

Research Activity 2013



INDEX

1. Personnel (88).....	4
2. Competitive Projects (28).....	5
• New projects awarded in 2012 (3)	5
• Renewals (19)	5
• Grants (6)	8
3. PhD Thesis (11)	10
4. Master thesis and Master projects (11).....	11
5. Research stays: outgoing (14)	12
6. Research stays: incoming (18).....	13
7. Courses, Tutorials and Invited Talks by CVC personnel (36)	15
8. Courses and invited talks at CVC (22)	19
9. Patents (1).....	22
10. Publications (168)	23
• Books (11)	23
• Book Chapters (10)	23
• Journals with Impact Factor (51)	24
• Other Journals (1)	27
• International Conferences (90).....	27
• Technical Report (2)	34
• Miscellanea (4)	34
• Fact sheet – Publications	35
11. Organization of Conferences, Workshops and other dissemination activities (12) 36	
12. Awards (12)	38

0. Summary

PERSONNEL	88
Postdoc Researchers	47
PhD students	41
COMPETITIVE PROJECTS	28
New projects	3
Renewals	19
Grants	6
PHD THESIS	11
MASTER THESIS AND MASTER PROJECTS	11
RESEARCH STAYS: OUTGOING	14
RESEARCH STAYS: INCOMING	18
COURSES, TUTORIALS AND INVITED TALKS BY CVC PERSONNEL	36
COURSES AND INVITED TALKS AT CVC	22
PATENTS	1
PUBLICATIONS	168
Books	11
Book Chapters	10
Journals with Impact Factor	51
Other Journals	1
International Conferences	90
Technical Report	2
Miscellanea	4
ORGANIZATION OF CONFERENCES WORKSHOP AND OTHER AND DISSEMINATION ACTIVITIES	36
AWARDS	12

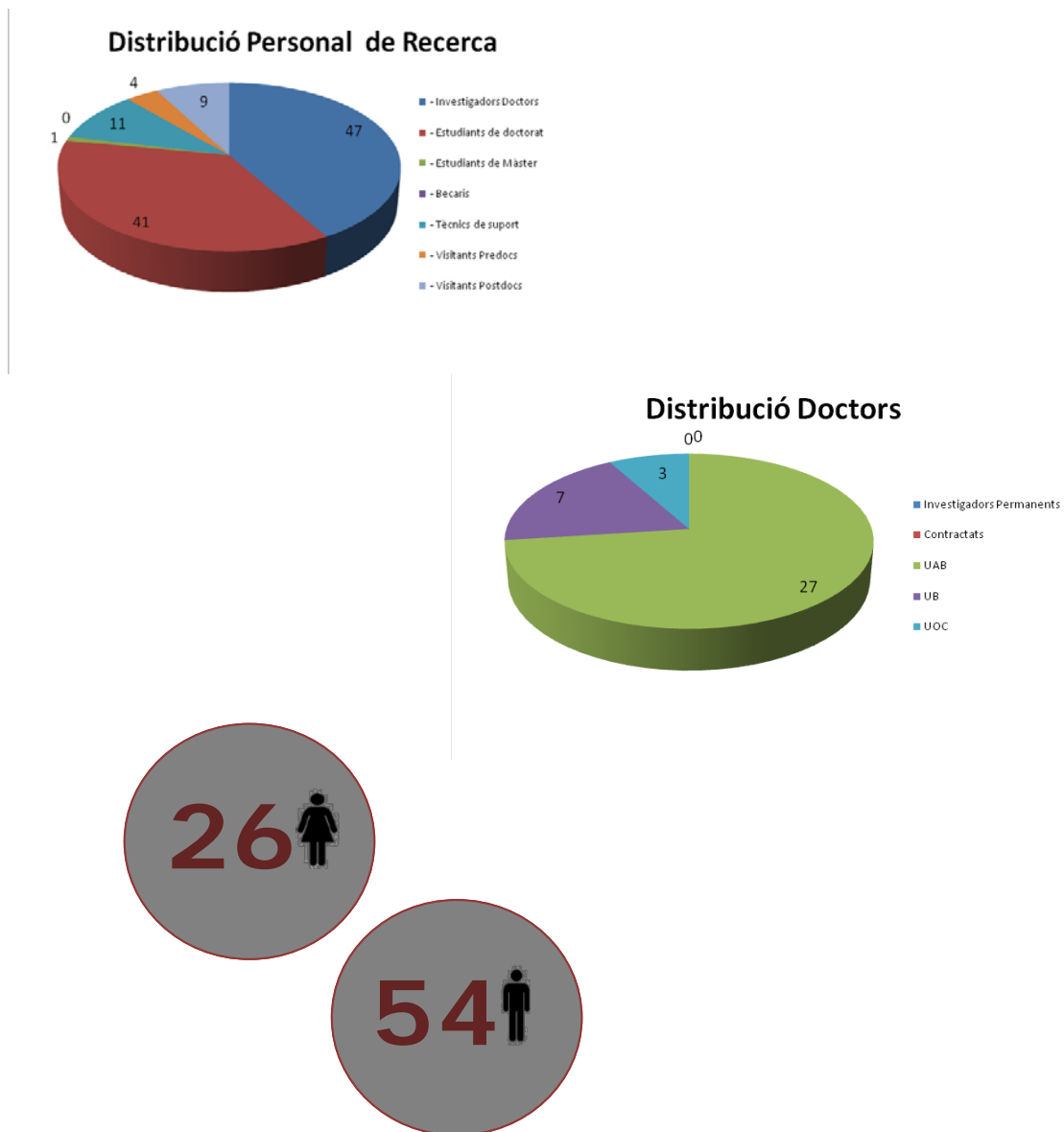
1. Personnel (88)

As of 31 December 2013, CVC personnel who perform research activities are composed by:

POST DOC RESEARCHERS (47):

- Permanent (22): including 4 senior researchers contracted by CVC and also 18 university professors from UAB, UB and UOC.
- Postdoc contracts (25): including Ramon y Cajal, as well as those hired by the CVC and the UAB, UB and UOC universities.

PHD. STUDENTS (41): It includes any PhD student with a scholarship (CVC, UAB, FPI or FI) or a contract as an assistant at the UAB, UB, or UOC, as well as the master students.



2. Competitive Projects (28)

- **New projects awarded in 2012 (3)**

TITLE: PROGRAMA SUMA
REFERENCE: VISITT
FUNDING ENTITY: CERCA
DURATION: 2014
TOTAL AWARDED: 100.000,00€
RESEARCHER: Josep Lladós

TITLE: AVAL-DOC Advances in Automatic Valorisation of Administrative Document Contents
REFERENCE: TECSPR Q5856375J152536
FUNDING ENTITY: ACCIÓ
DURATION: 2014-2015
TOTAL AWARDED: 28.751,60€
RESEARCHER: Marçal Rossinyol

TITLE: Técnicos de Apoyo 2012
REFERENCE: PTA2012-8115-E
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 2013-2016
TOTAL AWARDED: 48.000,00€
RESEARCHER: Raul Alcaide
ADVISOR: David Rotger

- **Renewals (19)**

TITLE: PRAGMATA - Desarrollo de la Hermenéutica Visual en la Interpretación de Imágenes.
REFERENCE: TIN2012-39051
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 2012-2015
TOTAL AWARDED: 90.768,60€
RESEARCHER: X.Roca

TITLE: Co-READ - Reconocimiento Contextual en Documentos Antiguos
REFERENCE: TIN2012-37475-C02-02
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 2012-2015
TOTAL AWARDED: 88.639,20€
RESEARCHER: J. Lladós

TITLE: FISIOLÓGICA - Integración de datos anatómico-funcionales mediante mapas de coordenadas normalizados basados en marcadores fisiológicos.
REFERENCE: TIN2012-33116
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 2012-2015
TOTAL AWARDED: 116.020,71€
RESEARCHER: D.Gil

TITLE: Extracción de conocimiento de imágenes de documentos con contenidos heterogéneos.

REFERENCE: TIN-2009-14633-C03-03

FUNDING ENTITY: Ministerio de Ciencia e Innovación

DURATION: 2010-2013

TOTAL AWARDED: 195.400,00 €

RESEARCHER: J. Lladós

TITLE: Tècniques de aprendizaje para sistemas de visión a gran escala: aplicaciones al reconocimiento de objetos.

REFERENCE: TIN2009-14404-C02-01

FUNDING ENTITY: Ministerio de Ciencia e Innovación

DURATION: 2010-2013

TOTAL AWARDED: 136.600,00 €

RESEARCHER: J. Vitrià

TITLE: Comprensión holística de imágenes en color: combinación de percepción "bottom-up" y semántica "top-D"

REFERENCE: TIN2009-14173

FUNDING ENTITY: Ministerio de Ciencia e Innovación

DURATION: 2010-2013

TOTAL AWARDED: 65.000,00 €

RESEARCHER: J. Van de Weijer

TITLE: Detección en tiempo real de cáncer de colón para la evaluación de calidad de las colonoscopias.

REFERENCE: TIN2009-10435

FUNDING ENTITY: Ministerio de Ciencia e Innovación

DURATION: 2010-2013

TOTAL AWARDED: 68.100,00 €

RESEARCHER: F. Vilariño

TITLE: Razonamiento epistemológico para la interpretación del contexto y de eventos de seguridad para la vigilancia.

REFERENCE: TIN2009-14501-C02-01

FUNDING ENTITY: Ministerio de Ciencia e Innovación

DURATION: 2010-2013

TOTAL AWARDED: 190.100,00 €

RESEARCHER: X. Roca

TITLE: Miocardia: Definición de un modelo integrado de la funcionalidad y anatomía muscular del ventrículo.

REFERENCE: TIN2009-13618

FUNDING ENTITY: Ministerio de Ciencia e Innovación

DURATION: 2010-2013

TOTAL AWARDED: 123.800,00 €

RESEARCHER: D. Gil

TITLE: Ajuts a la innovació TECCIT

REFERENCE: TECCIT12-1-0007-07

FUNDING ENTITY: ACCIÓ

DURATION: 2012-2013

TOTAL AWARDED: 40.000,00€

RESEARCHER: D.Rotger

TITLE: SiMeVé Sistema Multiespectral de Visió Estèreo
REFERENCE: TIN2011-25606
FUNDING ENTITY: Ministerio de Ciencia e Innovación
DURATION: 2011-2014
TOTAL AWARDED: 49.368,00 €
RESEARCHER: A. Sappa

TITLE: ViDAS-UrbE - Sistemas de Visión por Computador para la Asistencia a la Conducción en Entornos Urbanos.
REFERENCE: TRA2011-29454-C03-01
FUNDING ENTITY: Ministerio de Ciencia e Innovación
DURATION: 2011-2014
TOTAL AWARDED: 87.120,00 €
RESEARCHER: A. López

TITLE: FireWatcher - Monitorización de Incendios Mediante la Inspección Aérea del Terreno.
REFERENCE: TIN2011-29494-C03-02
FUNDING ENTITY: Ministerio de Ciencia e Innovación
DURATION: 2011-2014
TOTAL AWARDED: 32.186,00 €
RESEARCHER: D. Ponsa

TITLE: TnC - Text en la Ciutat - Comprensió Centrada en Humans de Text en Escenes
REFERENCE: TIN2011-24631
FUNDING ENTITY: Ministerio de Ciencia e Innovación
DURATION: 2011-2014
TOTAL AWARDED: 78.045,00 €
RESEARCHER: D. Karatzas

TITLE: CVC - PLAN DE TRANSFERENCIA DE TECNOLOGÍA 2011
REFERENCE: OTR-2011-0292
FUNDING ENTITY: Ministerio de Ciencia e Innovación
DURATION: 2011-2014
TOTAL AWARDED: 95.000,00 €
RESEARCHER: J. Lladós

TITLE: Introducción de información de color y mecanismos de atención a modelos Bio-inspirados de Visión por Computador
REFERENCE: TIN-2010-2177-C02-01
FUNDING ENTITY: Ministerio de Ciencia e Innovación
DURATION: 2010-2013
TOTAL AWARDED: 148.830,00 €
RESEARCHER: M. Vanrell

TITLE: X-QPA: a Quantitative X-ray-based intraoperative myocardial Re-perfusion Computer-assisted Analysis / Diagnosis Tool.
REFERENCE: 2010 VALOR 00158
FUNDING ENTITY: Agència de Gestió d'Ajuts Universitaris i de Recerca
DURATION: 2011-2013
TOTAL AWARDED: 76.005,00 €
RESEARCHER: C. Gatta

TITLE: Aministrative Document Automate Optimization
REFERENCE: FP7-PEOPLE-2008-IAPP-230653
FUNDING ENTITY: Marie Curie
DURATION: 2009 - 2013
TOTAL AWARDED: 184.261,26 €
RESEARCHER: J. Lladós

TITLE: 5CofM—Five Centuries of Marriages.
REFERENCE: Project Number 269796
FUNDING ENTITY: Unió Europea
DURATION: 2011-2015
TOTAL AWARDED: 396.800,00 €
RESEARCHER: J.Lladós

- **Grants (6)**

TITLE: Beca FI
REFERENCE: 2012FI_B 01124
FUNDING ENTITY: AGAUR
DURATION: 2013-2016
TOTAL AWARDED: 14.400,00 €
RESEARCHER: Lluís Gómez
ADVISOR: Dimosthenis Karatzas

TITLE: Estancia Breve - FPI
REFERENCE: EEBB-I-13-07059
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 03/10/2013-31/12/2013
TOTAL AWARDED: 6.450,00€
RESEARCHER: Patricia Márquez
ADVISOR: Dr. Debora Gil

TITLE: Estancia Breve - FPI
REFERENCE: EEBB-I-13-07818
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 16/10/2013-29/12/2013
TOTAL AWARDED: 8.850,00€
RESEARCHER: Ekaterina Zaytseva
ADVISOR: Dr. Jordi Vitrià

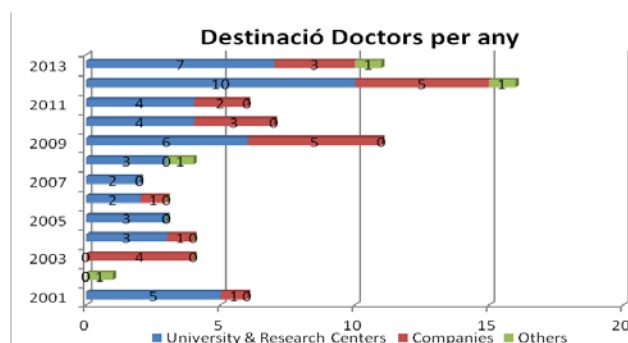
TITLE: Beca FI 2013
REFERENCE: BES-2013-063756
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 2014-2017
TOTAL AWARDED: 20.600,00€
RESEARCHER: Antoni Gurguí
ADVISOR: Debora Gil

TITLE: Estancia Breve - FPI 2013
REFERENCE: EEBB-I-14-00471
FUNDING ENTITY: Ministerio de Economía y Competitividad
DURATION: 31/03/2014 – 27/06/2014
TOTAL AWARDED: 600,00€ + 4.249,00€
RESEARCHER: Patricia Márquez
ADVISOR: Debora Gil

TITLE: Doctorats Industrials
REFERENCE: 2013 DI 067
FUNDING ENTITY: Scytl Secure Electronic Voting, SA
DURATION: 2014-2017
TOTAL AWARDED: 66.180,00€
RESEARCHER: Juan Ignacio Toledo
ADVISOR: Josep Lladós / Alicia Fornés

3. PhD Thesis (11)

- **Albert Gordo**, "*Document Image Representation, Classification and Retrieval in Large-Scale Domains*", CVC-UAB, January 2013.
Advisors: **Dr. Ernest Valveny** and **Dr. Florent Perronin**
- **Murad Al Haj**, "*Looking at Faces: Detection, Tracking and Pose Estimation*", CVC-UAB, February 2013.
Advisors: **Dr. Jordi González** and **Dr. Xavier Roca**
- **Marina Alberti**, "*Deteccion and Alignment of Vascular Structures in Intravascular Ultrasound using Pattern Recognition Techinques*", CVC-UB, February 2013.
Advisors: **Dr. Simone Balocco** and **Dr. Petia Radeva**
- **Miguel Armando Riem de Oliveira**, "*Automatic Information and Safety Systems for Driving Assistance*", Universidade de Aveiro, February 2013.
Advisors: **Dr. Angel Sappa** and **Dr. Vitor Santos**
- **Shida Beigpour**, "*Illumination and Object Reflectance Modeling*", CVC-UAB, March, 2013.
Advisor: **Dr. Joost van de Weijer**
- **Wenjuan Gong**, "*3D Motion Data aided Human Action Recognition and Pose Estimation*", CVC-UAB, May 2013.
Advisors: **Dr. Jordi González** and **Dr. Xavier Roca**
- **Javier Marín**, "*Pedestrian Detection Based on Local Experts*", CVC-UAB, June 2013.
Advisors: **Dr. Antonio López** and **Dr. Jaume Amores**
- **Rao Muhamad Anwer**, "*Color for Object Detection and Action Recognition*", CVC-UAB, July 2013.
Advisors: **Dr. Antonio López** and **Dr. Joost van de Weijer**
- **David Vázquez**, "*Domain Adaptation of Virtual and Real Worlds for Pedestrian Detection*", CVC-UAB, July 2013.
Advisors: **Dr. Antonio López** and **Dr. Daniel Ponsa**
- **Naveen Onkarappa**, "*Optical Flow in Driver Assistance Systems*", CVC-UAB, October 2013.
Advisors: **Dr. Angel Sappa**
- **Ferran Poveda**, "*Computer Graphics and Vision Techniques for the Study of the Muscular Fiber Architecture of the Myocardium*", UAB-CVC, December 2013.
Advisors: **Dr. Debora Gil** and **Dr. Enric Martí**



4. Master thesis and Master projects (11)

- Andrew Nolan, "*Visual Navigation: Obstacle mapping module for quadrotors on outdoor search and rescue operations*", UAB, July 2013.
Advisors: **Dr. Aura Hernández & Dr. Dani Ponsa**, CVC-UAB
- Marta Núñez, "*Resting-state fMRI study for finding discrimination brain regions in obesity*", UAB, July 2013.
Advisors: **Dr. Laura Igual**, CVC-UB
- Adrià Ruiz, "*Affective response estimation with Bag-of-Facial-Words*", UAB, July 2013.
Advisors: **Dr. Joost Van de Weijer**, CVC-UAB, & Dr. Xavi Binefa, UPF
- Jordi Salvador, "*Towards multi-modal 3D reconstruction*", UAB, September 2013.
Advisors: **Dr. Felipe Lumbreras & Dr. Angel Sappa**, CVC-UAB
- Manuel Granados, "*Semantic scene understanding for urban scenarios*", UAB, September 2013.
Advisors: **Dr. Antonio López**, CVC-UAB
- **Ivet Rafegas**, "*Exploring low-level vision models. Case study: saliency prediction*", CVC-UAB, September 2013.
Advisors: **Dr. Maria Vanrell**, CVC-UAB
- Aitor Matilla, "*An Eye-tracking investigation into the role of bottom-up saliency and top-down guidance in visual recognition and memory*", UAB, September 2013.
Advisors: **Dr. Maria Vanrell**, CVC-UAB, & Dr. Laura Dempere, UPF
- Aleix Puig, "*Computer vision applied to immunohematology diagnostics*", UAB, September 2013.
Advisors: **Dr. Fernando Vilariño**, CVC-UAB
- Long Long Yu, "*Diagnosing color for object detection*", UAB, September 2013.
Advisors: **Dr. Joost Van de Weijer**, CVC-UAB
- **Francesco Brughi**, "*Artistic heritage motive retrieval: an explorative study*", CVC-UAB, September 2013.
Advisors: **Dr. Oriol Ramos & Dr. Dèbora Gil**, CVC-UAB
- Didier Domínguez, "*Handwritten word spotting*", UAB, September 2013.
Advisors: **Dr. Ernest Valveny & Jon Almazán**, CVC-UAB

5. Research stays: outgoing (14)

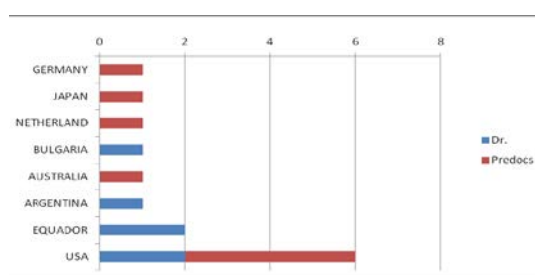
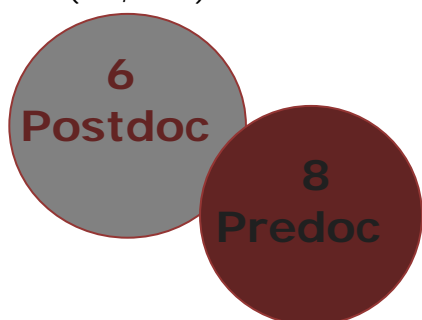
During 2013, CVC's research staff had carried out 14 research stays in labs outside Spain. Of these, 9 were in centers in America, 3 in centers in Europe, 1 in Japan and 1 in Australia.

Postdoctoral (6):

- **Dra. Debora Gil**, Timisoara HPC Center, Timisoara (Bulgaria), June 15 to June 21, 2013.
- **Dr. Angel Sappa**, Escuela Superior Politécnica del Litoral (ESPOL), Quayaquil (Ecuador), July 1st to September 30, 2013.
- **Dr. Ricardo Toledo**, Facultad de Ciencias Exactas, Ingeniería y Agrimensura, Universidad Nacional de Rosario, Rosario (Argentina), June 27 to July 31, 2013
- **David Masip**, Princeton University, Princeton (NJ, USA) April – October, 2013
- **Dr. Àgata Lapedriza**, MIT, Cambridge (MA, USA), February 2013 – present
- **Dr. Angel Sappa**, Facultad de Ingeniería en Electricidad y Computación, Escuela Superior Politécnica del Litoral (ESPOL), Quayaquil (Ecuador), Deseembre de 2013 – Febrer de 2014.

Predoctoral (8):

- **Lluís Gómez**, Dept. of Computer Science and Intelligent Systems, Graduate School of Engineering, Osaka Prefecture University, Japan, January 2013 –March 2013.
- **Germán Ros**, Institute of Measurement and Control Technology, Karlsruhe Institute of Technology (KIT), Germany, February 2013 – May 2013.
- **Patrícia Márquez**, Imaging Science and Tech. Eindhoven – Technische Universiteit Eindhoven (The Netherlands). October – December 2013.
- **Germán Ros**, Computer Vision Research Group, NICTA – National ICT Australia, December 2013 to March 2014.
- **Ekaterina Zaytseva**, Carnegie Mellon, The Robotics Institute, Carnegie Mellon University, Pittsburg (PA, USA), October – December 2013
- **Miguel Ángel Bautista**, The Robotics Institute, Carnegie Mellon University, Pittsburg (PA, USA)
- **Xavier Pérez Sala**, The Robotics Institute, Carnegie Mellon University, Pittsburg (PA, USA)
- **Antonio Hernández**, Department of Computer Science, Boston University, (MA, USA)



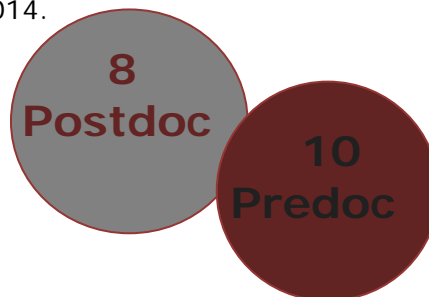
6. Research stays: incoming (18)

During 2013, we have received 18 researchers coming from other centers and institutions. Of these, one of them came from another center in Spain. The rest were from Europe (11), America (3) and Asia (3).

Postdoctoral (8):

Dr. El-Hadi Zahzah, Laboratoire de Mathématiques Image et Applications, Université de la Rochelle, La Rochelle (France), January – June 2013.

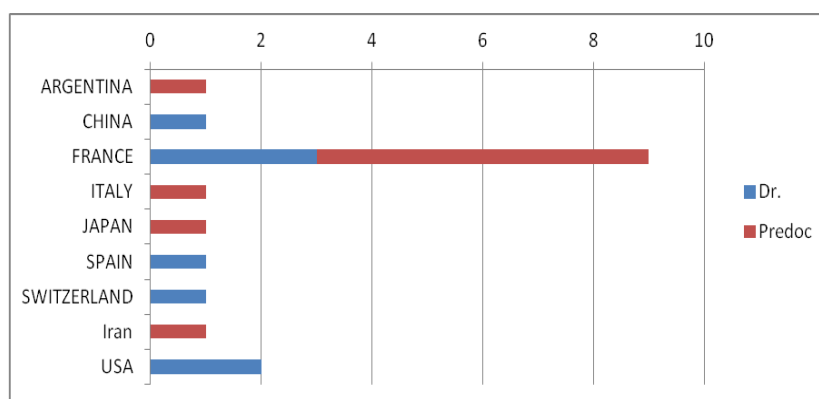
- Prof. Horst Bunke, Research Group on Computer Vision and Artificial Intelligence IAM, University of Bern (Switzerland), February 13 – March 9, 2012.
- Dr. Antonio Fernández, Departamento de Diseño en la Ingeniería, Universidad de Vigo (Spain), February 25 – April 25, 2012.
- Dr. Dimitris Samaras, Department of Computer Science, Stony Brook University, New York (USA), June 10-11, 2013.
- Dra. Veronique Eglin, INSA, Lyon (France), June 17 -19, 2013.
- Dr. Vladimir Pavlovic, SEQAM Lab – Rutgers University, Piscataway (NJ, USA), September – December, 2013.
- Dr. Peng Zhang, National University of Defense Technology – NUDT, Hunan (China), October 2013-September 2014.
- Dr. Pierre Héroux, LITIS - Université de Rouen, Saint-Etienne du Rouvray (France), October 2013 – April 2014.



Predocctoral (10):

- Gioacchino Vino, (Leonardo Program) Politécnico di Bari, Bari (Italy), September 2012 to January 2013.
- Marcelo Pistarelli, Universidad de Rosario, November 26 to February 11, 2013.
- Weihan Sun, Dept. of Computer Science and Intelligent Systems, Graduate School of Engineering, Osaka Prefecture University, (Japan), February 2013.
- Peng Wang, Laboratoire Hubert Currien, Université Jean Monnet –Saint Etienne (France), April to July 2013.
- Elodie Carel, Laboratoire Informatique, Image et Interaction (L3i) – Université de la Rochelle, La Rochelle (France) May 1 to July 31, 2013
- Christophe Rigaud, Laboratoire Informatique, Image et Interaction (L3i) – Université de la Rochelle, La Rochelle (France), May 13 to July 12, 2013.
- Romain Bertrand, Laboratoire Informatique, Image et Interaction (L3i) – Université de la Rochelle, La Rochelle (France), June 7 to July 2013.

- Anahita Pourbahrami, (Erasmus Mundus Program), Université de Poitiers, Poitiers (France), May to August 2013.
- Amir H. Bakhtiary, Univerity of Tehran, Tehran (Iran), June to September 2013.
- Nicolas Déchaud, Université Saint Etienne, July 2013.



7. Courses, Tutorials and Invited Talks by CVC personnel (36)

COURSES:

Title: Sistemas de Visión Multiespectrales, principios básicos y aplicaciones (34 h course and 32 h final projects supervision)

Lecturer: Dr. Angel Sappa, Computer Vision Center

Place: Facultad de Ingeniería en Electricidad y Computación, Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil (Ecuador)

Date: July-August, 2013

Title: Computer Vision: Tools and Applications

Lecturer: Dr. Angel Sappa, Computer Vision Center

Place: Middle East College, Muscat, Sultanate of Oman

Date: March 18-19, 2013

TUTORIALS:

Title: Tècniques de digitalització de documents històrics (2 ECTS), in Modul V - Digitalització i reconeixement digital de textos manuscrits, I Postgrau de Gestió i Tractament Digital de Documentació Històrica, course 2013-2014

Lecturer: Dr. Josep Lladós – Computer Vision Center-UAB

Place: Escola d'Arxivística i Gestió de Documents, Terrassa (Spain)

Date: November 20-21 and 27-28, 2013

Title: Tècniques de tractament de continguts digitals i d'explotació de la informació (2 ECTS), in Modul V - Digitalització i reconeixement digital de textos manuscrits, I Postgrau de Gestió i Tractament Digital de Documentació Històrica, course 2013-2014

Lecturer: Dr. Dimosthenis Karatzas – Computer Vision Center-UAB

Place: Escola d'Arxivística i Gestió de Documents, Terrassa (Spain)

Date: November 20-21 and 27-28, 2013

INVITED TALKS

Title: Colour Vision for Image Understanding, in Annual Colour Vision Meeting

Speaker: Dr. Maria Vanrell, Computer Vision Center- UAB

Place: Institute of Ophtalmology, London

Date: January 9, 2013

Title: Combining Color and Shape for Object Recognition

Speaker: Dr. Maria Vanrell, Computer Vision Center

Conference: The fourth Computational Color Imaging Workshop (CCIW 2013)

Place: Chiba (Japan)

Date: March 5, 2013

Title: Human Body Analysis in Images: Towards Human Interaction

Speaker: Dr. Petia Radeva, Computer Vision Center - UB

Place: Bulgarian Academy of Science, Sofia (Bulgaria)

Date: March 27, 2013

Title: Towards Efficient Segmentation-free Keyword Spotting Methods, in Kolloquiums der Fakultät für Informatik.

Speaker: Dr. Marçal Rossinyol, Computer Vision Center

Place: Technische Universität Dortmund (Germany)

Date: April 24-26, 2013

Title: Recognition of textual and graphical patterns, in International Document Image Processing Summer School 2013

Speaker: Dr. Josep Lladós, Computer Vision Center - UAB

Place: Fourni, Greece

Date: June 6, 2013

Title: Handwritten Word Spotting in Historical Documents: the Project Five Centuries of Marriages

Speaker: Dr. Josep Lladós, Computer Vision Center - UAB

Conference: SAOT Workshop on Automatic Pattern Recognition and Historical Document Analysis

Place: Erlangen (Germany)

Date: June 14-15, 2013

Title: Does Computer Vision needs HPC?

Speaker: Dr. Debora Gil, Computer Vision Center - UAB

Place: HPC Center from West University of Timisoara (Bulgaria)

Date: June 17, 2013

Title: Does Computer Vision needs HPC?

Speaker: Dr. Debora Gil, Computer Vision Center - UAB

Place: Dept. of Computer Science, West University of Timisoara (Bulgaria)

Date: June 19, 2013

Title: Innovación docente: Uso de la robótica en el aprendizaje de Ciencias de la Computación

Speaker: Dr. Ricardo Toledo, Computer Vision Center - UAB

Place: Facultad de Ciencias Exactas, Ingeniería y Agrimensura, Universidad Nacional de Rosario, Rosario (Argentina)

Date: July 16, 2013

Title: MultiTable Reinforcement Learning for Visual Object Recognition

Speaker: Dr. Ricardo Toledo, Computer Vision Center - UAB

Place: Facultad de Ciencias Exactas, Ingeniería y Agrimensura, Universidad Nacional de Rosario, Rosario (Argentina)

Date: July 18, 2013

Title: Últimos avances en robots y androides. ¿Dónde estamos y hacia dónde vamos?

Speaker: Dr. David Rotger, Computer Vision Center

Place: Talk on Emocions Artificials, organized by Direcció de Creativitat i Innovació de l'Institut de Cultura de Barcelona i el GREC 2013, Barcelona (Spain)

Date: July 3, 2013

Title: CVC, un modelo de I&D

Speaker: Dr. Angel Sappa, Computer Vision Center

Place: Facultad de Ingeniería en Electricidad y Computación, Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil (Ecuador)

Date: August 14, 2013

Title: Visión por Computador: Extracción y Representación de Información 3D
Speaker: Dr. Angel Sappa, Computer Vision Center
Place: Facultad de Ingeniería en Electricidad y Computación, Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil (Ecuador)
Date: August 14, 2013

Title: Visión por Computador: Sistemas Avanzados de Asistencia a la Conducción
Speaker: Dr. Angel Sappa, Computer Vision Center
Place: Facultad de Ingeniería en Electricidad y Computación, Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil (Ecuador)
Date: August 21, 2013

Title: After 20 years... my mom is proud of me being in document analysis and contributing to Computer Vision. Final Panel in ICDAR 2013 – International Conference in Document Analysis and Recognition.
Speaker: Dr. Josep Lladós, Computer Vision Center
Place: Washington D. C. (USA)
Date: August 2013

Title: Sistemas de Visión Multiespectrales
Speaker: Dr. Angel Sappa, Computer Vision Center
Place: Decanato de Investigación, Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil (Ecuador)
Date: September 3, 2013

Title: Detection, analysis and control on therapies and treatments
Speaker: Dr. Sergio Escalera, Computer Vision Center - UB
Conference: Jornada de Salut – Innovating Mental Health at Europe
Place: Parc Taulí, Sabadell (Spain)
Date: September 5, 2013

Title: Domain Adaptaion and Pedestrian Detecion
Speaker: Dr. David Vázquez, Computer Vision Center
Place: DAIMLER AG, Stuttgart (Germany)
Date: September 23, 2013

Title: 3D Scene Understanding
Speaker: Juan S. Ramos, Computer Vision Center
Place: DAIMLER AG, Stuttgart (Germany)
Date: September 23, 2013

Title: Combining Color and Shape for Bag of Words Representations
Speaker: Dr. Joost van de Weijer, Computer Vision Center
Place: Université Jean Monnet St. Etienne (France)
Date: October 8, 2013

Title: Combining Color and Shape for Object Recognition
Speaker: Dr. Joost van de Weijer, Computer Vision Center
Place: Universiteit van Amsterdam (The Netherlands)
Date: October 9, 2013

Title: Telling machines to find your ancestors in historical manuscripts. The use case of 5CofM
Speaker: Dr. Josep Lladós, Computer Vision Center - UAB
Conference: CED # 30 Lecture Cycle
Place: Centre d'Estudis Demogràfics (CED), UAB, Bellaterra (Spain)
Date: October 31, 2013

Title: Word Spotting in Historical Manuscripts
Speaker: **Dr. Josep Lladós**, Computer Vision Center - UAB
Place: Université de Lyon (France)
Date: November, 2013

Title: Domain Adaptation and Pedestrian Detection
Speaker: **Dr. Antonio M. López**, Computer Vision Center - UAB
Place: Universidad de Zaragoza (Spain)
Date: November 6, 2013

Title: 3D Scene Understanding
Speakers: **Germán Ros & Juan S. Ramos**, Computer Vision Center
Place: Universidad de Zaragoza (Spain)
Date: November 6, 2013

Title: Semantic Segmentation
Speaker: **Juan Sebastián Ramos**, Computer Vision Center
Place: NICTA- National ICT Australia, Canberra (Australia)
Date: November 29, 2013

Title: Domain Adaptation of a Deformable Part-Based Model
Speaker: **Jiaolong Xu**, Computer Vision Center
Place: NICTA – National ICT Australia, Canberra (Australia)
Date: November 29, 2013

Title: Virtual and Real World Adaptation for Pedestrian Detection
Speaker: **Dr. Antonio M. López**, Computer Vision Center - UAB
Place: ICCV Workshop on Visual Domain Adaptation and Dataset Bias, Sidney (Australia)
Date: December 7, 2013

Title: Correspondencia estereoscópica multiespectral
Speaker: **Dr. Angel Sappa**, Computer Vision Center
Place: Facultad de Ingeniería en Electricidad y Computación de la Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil (Ecuador)
Date: December 20, 2013

Title: Combining Color and Shape for Object Recognition
Speaker: **Dr. Joost van de Weijer**, Computer Vision Center
Place: The Fourth Computational Color Imaging Workshop (CCIW 2013), Chiba (Japan)
Date: December 2013

Title: Autonomous Driving: when 3D Mapping meets Semantics
Speaker: **Jiaolong Xu**, Computer Vision Center
Place: in Computer Vision in Vehicle Technology: From Earth to Mars, an ICCV 2013 Workshop, Sydney (Australia)
Date: December 2013

Title: Domain Adapted Pedestrian Detector
Speaker: **Jiaolong Xu**, Computer Vision Center
Place: in Reconstruction Meets Recognition Challenge, an ICCV 2013 Workshop, Sydney (Australia)
Date: December, 2013

8. Courses and invited talks at CVC (22)

COURSES:

Title: MCVAI – Traffic Sign Recognition Workshop, in Master in Computer Vision and Artificial Intelligence

Lecturer: Dr. Ulrich Kressel, Daimler AG,

Place: CVC, Bellaterra

Date: February 4, 2013

Title: *"Towards the unification of Structural and Statistical Pattern Recognition"* (4h), given in the official master of Computer Vision and Artificial Intelligence.

Lecturer: Prof. Em. Horst Bunke, Research Group on Computer Vision and Artificial Intelligence IAM, University of Bern

Place: CVC, Bellaterra

Date: February 28 and March 6, 2013.

Title: *"Reconocimiento Facial y Técnicas Biométricas"* (4h), given in the Mater en Criminología.

Lecturer: Dr. Bogdan Raducanu, CVC

Place: CVC, Bellaterra

Date: May 24, 2013

Title: Introducción a la Visión por Computador (20 h), special course for Institut Anna Gironella de Mundet (Barcelona)

Lecturers: Dr. Jorge Bernal, CVC-UAB. Coen Antens and Juan Ramon Jiménez, CVC, gave a session of 2 hours.

Place: Institut Anna Gironella de Mundet (Barcelona) and CVC

Date: June 19, 20, 21, 25 and 26 2013

INVITED TALKS:

Title: Scale Image and Object Recognition.

Speaker: Dr. Hervé Jégou

Affiliation: TEXMEX Research Team, INRIA, Rennes Cedex (France)

Place: CVC, Bellaterra

Date: January 17, 2013

Title: Artificial Neural Networks for Preprocessing and Recognizing Handwritten Text

Speaker: Dr. Maria José Castro

Affiliation: Universitat Politècnica de València (Spain)

Place: CVC, Bellaterra

Date: February 13, 2013

Title: Detection and Alignment of Vascular Structures in Intravascular Ultrasound using Pattern Recognition Techniques

Speaker: Marina Alberti

Affiliation: Universitat de Barcelona and CVC (Spain)

Place: CVC, Bellaterra

Date: February 15, 2013

Title: Patient Specific Translational Research on Atherosclerosis & Diagnosis
Speaker: Dr. Amin Katouzian
Affiliation: Technische Universität München (Germany)
Place: CVC, Bellaterra
Date: February 22, 2013

Title: Multiclass Learning for Vessel Characterization in Intravascular Ultrasound
Speaker: Dr. Francesco Ciompi
Affiliation: Universitat de Barcelona and CVC (Spain)
Place: CVC, Bellaterra
Date: March 1, 2013

Title: Search Based Inference and 3D Object Detection
Speaker: Dr. Peter Gehler
Affiliation: Max Planck Institute for Intelligent Systems (Germany)
Place: CVC, Bellaterra
Date: March 18, 2013

Title: Differential Evolution: Properties and Applications
Speaker: Dr. Daniela Zaharie
Affiliation: Department of Computer Science, West University of Timisoara (Romania)
Place: CVC, Bellaterra
Date: April 18, 2013

Title: Digital Spaces Living Lab/Large Scale Image Analysis as a Service
Speaker: Dr. Stavri Nikolov
Affiliation: Department of Electrical and Electronic Engineering, University of Bristol / Digital Spaces Living Lab / Imagga Ltd. (UK and Bulgaria)
Place: CVC, Bellaterra
Date: June 14, 2013

Title: Multiple handwriting representations dedicated to CBIR and word spotting application
Speaker: Veronique Eglin
Affiliation: INSA, Lyon (France)
Place: CVC, Bellaterra
Date: 18/06/2013

Title: Classifier ensembles: Is there more to be done?
Speaker: Prof. Ludmila Kuncheva
Affiliation: Bangor University, Wales (UK)
Place: CVC, Bellaterra
Date: 08/07/2013

Title: Real-time Visual Map Building
Speaker: José M. Martínez Montiel
Affiliation: Universidad de Zaragoza, Zaragoza (Spain)
Place: CVC, Bellaterra
Date: 10/07/2013

Title: Video Stabilization for Everyone: From Research to Launch on YouTube
Speaker: Prof. Irfan Essa
Affiliation: Georgia Tech, School of Interactive Computing, Atlanta (GA, USA)
Place: CVC, Bellaterra
Date: 24/07/2013

Title: Statistical learnign & Computer Vision: affective computing, action modeling and tracking at SEQAM Lab

Speaker: Dr. Vladimir Pavlovic, Sequence Analysis and Modeling (SEQAM) Lab at Rutgers, Piscataway (NJ, USA)

Place: CVC, Bellaterra

Date: 04/10/2013

Title: Towards a Quadratic Time Approximation of Graph Edit Distance

Speaker: Prof. Horst Bunke, Research Group on Computer Vision and Artificial Intelligence IAM, University of Bern, (Switzerland)

Place: CVC, Bellaterra

Date: 17/10/2013

Title: Prediction of Pedestrian Intentions

Speaker: Dr. Miguel Ángel Sotelo, Universidad de Alcalá de Henares (Spain)

Place: CVC, Bellaterra

Date: 23/10/2013

Title: Some Contributions to Structural Methods for Pattern Recognition

Speaker: Dr. Pierre Héroux, Université de Rouen, Rouen (France)

Place: CVC, Bellaterra

Date: 29/10/2013

Title: Some Contributions to Structural Methods for Pattern Recognition

Speaker: Dr. Raquel Urtasun, Toyota Technological Institute, Chicago (II, USA)

Place: CVC, Bellaterra

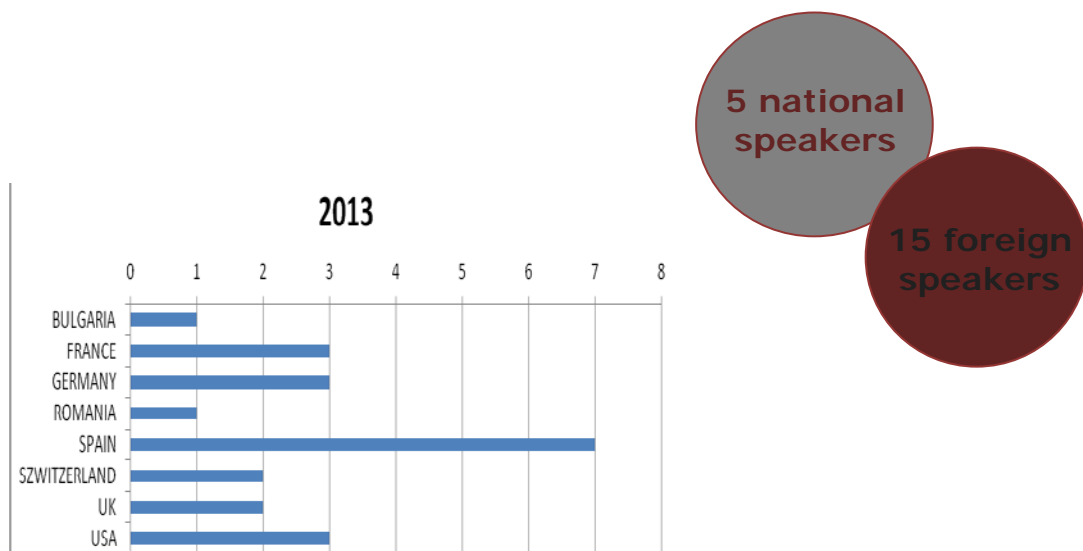
Date: 11/11/2013

Title: Mass digitalisation is here now: What it means for Document Analysis Researchers

Speaker: Dr. Apostolos Antonacopoulos, PRImA Research Lab, University of Salford, Manchester (UK)

Place: CVC, Bellaterra

Date: 22/11/2013



9. Patents (1)

Title: Device, System and Method for Automatic Detection of Contractile Activity in an Image Frame

Inventors: Dr. Panagiota Spyridonos, **Dr. Fernando Vilariño**, **Dr. Petia Radeva**, Dr. Fernando Azpiroz, Dr. Juan Malagelada

Application number: 12/282,704

Priority Country: US

Priority Date: 13/03/2007

Date of Publication: 12/11/2013

Original Assignee: Given Imaging, LTD

10. Publications (168)

- **Books (11)**

1. Albert Gordo. (2013). *Document Image Representation, Classification and Retrieval in Large-Scale Domains*. Ph.D. thesis, Ediciones Gráficas Rey.
2. Angel Sappa, & Jordi Vitria. (2013). *Multimodal Interaction in Image and Video Applications* (Vol. 48). Springer Berlin Heidelberg.
3. David Vazquez. (2013). *Domain Adaptation of Virtual and Real Worlds for Pedestrian Detection* (Vol. 1). Ph.D. thesis, Ediciones Gráficas Rey, Barcelona.
4. Javier Marin. (2013). *Pedestrian Detection Based on Local Experts*. Ph.D. thesis, Ediciones Gráficas Rey.
5. Jorge Bernal, & David Vazquez (Eds.). (2013). *Computer vision Trends and Challenges*.
6. Marina Alberti. (2013). *Detection and Alignment of Vascular Structures in Intravascular Ultrasound using Pattern Recognition Techniques*. Ph.D. thesis, Ediciones Gráficas Rey.
7. Murad Al Haj. (2013). *Looking at Faces: Detection, Tracking and Pose Estimation*. Ph.D. thesis, Ediciones Gráficas Rey.
8. Shida Beigpour. (2013). *Illumination and object reflectance modeling*. Ph.D. thesis, Ediciones Gráficas Rey
9. Wenjuan Gong. (2013). *3D Motion Data aided Human Action Recognition and Pose Estimation*. Ph.D. thesis, Ediciones Gráficas Rey.
10. Katerine Diaz, & Francesc J. Ferri. (2013). *Extensiones del método de vectores comunes discriminantes Aplicadas a la clasificación de imágenes*.
11. Naveen Onkarappa. (2013). *Optical Flow in Driver Assistance Systems*. Ph.D. thesis, Ediciones Gráficas Rey.

- **Book Chapters (10)**

1. A.Gonzalez, Robert Benavente, Olivier Penacchio, Javier Vazquez, Maria Vanrell, & Carlos Alejandro Parraga. (2013). Coloresia: An Interactive Colour Perception Device for the Visually Impaired. In *Multimodal Interaction in Image and Video Applications* (Vol. 48, pp. 47–66). Springer Berlin Heidelberg.
2. Carles Fernandez, Jordi Gonzalez, Joao Manuel R. S. Taveres, & Xavier Roca. (2013). Towards Ontological Cognitive System. In *Topics in Medical Image Processing and Computational Vision* (Vol. 8, pp. 87–99). Springer Netherlands.
3. David Vazquez, Antonio Lopez, Daniel Ponsa, & David Geronimo. (2013). Interactive Training of Human Detectors. In *Multimodal Interaction in Image and Video Applications Intelligent Systems Reference Library* (Vol. 48, pp. 169–182). Springer Berlin Heidelberg.

4. Ernest Valveny, Oriol Ramos Terrades, Joan Mas, & Marçal Rusiñol. (2013). Interactive Document Retrieval and Classification. In Angel Sappa, & Jordi Vitria (Eds.), *Multimodal Interaction in Image and Video Applications* (Vol. 48, pp. 17–30). Springer Berlin Heidelberg.
5. Joost van de Weijer, Fahad Shahbaz Khan, & Masana Castrillo. (2013). Interactive Visual and Semantic Image Retrieval. In Angel Sappa, & Jordi Vitria (Eds.), *Multimodal Interaction in Image and Video Applications* (Vol. 48, pp. 31–35). Springer Berlin Heidelberg.
6. Lluís Pere de las Heras, Joan Mas, Gemma Sanchez, & Ernest Valveny. (2013). Notation-invariant patch-based wall detector in architectural floor plans. In *Graphics Recognition. New Trends and Challenges* (Vol. 7423, pp. 79–88). LNCS. Springer Berlin Heidelberg.
7. Marc Castello, Jordi Gonzalez, Ariel Amato, Pau Baiget, Carles Fernandez, Josep M. Gonfaus, et al. (2013). Exploiting Multimodal Interaction Techniques for Video-Surveillance. In *Multimodal Interaction in Image and Video Applications Intelligent Systems Reference Library* (Vol. 48, pp. 135–151). Springer Berlin Heidelberg.
8. Michal Drozdal, Santiago Segui, Petia Radeva, Carolina Malagelada, Fernando Azpiroz, & Jordi Vitria. (2013). An Application for Efficient Error-Free Labeling of Medical Images. In *Multimodal Interaction in Image and Video Applications* (Vol. 48, pp. 1–16). Springer Berlin Heidelberg.
9. Muhammad Muzzamil Luqman, Jean-Yves Ramel, & Josep Lladós. (2013). Multilevel Analysis of Attributed Graphs for Explicit Graph Embedding in Vector Spaces. In *Graph Embedding for Pattern Analysis* (pp. 1–26). Springer New York.
10. Miquel Ferrer, I. Bardaji, Ernest Valveny, Dimosthenis Karatzas, & Horst Bunke. (2013). Median Graph Computation by Means of Graph Embedding into Vector Spaces. In Yun Fu, & Yungian Ma (Eds.), *Graph Embedding for Pattern Analysis* (pp. 45–72). Springer New York.

- **Journals with Impact Factor (51)**

1. Albert Clapes, Miguel Reyes, & Sergio Escalera. (2013). Multi-modal User Identification and Object Recognition Surveillance System. *PRL*, 34(7), 799–808.
2. Albert Gordo, Alicia Fornes, & Ernest Valveny. (2013). Writer identification in handwritten musical scores with bags of notes. *PR*, 46(5), 1337–1345.
3. Albert Gordo, Florent Perronnin, & Ernest Valveny. (2013). Large-scale document image retrieval and classification with runlength histograms and binary embeddings. *PR*, 46(7), 1898–1905.
4. Anjan Dutta, Josep Lladós, & Umapada Pal. (2013). A symbol spotting approach in graphical documents by hashing serialized graphs. *PR*, 46(3), 752–768.
5. Antonio Hernandez, Miguel Angel Bautista, Xavier Perez Sala, Victor Ponce, Sergio Escalera, Xavier Baro, et al. (2013). Probability-based Dynamic Time Warping and Bag-of-Visual-and-Depth-Words for Human Gesture Recognition in RGB-D. *PRL*, .
6. Bhaskar Chakraborty, Andrew Bagdanov, Jordi Gonzalez, & Xavier Roca. (2013). Human Action Recognition Using an Ensemble of Body-Part Detectors. *EXSY*, 30(2), 101–114.

7. Bhaskar Chakraborty, Jordi Gonzalez, & Xavier Roca. (2013). Large scale continuous visual event recognition using max-margin Hough transformation framework. *Computer Vision and Image Understanding*, 117(10), 1356–1368.
8. Bogdan Raducanu, & Fadi Dornaika. (2013). Texture-independent recognition of facial expressions in image snapshots and videos. *MVA*, 24(4), 811–820.
9. Cesar Isaza, Joaquin Salas, & Bogdan Raducanu. (2013). Rendering ground truth data sets to detect shadows cast by static objects in outdoors. *MTAP*, .
10. David Geronimo, Joan Serrat, Antonio Lopez, & Ramon Baldrich. (2013). Traffic sign recognition for computer vision project-based learning. *T-EDUC*, 56(3), 364–371.
11. David Roche, Debora Gil, & Jesus Giraldo. (2013). Mechanistic analysis of the function of agonists and allosteric modulators: Reconciling two-state and operational models. *British Journal of Pharmacology*, 169(6), 1189–202.
12. David Roche, Debora Gil, & Jesus Giraldo. (2013). Multiple active receptor conformation, agonist efficacy and maximum effect of the system: the conformation-based operational model of agonism,. *Drug Discovery Today*, 18(7-8), 365–371.
13. Eloi Puertas, Sergio Escalera, & Oriol Pujol. (2013). Generalized Multi-scale Stacked Sequential Learning for Multi-class Classification. *PAA*, .
14. Fadi Dornaika, Abdelmalik Moujahid, & Bogdan Raducanu. (2013). Facial expression recognition using tracked facial actions: Classifier performance analysis. *Engineering Applications of Artificial Intelligence*, 26(1), 467–477.
15. Fahad Shahbaz Khan, Muhammad Anwer Rao, Joost van de Weijer, Andrew Bagdanov, Antonio Lopez, & Michael Felsberg. (2013). Coloring Action Recognition in Still Images. *IJCV*, 105(3), 205–221.
16. Fernando Barrera, Felipe Lumbreras, & Angel Sappa. (2013). Multispectral Piecewise Planar Stereo using Manhattan-World Assumption. *PRL*, 34(1), 52–61.
17. Ferran Diego, Joan Serrat, & Antonio Lopez. (2013). Joint spatio-temporal alignment of sequences. *TMM*, 15(6), 1377–1387.
18. Ferran Poveda, Debora Gil, Enric Marti, Albert Andaluz, Manel Ballester, & Francesc Carreras Costa. (2013). Helical structure of the cardiac ventricular anatomy assessed by Diffusion Tensor Magnetic Resonance Imaging multi-resolution tractography. *REC*, 66(10), 782–790.
19. Francisco Javier Orozco, Ognjen Rudovic, Jordi Gonzalez, & Maja Pantic. (2013). Hierarchical On-line Appearance-Based Tracking for 3D Head Pose, Eyebrows, Lips, Eyelids and Irises. *IMAVIS*, 31(4), 322–340.
20. Ivan Huerta, Ariel Amato, Xavier Roca, & Jordi Gonzalez. (2013). Exploiting Multiple Cues in Motion Segmentation Based on Background Subtraction. *NEUCOM*, 100, 183–196.
21. J.S. Cope, P.Remagnino, S.Mannan, Katerine Diaz, Francesc J. Ferri, & P.Wilkin. (2013). Reverse Engineering Expert Visual Observations: From Fixations To The Learning Of Spatial Filters With A Neural-Gas Algorithm. *Expert Systems with Applications*, 40(17), 6707–6712.
22. Jasper Uilings, Koen E.A. van de Sande, Theo Gevers, & Arnold Smeulders. (2013). Selective Search for Object Recognition. *IJCV*, 104(2), 154–171.

23. Jaume Amores. (2013). Multiple Instance Classification: review, taxonomy and comparative study. *Artificial Intelligence*, 201, 81–105.
24. Jaume Gibert, Ernest Valveny, & Horst Bunke. (2013). Embedding of Graphs with Discrete Attributes Via Label Frequencies. *IJPRAI*, 27(3), 1360002–1360029.
25. Javier Marin, David Vazquez, Antonio Lopez, Jaume Amores, & Ludmila I. Kuncheva. (2013). Occlusion handling via random subspace classifiers for human detection. *TSMC*, .
26. Joan Serrat, Felipe Lumbreras, & Antonio Lopez. (2013). Cost estimation of custom hoses from STL files and CAD drawings. *COMPUTIND*, 64(3).
27. Jordi Roca, Carlos Alejandro Parraga, & Maria Vanrell. (2013). Chromatic settings and the structural color constancy index. *JV*, 13(4-3), 1–26.
28. Jose Manuel Alvarez, Theo Gevers, Ferran Diego, & Antonio Lopez. (2013). Road Geometry Classification by Adaptive Shape Models. *TITS*, 14(1), 459–468.
29. Juan Ramon Terven Salinas, Joaquin Salas, & Bogdan Raducanu. (2013). Computer Vision Systems for Visually Impaired People. *Computer*, .
30. Kaida Xiao, Chenyang Fu, D.Mylonas, Dimosthenis Karatzas, & S. Wuerger. (2013). Unique Hue Data for Colour Appearance Models. Part ii: Chromatic Adaptation Transform. *CRA*, 38(1), 22–29.
31. Laura Igual, Agata Lapedriza, & Ricard Borras. (2013). Robust Gait-Based Gender Classification using Depth Cameras. *EURASIPJAdSPd*, .
32. Lluís Pere de las Heras, Ahmed Sheraz, Marcus Liwicki, Ernest Valveny, & Gemma Sanchez. (2013). Statistical Segmentation and Structural Recognition for Floor Plan Interpretation. *IJDAR*, .
33. Marçal Rusiñol, Lluís Pere de las Heras, & Oriol Ramos Terrades. (2013). Flowchart Recognition for Non-Textual Information Retrieval in Patent Search. *Information Retrieval*, .
34. Marina Alberti, Simone Balocco, Xavier Carrillo, Josefina Mauri, & Petia Radeva. (2013). Automatic non-rigid temporal alignment of IVUS sequences: method and quantitative validation. *UMB*, 39(9), 1698–712.
35. Michal Drozdal, Santiago Seguí, Carolina Malagelada, Fernando Azpiroz, & Petia Radeva. (2013). Adaptable image cuts for motility inspection using WCE. *CMIG*, 37(1), 72–80.
36. Miguel Reyes, Albert Clapes, Jose Ramirez, Juan R Revilla, & Sergio Escalera. (2013). Automatic Digital Biometry Analysis based on Depth Maps. *COMPUTIND*, 64(9), 1316–1325.
37. Mikhail Mozerov. (2013). Constrained Optical Flow Estimation as a Matching Problem. *TIP*, 22(5), 2044–2055.
38. Mirko Arnold, Anarta Ghosh, Glen Doherty, Hugh Mulcahy, Stephen Patchett, & Gerard Lacey. (2013). Towards Automatic Direct Observation of Procedure and Skill (DOPS) in Colonoscopy. *Proc. International Conference on Computer Vision Theory and Applications*, .
39. Mohammad ali Bagheri, Qigang Gao, & Sergio Escalera. (2013). A Genetic-based Subspace Analysis Method for Improving Error-Correcting Output Coding. *PR*, 46(10), 2830–2839.

40. Muhammad Muzzamil Luqman, Jean-Yves Ramel, Josep Lladós, & Thierr. (2013). Fuzzy Multilevel Graph Embedding. *PR*, 46(2), 551–565.
41. Naila Murray, Maria Vanrell, Xavier Otazu, & Carlos Alejandro Parraga. (2013). Low-level SpatioChromatic Grouping for Saliency Estimation. *TPAMI*, 35(11), 2810–2816.
42. Naveen Onkarappa, & Angel Sappa. (2013). A Novel Space Variant Image Representation. *JMIV*, 47(1-2), 48–59.
43. Olivier Penacchio, Xavier Otazu, & Laura Dempere-Marco. (2013). A Neurodynamical Model of Brightness Induction in V1. *Plos*, 8(5), e64086.
44. Palaiiahnakote Shivakumara, Anjan Dutta, Chew Lim Tan, & Umapada Pal. (2013). Multi-oriented scene text detection in video based on wavelet and angle projection boundary growing. *MTAP*, .
45. Santiago Seguí, Laura Igual, & Jordi Vitria. (2013). Bagged One Class Classifiers in the Presence of Outliers. *IJPRAI*, 27(5), 1350014–1350035.
46. Sergio Escalera. (2013). Multi-Modal Human Behaviour Analysis from Visual Data Sources. *ERCIM*, 95, 21–22.
47. Sergio Vera, Debora Gil, Agnes Borrás, Marius George Linguraru, & Miguel A. Gonzalez Ballester. (2013). Geometric Steerable Medial Maps. *MVA*, 24(6), 1255–1266.
48. Thierry Brouard, Jordi Gonzalez, Caifeng Shan, Massimo Piccardi, & Larry S. Davis. (2013). Special issue on background modeling for foreground detection in real-world dynamic scenes. *Machine Vision and Applications*, .
49. Veronica Romero, Alicia Fornes, Nicolas Serrano, Joan-Andreu Sanchez, A.H. Toselli, Volkmar Frinken, et al. (2013). The ESPOSALLES database: An ancient marriage license corpus for off-line handwriting recognition. *PR*, 46(6), 1658–1669.
50. Zeynep Yucel, Albert Ali Salah, Çetin Meriçli, Tekin Meriçli, Roberto Valenti, & Theo Gevers. (2013). Joint Attention by Gaze Interpolation and Saliency. *IEEE Transactions on cybernetics*, 43(3), 829–842.

- **Other Journals (1)**

1. Juan Ramon Terven Salinas, Joaquin Salas, & Bogdan Raducanu. (2013). *Estado del Arte en Sistemas de Vision Artificial para Personas Invidentes* (Vol. 1).

- **International Conferences (90)**

1. A. Doulamis, N. Doulamis, M. Bertini, Jordi Gonzalez, & Thomas B. Moeslund. (2013). Analysis and Retrieval of Tracked Events and Motion in Imagery Streams. In *21st ACM international Conference on Multimedia*.
2. A.M. Here, B. C. Lopez, Debora Gil, J. J. Camarero, & Jordi Martinez-Vilalta. (2013). A new software to analyse wood anatomical features in conifer species. In *International Symposium on Wood Structure in Plant Biology and Ecology*.

3. Adriana Romero, & Carlo Gatta. (2013). Do We Really Need All These Neurons? In *Pattern Recognition and Image Analysis* (pp. 460–467).
4. Albert Gordo, Marçal Rusiñol, Dimosthenis Karatzas, & Andrew Bagdanov. (2013). Document Classification and Page Stream Segmentation for Digital Mailroom Applications. In *12th International Conference on Document Analysis and Recognition*.
5. Alex Pardo, Albert Clapes, Sergio Escalera, & Oriol Pujol. (2013). Actions in Context: System for people with Dementia. In *2nd International Workshop on Citizen Sensor Networks (Citisen2013) at the European Conference on Complex Systems*.
6. Alicia Fornes, Xavier Otazu, & Josep Lladós. (2013). Show through cancellation and image enhancement by multiresolution contrast processing. In *12th International Conference on Document Analysis and Recognition* (pp. 200–204).
7. Alvaro Cepero, Albert Clapes, & Sergio Escalera. (2013). Quantitative analysis of non-verbal communication for competence analysis. In *16th Catalan Conference on Artificial Intelligence*.
8. Andreas Fischer, Ching Y. Suen, Volkmar Frinken, Kaspar Riesen, & Horst Bunke. (2013). A Fast Matching Algorithm for Graph-Based Handwriting Recognition. In *9th IAPR – TC15 Workshop on Graph-based Representation in Pattern Recognition* (pp. 194–203).
9. Andreas Fischer, Volkmar Frinken, Horst Bunke, & Ching Y. Suen. (2013). Improving HMM-Based Keyword Spotting with Character Language Models. In *12th International Conference on Document Analysis and Recognition* (pp. 506–510).
10. Andreas Mogelmoose, Chris Bahnsen, Thomas B. Moeslund, Albert Clapes, & Sergio Escalera. (2013). Tri-modal Person Re-identification with RGB, Depth and Thermal Features. In *9th IEEE Workshop on Perception beyond the visible Spectrum, Computer Vision and Pattern Recognition*.
11. Andrew Nolan, Daniel Serrano, Aura Hernandez, Daniel Ponsa, & Antonio Lopez. (2013). Obstacle mapping module for quadrotors on outdoor Search and Rescue operations. In *International Micro Air Vehicle Conference and Flight Competition*.
12. Anjan Dutta, Josep Lladós, Horst Bunke, & Umapada Pal. (2013). A Product graph based method for dual subgraph matching applied to symbol spotting. In *10th IAPR Workshop on Graphics Recognition* (pp. 7–11).
13. Anjan Dutta, Josep Lladós, Horst Bunke, & Umapada Pal. (2013). Near Convex Region Adjacency Graph and Approximate Neighborhood String Matching for Symbol Spotting in Graphical Documents. In *12th International Conference on Document Analysis and Recognition* (pp. 1078–1082).
14. Antonio Clavelli, Dimosthenis Karatzas, Josep Lladós, Mario Ferraro, & Giuseppe Boccignone. (2013). Towards Modelling an Attention-Based Text Localization Process. In *6th Iberian Conference on Pattern Recognition and Image Analysis* (Vol. 7887, pp. 296–303). LNCS. Springer Berlin Heidelberg.
15. Ariel Amato, Angel Sappa, Alicia Fornes, Felipe Lumbreras, & Josep Lladós. (2013). Divide and Conquer: Atomizing and Parallelizing A Task in A Mobile Crowdsourcing Platform. In *2nd International ACM Workshop on Crowdsourcing for Multimedia*.

16. Carles Sanchez, Debora Gil, Antoni Rosell, Albert Andaluz, & F. Javier Sanchez. (2013). Segmentation of Tracheal Rings in Videobronchoscopy combining Geometry and Appearance. In Sebastiano Battiato and José Braz (Ed.), *Proceedings of VISAPP 2013* (Vol. 1, pp. 153–161). Portugal: SciTePress.
17. Carles Sanchez, Jorge Bernal, Debora Gil, & F. Javier Sanchez. (2013). On-line lumen centre detection in gastrointestinal and respiratory endoscopy. In *16th International Conference on Medical Image Computing and Computer Assisted Intervention*. LNCS.
18. Christophe Rigaud, Dimosthenis Karatzas, Joost van de Weijer, Jean-Christophe Burie, & Jean-Marc Ogier. (2013). An active contour model for speech balloon detection in comics. In *12th International Conference on Document Analysis and Recognition*.
19. Christophe Rigaud, Dimosthenis Karatzas, Joost van de Weijer, Jean-Christophe Burie, & Jean-Marc Ogier. (2013). Automatic text localisation in scanned comic books. In *9th International Conference on Computer Vision Theory and Applications*.
20. D.Sanchez, J.C.Ortega, & Miguel Angel Bautista. (2013). Human Body Segmentation with Multi-limb Error-Correcting Output Codes Detection and Graph Cuts Optimization. In *6th Iberian Conference on Pattern Recognition and Image Analysis*.
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- **Technical Report (2)**

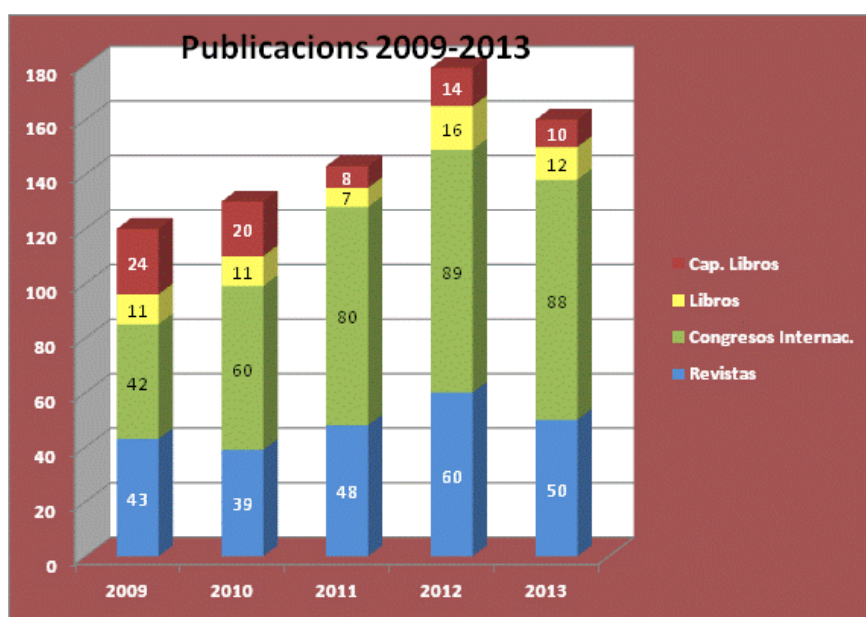
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- **Miscellanea (4)**

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- **Fact sheet – Publications**

Publications	Number
Journals with IF	50
International Conferences	90
Book Chapters	10
Books	11
Miscellaneous	4
Reports	2
Total	166



11. Organization of Conferences, Workshops and other dissemination activities (12)

- **ESCOLAB, Programa Barcelona Ciència** - Institut de Cultura and Programa de Cultura Científica de l'Institut d'Educació de l'Ajuntament de Barcelona.
Date: 21/02/2013
- **Jornada en Salut Mental – Innovating Mental Health at Europe, Parc Taulí Sabadell (Spain), September 2013**
Organization committee member: **Dr. Sergio Escalera**, HupBA Group, CVC-UB.
- **Jornada de portes obertes PFC – Projectes Final de Carrera**
Organizer: **ADAS Group**
Place: CVC
Date: September 26, 2013 and October 4, 2013
- **ESCOLAB, Programa Barcelona Ciència** - Institut de Cultura and Programa de Cultura Científica de l'Institut d'Educació de l'Ajuntament de Barcelona.
Visit of Institut de Batxillerat Leonardo da Vinci, Sant Cugat del Vallès
Date: 08/11/2013
- **ESCOLAB, Programa Barcelona Ciència** - Institut de Cultura and Programa de Cultura Científica de l'Institut d'Educació de l'Ajuntament de Barcelona.
Visit of Institut de Batxillerat Font del Ferro, Palafolls
Date: 21/11/2013
- **Workshop "Key Topics in Administrative Document Analysis"**, organized by **Dr. Dimosthenis Karatzas**, **Dr. Marçal Rossinyol** and **Dr. Josep Lladós**, together with ITESOFT. Training activity of European Project ADAO
Place: Aimargues (France)
Date: February 21 and 22, 2013
- **HIP 2013 - Workshop on Historical Document Imaging and Processing**, 2nd International Workshop in conjunction with ICDAR 2013, Washington (USA), agost 2013.
- **Competition on Music Scores Recognition**. In Int. Conf. on Document Analysis and Recognition - ICDAR2013 (Washington).
- **Robust Reading Competition**. In Int. Conf. on Document Analysis and Recognition - ICDAR2013 (Washington).

- **MICCAI-STEST 2013, Workshop held in conjunction with the MICCAI 2013, Nagoya (Japan), September 22-26, 2013.**
Organizers: **Dr. Simone Balocco, Dr. Carlo Gatta, Dr. Stefanie Demirci, Dr. Geir Arne Tangen, Dr. Su-Lin Lee**
- **Multi-modal ChaLearn Gesture Recognition Challenge, in conjunction with ICMI 2013, Sidney (Australia), December 2013.**
Organizers: **Dr Sergio Escalera (CVC-UB), Dr. Jordi González (CVC-UAB), Isabelle Guyon (Berkeley-USA), Dr. Xavier Baró (CVC-UOC), Miguel Reyes (CVC-UB), Oscar Lopes (CVC), Thomas B. Moeslund (Aalborg-Denmark), Vassilis Athitsos (Texa-USA), Pat Jangyodsuk (Texas-USA), Hugo Jair Escalante (Mexico).**
- **CVVT-E2M 2013 – Computer Vision in Vehicle Technology: From Earth to Mars, 4th International Workshop in conjunction with ICCV 2013, Sydney (Australia) December 2013**
Organized by **ADAS Group, CVC.** <http://www.cvc.uab.es/adas/cvvt2013/>

12. Awards (12)

- **ICDAR Young Investigator Award - IAPR/ICDAR 2013**
Dr. Dimosthenis Karatzas. The IAPR/ICDAR Young Investigator Award was presented to Dr. Karatzas for outstanding service to the ICDAR community in a variety of roles, as well as innovative research in human perception-based document analysis.
- **Dr. Angel Sappa, appointed Senior Member of IEEE**
- **Best poster Award MVA 2013 – IAPR International Conference on Machine Vision Applications**
Victor Borjas, Dr. Jordi Vitrià, and Dr. Petia Radeva, for the paper entitled "Gradient Histogram Background Modeling for People Detection in Stationary Camera Environments"
Place: Risumeikan University, Kyoto (Japan)
Date: May 20-23, 2013
- **Best Paper Award a HIP'2013 - 2nd International Workshop on Historical Document Imaging and Processing, Washington DC, USA, 2013.** Article: "Contextual Word Spotting in Historical Manuscripts using Markov Logic Networks". D. Fernández, S. Marinai, Dr. J. Lladós and Dr. A. Fornés.
- **Best Poster Presentation Award in ICDAR2013 Doctoral Consortium - 12th International Conference on Document Analysis and Recognition, Washington DC, USA, 2013.** Lluís-Pere de las Heras.
- **Best Paper Award a DocEng'2013 – ACM Symposium on Document Engineering, Florence, 2013.** Article: "Document Noise Removal using Sparse Representations over Learned Dictionary", T-H. Do, S. Tabbone, Dr. O. Ramos.
- **Accèssit, Premi a la millor tesi AERFAI 2013**
Thesis Title: *Multi-Class Learning for Vessel Characterization in Intravascular Ultra-Sound*
Author: Dr. Francesco Ciompi, CVC-UB
Date: June 5, 2013
- **Accèssit, Premi a la millor tesi AERFAI 2013**
Thesis Title: *Probabilistic Alignment of Video Sequences Recorded by Moving Cameras*
Author: Dr. Ferran Diego, CVC-UAB
Date: June 5, 2013
- **TR35 Argentina and Uruguay's 2013 winners (MIT Technology Review).**
Dr. Ariel Amato was one of the tenth winners in this contest for the design of Knowxel, a system of open collaboration platform and multitasking.
Place: Buenos Aires (Argentina)
Date: November 20, 2013

- **Programa Generació d'Idees 2013, organized by UAB and Parc de Recerca UAB**
Final winners Francisco Blanco, **Dr. Joan Serrat**, **Dr. Felipe Lumbreras**, Montserrat López-Mesas, Manuel Valiente, with the project "MyStone: Classificació de Pedres de Ronyó"
Place: Bellaterra (Spain)
Date: November 29, 2013
- **PFC - Best poster award academic course 2012/2013**
Winner **Ricard Balagué** (CVC-UAB), supervisor **Dr. Robert Benavente** (CVC-UAB), with the poster "Aplicació per a la transferència de color entre imatges".
Place: Escola d'Enginyeria, Bellaterra (Spain)
Date: november 29, 2013
- **Pedestrian Detection Challenge at ICCV RMRC Workshop 2013.**
Winner **Jiaolong Xu** (CVC-UAB)
Place: Sydney (Australia)
Date: November 29, 2013