

# Fernando Vilariño

(Resume 8-2014)

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## EDUCATION

- PhD in Computer Vision and Artificial intelligence. Univ. Autònoma Barcelona (UAB), Spain (2006).
- MSc in Computer Science & Artificial Intelligence. Univ. Santiago Compostela (USC), Spain (1997).
- BSc in Physics at Univ. Santiago Compostela (USC), Spain (1996).

## PREVIOUS POSITIONS

1. Universitat Autònoma de Barcelona (UAB), Associate Professor (15/10/2009-).
2. Universitat Autònoma de Barcelona (UAB), Lecturer (16/10/2008).
3. Centre de Visió per Computador (CVC), Research Fellow (15/10/2007).
4. Trinity College Dublin (TCD), Research Fellow (15/10/2006).
5. Universitat Autònoma de Barcelona (UAB), Assistant Teacher (15/10/2001).
6. Universitat Autònoma de Barcelona (UAB), Associate Teacher (15/10/2000).

## GRANTS - AWARDS

1. Google Research Award (2014).
2. Ramon y Cajal Research Fellowship – Spanish Research Council award for excellence in research (2009).
3. Juan de la Cierva – Spanish Research Council award for Young Doctors (2007).

## TEACHING EXPERIENCE

- Database systems. Computer Science degree at UAB (2000-2006).
- Database systems administration. Computer Science degree at UAB (2000-2006 and 2008-2010).
- Computer Vision. Computer Science and Statistics degree at TCD (2006-2007).
- Algorithm design. Aeronautics degree at UAB (2008-2009).
- Multimedia Systems. Computer Science degree at UAB (2008-2013).
- Robotics, Language and Planning. Computer Science degree at UAB (2010-2013).
- MSc in Multimedia Systems, UAB 2010-2012.
- MSc in Computer Vision and Artificial Intelligence, UAB 2009-2013

## PROFESSIONAL MEMBERSHIP OF SOCIETIES and CONFERENCE ORGANISATION

- Member of the following societies: IEEE Society (from 2009), AERFAI Society (from 2009), Eye Movement Research Association (from 2013).
- Co-organizer of ICPR 2000, ICCV 2011.
- Organizer of the Winter School on Eye-tracker Methodology 2009.

## PARTICIPATION IN RESEARCH PROYECTS (last 5 years)

1. **TIN2012-33116**. Integration of anatomical and functional data by using normalised coordinate maps based on physiological markers. Spanish Council for Research. 108.00Eu. (2013-2015).
2. **TIN2009-10435**. (Project PI) Real time detection of colon cancer for the assessment of the quality of the endoscopy. Spanish Council for Research. 80.010Eu. (2009-2013).
3. **CSD2007-00018**. MIPRCV Multimodal interaction in pattern recognition and computer vision / Consolider-Ingénio 2010. Spanish Council for Research. (2008-2013).
4. **Endoview**. Computer aided decision support to improve the quality of endoscopy screening. Research Ireland. 500.00Eu. (2009).
5. **TIN2006-15308-C02-02**. MAMMIM. Multi-task learning models for the analysis of medical imaging. Spanish Council for Research 127.000Eu. (2007-2009).
6. **PBR 2008 00065**. (Project PI) New didactic techniques in the EHES applying mobile technologies. Agaur Catalonia. 7500Eu. (2008).

## PATENTS

1. Vilariño, Fernando; Segui, Santiago et al. **Method for automatic classification of in vivo images**. US 2010/0046816 A1. 25/02/2010. EU, world PCT. In exploitation by Given Imaging, Ltd.
2. Spyridonos, Panagiota; Vilariño, Fernando et al. **Device, system and method for automatic detection of contractile activity in an image frame**. US 8,396,327 B2. 12/11/2013. PCT/IL2007/000322. In exploitation by Given Imaging, Ltd.
3. Radeva, Petia; Vitria, Jordi; Vilariño, Fernando et al. **Cascade analysis for intestinal contraction detection**. EP 1 997 076 B1. 10/11/2010. PCT/IL2007/000323. In exploitation by Given Imaging, Ltd.
4. Lacey, Gerard; Vilariño, Fernando. **Endoscopy system with motion sensors**. 12/736,536. 15/04/2009. PCT IE/2009/000018. In exploitation by EndoDex. Ltd.
5. Vilariño, Fernando; Spyridonos, Panagiota et al. **Device, system and method for measurement and analysis of contractile activity**. US 8,335,362 B2. 18/12/1012. PCT/IL2007/000709. In exploitation by Given Imaging, Ltd.

## SELECTED PUBLICATIONS

(Google Scholar Profile <http://scholar.google.com/citations?user=j-NOlgUAAAAJ>. 436 Citations, h-index=11)

### Journal papers:

1. Onur Ferhat, Fernando Vilariño y Javier Sánchez. **A Cheap Portable Eye-Tracker Solution for Common Setups**. Journal of Eye Movement Research, 6(3), 103-111. 2014.
2. Jorge Bernal, Javier Sánchez, and Fernando Vilariño **Towards Automatic Polyp Detection with a Polyp Appearance Model**. Pattern Recognition, vol. 45, no. 9, pp: 3166-3182, 2012. JCR Journal Q1(IF=3.172).
3. Santi Segui, Michal Drozdal, Fernando Vilariño et al. **Categorization and segmentation of intestinal content frames for wireless capsule endoscopy**. Transactions on Information Technology in BioMedicine, vol. 16, no. 6, pp: 1341-1351, 2012. JCR Journal Q2 (IF=1.676).
4. Fernando Vilariño, Panagiota Spyridonos, et al. **Intestinal Motility Assessment With Video Capsule Endoscopy: Automatic Annotation of Phasic Intestinal Contractions**. IEEE Transactions on Medical Imaging, 29(2), 246–259, 2010. JCR Journal Q1 (IF=4.027).
5. Jorge Bernal, Fernando Vilariño and Javier Sánchez. **WM-DOVA maps for Accurate Polyp Localization in Colonoscopy: Validation vs. Saliency Maps from Physicians**". IEEE Transactions on Medical Imaging (second revision 2014). JCR Journal Q1 (IF=4.027).

### Conference papers:

1. Jorge Bernal, Javier Sánchez, Fernando Vilariño, et al. **Experts vs. Novices: Applying Eye-tracking methodologies in Colonoscopy Video Screening for Polyp Search**. In Proc. ETRA 2014.
2. Onur Ferhat, Fernando Vilariño and Javier Sánchez. **A Cheap Portable Eye-Tracker Solution for Common Setups** In Proc. of the ECEM 2013.
3. Jorge Bernal, Javier Sánchez and Fernando Vilariño. **Integration of Valley Orientation Distribution for Polyp Region Identification in Colonoscopy**. In Workshop on Computational and Clinical Applications in Abdominal Imaging. MICCAI (LNCS Vol. 6668, pp. 76–83). 2011.
4. Jorge Bernal, Javier Sánchez and Fernando Vilariño. **Reduction of Pattern Search Area in Colonoscopy Images by Merging Non-Informative Regions**, In Proc. CASEIB 2010.
5. Fernando Vilariño, Stephan Ameling, et al. **Eye tracking search patterns in expert and trainee colonoscopists: A novel method of assessing endoscopic competency?**, Digestive Disease Week (DDW), pp:1 – 2, 2009.

### Book Chapters:

Jorge Bernal, Fernando Vilariño y Javier Sánchez **Towards Intelligent Systems for Colonoscopy**. In Paul Miskovitz (Ed.), Colonoscopy (Vol. 1, pp. 257–282). InTech. 2011.