persons' Falls. Doulamis A., Kalisperakis I., Stentoumis C., Matsatsinis N., 5th International Workshop on Semantic Media Adaptation and Personalization, Limassol. (to appear)
- 2010 A Real-Time Single-Camera approach for automatic fall detection. A. Doulamis, N. Doulamis, I. Kalisperakis, C. Stentoumis, International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. XXXVIII, Part 5, 207-212.
- 2009 FAUCCAL: An Open Source Toolbox for Fully Automatic Camera Calibration. V. Douskos, L. Grammatikopoulos, I. Kalisperakis, G. Karras, E. Petsa, XXII CIPA Symposium on Digital Documentation, Interpretation & Presentation of Cultural Heritage, October 11-15, 2009, Kyoto, Japan
- 2008 Fully automatic camera calibration using regular planar patterns. V. Douskos, I. Kalisperakis, G. Karras, E. Petsa. International Archives of Photogrammetry, Remote Sensing and the Spatial Information Sciences, vol. 37(5), pp. 21-26
- 2007 Laser scanning and automatic multi-image texturing of surface projections. E. Petsa, L. Grammatikopoulos, I. Kalisperakis, G. Karras, V. Pagounis. XXI CIPA International Symposium, Athens, 1-6 October, pp. 579-584.

- 2007 Automatic calibration of digital cameras using planar chess-board patterns. V. Douskos, I. Kalisperakis, G. Karras. Optical 3-D Measurement Techniques VIII, Wichman Verlag, vol. 1, pp.132-140.
- 2007 Automatic multi-view texture mapping of 3D surface projections. L. Grammatikopoulos, I. Kalisperakis, G. Karras, E. Petsa. 3D Virtual Reconstruction and Visualization of Complex Architectures (3D Arch '07), July 12-13, ETH Zurich, Switzerland.
- 2007 Generation of orthoimages and perspective views with automatic visibility checking and texture blending. G. Karras, L. Grammatikopoulos, I. Kalisperakis, E. Petsa. Photogrammetric Engineering and Remote Sensing, 73(4), pp. 403-411.
- 2006 Σύγχρονες ψηφιακές τεχνικές τεκμηρίωσης στην επίγεια φωτογραμμετρία. Λ. Γραμματικόπουλος, Η. Καλησπεράκης, Γ. Καρράς, Δ. Μαυρομάτη, Ε. Πέτσα, 2ο Πανελλήνιο Συνέδριο Αγρονόμων Τοπογράφων Μηχανικών, 9-10 Δεκεμβρίου (In Greek)
- 2006 An open-source educational software for basic photogrammetric tasks. I. Kalisperakis, L. Grammatikopoulos, E. Petsa, G. Karras. Proceedings of the FIG-ISPRS-ICA International Symposium on Modern Technologies, Education and Professional Practice in Geodesy and Related Fields, Sofia, 09 - 10 November, pp. 581-586.
- 2006 A unified approach for automatic camera calibration from vanishing points. L. Grammatikopoulos, G. Karras, E. Petsa, I. Kalisperakis. International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, Vol. XXXVI, Part 5 (in CD).
- 2006 3D aspects of 2D epipolar geometry. I. Kalisperakis, G. Karras, L. Grammatikopoulos. International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, Vol. XXXVI, Part 3, pp.255-259.
- 2005 Estimation of camera parameters from stereo pairs with no external control information. I. Kalisperakis, G. Karras, E. Petsa. XX CIPA International Symposium, Torino, 27 September - 1 October, pp. 390-394.
- 2005 Data fusion from multiple sources for the production of orthographic and perspective views with automatic visibility checking. L. Grammatikopoulos, I. Kalisperakis, G. Karras, E. Petsa. Proc. XX CIPA International Symposium, Torino, 27 September - 1 October, pp. 819-824.
- 2004 Automatic multi-image photo-texturing of 3D surface models obtained with laser scanning. L. Grammatikopoulos, I. Kalisperakis, G. Karras, T. Kokkinos, E. Petsa. CIPA International Workshop on "Vision Techniques Applied to the Rehabilitation of City Centres", Lisbon, 25-27 October
- 2004 On automatic orthoprojection and texture-mapping of 3D surface models. L. Grammatikopoulos, I. Kalisperakis, G. Karras, T. Kokkinos, E. Petsa. International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, 35(5), pp. 360-365.
- 2003 On multi-image reconstruction from historic photographs. I. Kalisperakis, E. Petsa, M. Rova, G. E. Karras. XIX CIPA International Symposium, Antalya, Turkey, 30 September - 4 October, pp. 216-219.

## Research Projects

**2005–2007**

*Development of Algorithms for the Automatic Generation of Accurate Photorealistic Models by Combining Photogrammetry, Image Processing and Laser Scanning – Application in the Documentation*

*of Cultural Heritage (Financed within the “Archimedes II – Support of Research Groups of TEI” framework)*

**2005–2007**                      *Automatic Approaches for the Generation of “True Orthoimages” with Application in the Documentation of a Roman Monument (Financed by the Greek Ministry of Culture)*

**2008–2011**                      *Implementation of an Optical-Photogrammetric Scanner for the Automatic 3D Reconstruction of Small Objects. (Financed by TEI of Athens)*

## **Teaching**

- **2002 – Today**  
Auxiliary teaching in the courses Photogrammetry III (Digital Photogrammetry) and Summer Field Course in Photogrammetry in the department of Rural and Surveying Engineering (NTUA).
- **2002 – 2008**  
Laboratory Assistant in the department of Surveying Engineering of the Technological Educational Institute of Athens (TEI-A) in the courses “Photogrammetry III” and “Applications of Photogrammetry”.
- **2010 - Today**  
Scientific and Laboratory Assistant in the department of Surveying Engineering of the Technological Educational Institute of Athens (TEI-A) in the courses “Theory of Errors and Adjustment of Observations” and “Applications of Photogrammetry”.

## **Languages**

- English “Cambridge Certificate of Proficiency in English”
- French “Diplome Approfondu de Langue Francaise” (DALF)

## **Technical Expertise**

- Programming (C/C++, C#, Visual Basic, Matlab, Octave)
- processing – modeling of range data (Geomagic, MeshLab, Polyworks)
- CAD Software (AutoCad, Land Development)
- Image Processing (Photoshop, PhotoPaint, Gimp)
- Photogrammetric Software (Leica Photogrammetry Suite, Inpho, DVP Workstation, Photomodeler)

## **Additional Information**

### **Software Development**

- AutoRec (Software for Digital Image Rectification)
- BASTA (**B**undle **A**djustment with **S**elf calibra**T**ion in **A**utocad)
- MPT (**M**atlab **P**hotogrammetric **T**oolbox)