

# Dr. Ioannis (Yannis) Kalantidis

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## Education

- 2009–2014 **Ph.D. in Computer Science**, *School of Electrical and Computer Engineering*, National Technical University of Athens, Greece.  
Ph.D. Thesis: Clustering and nearest neighbor methods for visual search
- 2002–2009 **Diploma/M.Eng. in Electrical and Computer Engineering**, *School of Electrical and Computer Engineering*, National Technical University of Athens, Athens, Greece.  
Diploma Thesis: Content- and geometry-based image retrieval

## Research interests

- Computer vision Large scale visual search and indexing, large scale data clustering, image clustering, automatic geo-localization, landmark recognition, logo detection, feature selection, clothing recognition, large scale nearest neighbor search and classification

## Working experience

- Jan 2015–present **Yahoo! Labs, San Francisco**, *Visiting/PostDoctoral Scientist*, San Francisco, USA.
- May–August 2014 **Yahoo! Labs, San Francisco**, *Research Intern*, supervisor: Lyndon Kennedy & David A. Shamma, collaborators: Li-Jia Li, Flickr Vision Team, San Francisco, USA.
- May–August 2012 **Yahoo! Labs, Santa Clara**, *Research Intern*, supervisor: Lyndon Kennedy & David A. Shamma, collaborator: Li-Jia Li, San Francisco & Santa Clara, USA.
- May–July 2010 **Yahoo! Research, Barcelona**, *Research Intern*, supervisor: Roelof Van Zwol, collaborators: Lluis Garcia Pueyo, Michele Trevisiol, Barcelona, Spain.
- 2007–2014 **Image Video and Multimedia Laboratory, School of Electrical and Computer Engineering, National Technical University of Athens**, *Research and Development in FP7 European Projects*,  
2009: Imagination (under ICCS/NTUA)  
2009-2011: WEKNOWIT (under CERTH/ITI) .

## Teaching experience

- 2009–2014 **Image and Video Analysis, Lab assistant**, *School of Electrical and Computer Engineering*, National Technical University of Athens, Greece.
- 2010–2014 **Programming Techniques, Lab assistant**, *School of Electrical and Computer Engineering*, National Technical University of Athens, Greece.

2009–2010 **Introduction to Programming, Lab assistant**, *School of Electrical and Computer Engineering*, National Technical University of Athens, Greece.

## Patents & Defensive Publications

US Patent Application **Visual Clothing Retrieval**, *Lyndon Kennedy, Li-Jia Li, Ioannis Kalantidis*, Pub. No: 2014/0314313 A1, Pub. Date: 23 October 2014, Patent Pending.

Defensive Publication **Scalable Triangulation-based Logo Recognition**, *Yannis Kalantidis, Michele Trevisiol, Lluís Garcia Pueyo and Roelof van Zwol*, Defensive Publication, Docket No.: ID11-7243, Pub. Date: April 29 2011.

## Development projects

VIRaL Principal developer in the Visual Image Retrieval and Localization tool <http://viral.image.ntua.gr>.

## Recommendation Letters

The following people will be willing to provide recommendation letters:

**Yannis Avrithis**, *Senior Researcher, University of Athens*.

**Lluís Garcia-Pueyo**, *Senior Research Engineer, Google Inc*.

**Stefanos Kollias**, *Full Professor, NTUA*.

**Lyndon Kennedy**, *Senior Research Scientist, Yahoo! Research*.

**Li-Jia Li**, *Director of Research, Snapchat*.

**Petros Maragos**, *Full Professor, NTUA*.

**Ioannis Emiris**, *Full Professor, University of Athens*.

**Roelof Van Zwol**, *Director of Innovation, Netflix*.

**Shih-Fu Chang**, *Full Professor, Columbia University*.

**Fei-Fei Li**, *Full Professor, Stanford University*.

**Herve Jegou**, *Senior Researcher, Facebook*.

## Professional Memberships

2009–today **Institute of Electrical and Electronics Engineers**, [IEEE].

2009–today **Technical Chamber of Greece**, [GTC].

## Awards & Scholarships

2005 **Erasmus Scholarship**, *Exchange Studies at Lund University, Lund, Sweden*.

2011 **Thomaidion Award for Scientific Publication**, *Retrieving landmark and non-landmark images from community photo collections*, National Technical University of Athens.

2012 **Thomaidion Award for Scientific Publication**, *VIRaL: Visual Image Retrieval and Localization*, National Technical University of Athens.

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## Invited Talks

**Columbia University**, *Digital Video and Multimedia Laboratory*, Invited by Prof. Shih-Fu Chang, August 19th 2014, New York, NY.

**Stanford University**, *Image, Video and Multimedia Systems Group*, Invited by Prof. Bernd Girod, August 1st 2014, Stanford, CA.

**FXPAL**, *Fuji-Xerox Palo Alto Laboratory*, Invited by Dr. Matt Cooper, July 29th 2014, Palo Alto, CA.

**Stanford University**, *Stanford Vision Lab*, Invited by Prof. Fei-Fei Li, July 28th 2014, Stanford, CA.

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## Reviewer in journals

- 2010–today **Multimedia Tools and Applications**, [MTAP], Springer.  
2012–today **Signal Processing: Image Communication**, [SPIC], Elsevier.  
2014–today **Transactions on Circuits and Systems for Video Technology**, [CSVT], IEEE.  
2014–today **Transactions on Multimedia**, [TMM], IEEE.  
2015–today **Transactions on Image Processing**, [TIP], IEEE.  
2015–today **Transactions on Intelligent Systems and Technology**, [TIST], ACM.  
2015–today **Signal Processing Letters**, [SPL], IEEE.  
2015–today **Transactions on Knowledge and Data Engineering**, [TKDE], IEEE.

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## Committee member in conferences & workshops

- 2016 **IEEE Conference on Computer Vision and Pattern Recognition**, *Technical Program Committee Member*, [CVPR].  
2015 **IEEE International Conference on Computer Vision**, *Technical Program Committee Member*, [ICCV].  
2013, 2015 **ACM Multimedia Conference**, *Technical Program Committee Member*, [ACM-MM].  
2011 **IEEE Workshop on Content-based Multimedia Indexing**, *Technical Program Committee Member*, [CBMI].  
2009 **IEEE Workshop on Content-based Multimedia Indexing**, *Local Chair Member*, [CBMI].

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## Summer schools attended

- GSS 2013 **Graduate Summer School: Computer Vision**, *UCLA, Los Angeles, California*, 22 July - 9 August 2013, Full UCLA Scholarship.  
SAGA 2011 **SAGA (ShApes Geometry and Algebra) Fall School**, *Vilnius, Lithuania*, 27-30 September 2011, Full SAGA Scholarship.  
VS3 2010 **Vision and Sports Summer School 2010**, *ETH, Zurich, Switzerland*, 16-20 August 2010.  
ESSIR 2009 **7th European Summer School in Information Retrieval**, *Padova, Italy*, 31st August - 4 September 2009.

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## Languages

Greek	<b>Native</b>	
English	<b>Fluent</b>	<i>Certificate of Proficiency in English</i>
German	<b>Basic</b>	<i>Zertificat Deutsch als Fremdsprache, Test DaF (grade 3)</i>

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## Computer skills

Programming	Experience in C, C++, Matlab, Python, bash scripting Familiar with PHP, Java, SQL, HTML, XML, PIG, Hadoop
Other	L <sup>A</sup> T <sub>E</sub> X, OpenCV, Pgfplots, TikZ, Visual Studio, Codeblocks, 3D Studio, Adobe Photoshop, Adobe Premiere

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## Musical Education

- 1993-2001 **Classical Piano Studies**, *International Conservatory of Athens*, Ilioupoli, Athens.
- 1994-1999 **Children Choir Member**, *Dimitris Typaldos Children's Choir*, Moschato, Athens.
- 1993-2001 **Music Theory Degree, Harmony Analysis Studies**, *International Conservatory of Athens*, Ilioupoli, Athens.
- 1999-2001 **Electric Guitar Studies**, *Aeonaon Conservatory*, Ilioupoli, Athens.
- 2003-2005 **Modern/Jazz Piano and Theory Studies**, *Yiorgos Fakanas Art Music School*, Moschato, Athens.
- 2005 **Classic Trumpet Studies**, *Ilioupoli City Philharmonic Orchestra*, Ilioupoli, Athens.
- 2007-2009 **Jazz Piano Studies**, *Private Courses with Giorgos Katsanos*, Nea Makri, Athens.
- 2013 **Introduction to Improvisation**, *Coursera.org online course / Berklee College of Music*, Instructor: Gary Burton, Certificate Obtained.
- 2015 **McCain Improv Workout**, *California Jazz Conservatory / Jazzschool*, Instructor: Seward McCain.

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## Web Radio Production

- 2014 **Disturbing Music**, *Curator of a web-radio series dedicated to experimental and improvisational music*, IlioupoliOnAir Internet Radio, Season 1, Jan – May 2014 (8 Episodes).

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## Film Experience

- 2008 **Love is Blind**, *Director, Producer, Screenplay Adaptation, Soundtrack*, A short film based on the novel by Boris Vian (8', black and white) .  
Official Selection:  
  - 11th International Panorama of Independent Film and Video Creators (Patra, 2009)
  - Athens Fantastic Film Festival 2009 (Ilioupoli, Athens, Greece 2009)Awards:  
  - Audience Choice Award (Athens Fantastic Film Festival 2009, Ilioupoli, Athens, Greece)
  - Fantastic Film Audience Choice Award (2010, [www.bigbang.gr](http://www.bigbang.gr))
- 2008 **The Experiment**, *Production Assistant, Soundtrack*, Short Film (7', color), directed by Andreas Vakalios, Participated in the 48 hour film festival (Athens, Greece 2008).

- 2009 **The Day The Cup Was Stuck On The Table**, (*co-*)*Director of Cinematography*, Short Film (6', color), directed by Fili Olsefsi, Official Selection: Naousa International Short Film Festival (NIFF 2012, Naousa, Greece 2012).
- 2014 **Blind Crossing**, *Director, Producer, Screenplay, Soundtrack*, Documentary Feature Film (57', color).  
Official Selection:  
  - Athens International Film Festival (Athens, Greece, 2015)
  - Chalkida DocFest (Chalikda, Greece, 2015)

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## Publications

### Selected publications

- Y. Avrithis, Y. Kalantidis, E. Anagnostopoulos and I. Z. Emiris. Web-scale image clustering revisited. In *International Conference on Computer Vision (oral) (ICCV)*, Santiago, Chile, December 2015.
- Y. Kalantidis and Y. Avrithis. Locally Optimized Product Quantization for Approximate Nearest Neighbor Search. In *Computer Vision and Pattern Recognition (CVPR)*, Columbus, OH, June 2014.
- G. Tolia, Y. Kalantidis, and Y. Avrithis. Towards large-scale geometry indexing by feature selection. *Computer Vision and Image Understanding (CVIU)*, March 2014.
- Y. Kalantidis, L. Kennedy and L.-J. Li. Getting the Look: Clothing Recognition and Segmentation for Automatic Clothing Suggestions in Everyday Photos. In *International Conference on Multimedia Retrieval (Oral paper) (ICMR)*, Dallas, TX, April 2013.
- Y. Avrithis and Y. Kalantidis. Approximate gaussian mixtures for large scale vocabularies. In *European Conference on Computer Vision (ECCV)*, Florence, Italy, October 2012.
- G. Tolia, Y. Kalantidis, and Y. Avrithis. Symcity: Feature selection by symmetry for large scale image retrieval. In *ACM Multimedia (Oral paper) (MM 2012)*, Nara, Japan, October 2012. ACM.
- Y. Avrithis, Y. Kalantidis, G. Tolia, and E. Spyrou. Retrieving landmark and non-landmark images from community photo collections. In *ACM Multimedia (Oral paper) (ACM MM 2010)*, Firenze, Italy, October 2010.
- Y. Avrithis, G. Tolia, and Y. Kalantidis. Feature map hashing: Sub-linear indexing of appearance and global geometry. In *ACM Multimedia (Oral paper) (ACM MM 2010)*, Firenze, Italy, October 2010.
- Y. Kalantidis, LG. Pueyo, M. Trevisiol, R. van Zwol, and Y. Avrithis. Scalable triangulation-based logo recognition. In *International Conference on Multimedia Retrieval*, Trento, Italy, April 2011.

Y. Kalantidis, G. Tolia, Y. Avrithis, M. Phinikettos, E. Spyrou, P. Mylonas, and S. Kollias. Viral: Visual image retrieval and localization. *Multimedia Tools and Applications (MTAP)*, 2011.

#### Other publications

I. Kollia, Y. Kalantidis, K. Rapantzikos, and A. Stafylopatis. Improving semantic search in digital libraries using multimedia analysis. In *Journal of Multimedia*, vol. 7, no 2, pp. 193-204, 2012.

I. Kollia, Y. Kalantidis, K. Rapantzikos, and S. Kollias. Visual analysis for semantic search in digital libraries. In *Constantinides International Workshop on Signal Processing (CIWSP 2013)*, London, 2013.

E. Spyrou, Y. Kalantidis, G. Tolia, Ph. Mylonas, and S. Kollias. Intelligent content retrieval using a visual vocabulary and geometric constraints. In *FUZZ-IEEE 2010, in conjunction with The 2010 IEEE World Congress on Computational Intelligence (WCCI 2010)*, July 2010.

S. Papadopoulos, C. Zigkolis, G. Tolia, Y. Kalantidis, P. Mylonas, Y. Kompatsiaris, and A. Vakali. Image clustering through community detection on hybrid image similarity graphs. In *International Conference on Image Processing (ICIP 2010)*, Hong Kong, September 2010.

E. Spyrou, Y. Kalantidis, and Ph. Mylonas. Exploiting a region-based visual vocabulary towards efficient concept retrieval. In *in Proceedings of Recognising and tracking events on the Web and in real life, in conjunction with SETN 2010 (EVENTS 2010)*, May 2010.

Y. Kalantidis, E. Spyrou, Ph. Mylonas, and S. Kollias. Using a region and visual word approach towards semantic image retrieval. In *Workshop on Semantic Media Adaptation and Personalization (SMAP 2010)*, Limassol, Cyprus, December 2010.

Y. Kalantidis, G. Tolia, E. Spyrou, Ph. Mylonas, Y. Avrithis, and S. Kollias. Visual image retrieval and localization. In *Greek Electrical and Computer Engineering Student Conference*, Thessaloniki, Greece, April 2009.

Y. Kalantidis, G. Tolia, E. Spyrou, Ph. Mylonas, and Y. Avrithis. Visual image retrieval and localization. In *International Workshop on Content-Based Multimedia Indexing (CBMI 2009)*, Chania, Greece, June 2009.

Y. Kalantidis. Content- and geometry-based image search. *Diploma Thesis (National Technical University of Athens, Athens, Greece, February 2009)*.