

# Curriculum Vitae

(Last updated: 2017, June 20th)



## 1. Personal Data

**Given Names:** Bogdan Mihai  
**Surname:** Raducanu  
**Date of Birth:** 30/09/1971  
**Place of Birth:** Constanta (Romania)  
**Citizenship:** Romanian  
**Passport Number:** 1515.2191 (valid until 2019, August 17<sup>th</sup>)  
**Residence Permit:** X2068006-F (permanent)  
**Marital Status:** Single

**Current Address:** Vila Universitaria – Campus UAB  
Apart. Y-010  
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## 2. Current Affiliation

Computer Vision Center (CVC)  
Edifici “O” – Campus UAB  
08193 Bellaterra (Barcelona)  
SPAIN

**Position:** R&D Project Manager

## 3. Education

- B.S. degree in Computer Science from the University “Politehnica” of Bucharest (Romania)  
Thesis: “Implementation of Some Algorithms for Feature Extraction from Images”  
Date of Graduation: July 1995
- Ph. D. degree (*‘cum laude’*) in Computer Science from the University of The Basque Country (Spain)  
Thesis: “Morphological Techniques for Face Localization”  
Thesis supervisor: Prof. Manuel Graña, University of The Basque Country  
Date of Graduation: July 10<sup>th</sup>, 2001

- 2002- 2004 Post-doc at User-Centred Engineering Group, Technical University of Eindhoven, The Netherlands
- 2004 - 2009 Ramon y Cajal Research Fellow, Computer Vision Center, Spain
- 2009 - ... Senior Researcher, Computer Vision Center, Spain

**Research interests:** Computer Vision, Pattern Recognition, Machine Learning, Artificial Intelligence, Ambient Intelligence, Social Robotics, Social Computing

#### Languages:

- English - Fluently spoken and written
- Spanish - Fluently spoken and written
- French - Regular spoken and written
- Dutch - Basic spoken and written
- Romanian - Mother language

## 4. Professional Experience

### 4.1. Current projects

- **Title:** Deep Multi-Task Learning for Object Recognition  
**Funded by:** Ministry of Economy and Competitivity, Spain (TIN2016-79717-R)  
**Duration:** 1/01/2017 – 31/12/2019  
**Principal Researchers:** Joost van de Weijer and Bogdan Raducanu
- **Title:** RUBSEE - Extending Artificial Intelligence revolution in the Waste Field Beyond Sorting  
**Funded by:** European Commission  
**Call H2020-SMEINST-2-2016-2017:** SME Instrument, Phase 2  
**Duration:** 1/02/2017 – 31/01/2019  
**Coordinator:** SADAKO TECHNOLOGIES, S.L.  
**Principal Researchers CVC:** Joost van de Weijer
- **Title:** Closing the loop: bio-inspired top-down feedback for computational vision systems  
**Funded by:** Ministry of Economy and Competitivity, Spain (TIN2013-41751-P)  
**Duration:** 1/01/2014 – 31/12/2017  
**Principal Researchers:** Xavier Otazu and Joost van de Weijer

### 4.2. Past projects

- **Title:** Predoctoral grant for the formation of researchers from The University of The Basque Country  
**Funded by:** University of The Basque Country, Spain  
**Duration:** 1/11/1996 - 30/10/2000  
**Director:** prof. Manuel Graña
- **Title:** A Study for Techniques of Facial Information Processing: Face Localization, Modelling and Recognition  
**Funded by:** The Ministry of Education and Science, Spain  
**Duration:** 1/10/1998 - 30/09/1999  
**Principal Researcher:** prof. Manuel Graña
- **Title:** A Study of Methods for Face Localization in Arbitrary Scenes  
**Funded by:** The Basque Government, Spain  
**Duration:** 1/01/1999 - 31/12/2001  
**Principal Researcher:** prof. Manuel Graña
- **Title:** Computer Vision Technologies for Context-Aware Environments  
**Funded by:** Technical University of Eindhoven, The Netherlands  
**Duration:** 15/04/2002 – 15/04/2004  
**Principal Researcher:** dr. Panos Markopoulos

- **Title:** Human Presence Detection for Aware Environments  
**Funded by:** Ministry of Science and Technology, Spain (RYC-2003-002196)  
**Duration:** 20/04/2004 – 19/04/2009  
**Principal Researcher:** dr. Bogdan Raducanu
- **Title:** Visual Interfaces for Medical Environments  
**Funded by:** Ministry of Science and Technology, Spain (TIC2003-00654)  
**Duration:** 1/01/2004 - 31/12/2006  
**Principal Researcher:** prof. Jordi Vitrià
- **Title:** MAMVIC: Multitask Learning Models for Computer Vision  
**Funded by:** Ministry of Education and Science, Spain (TIN2006-15308-C02)  
**Duration:** 1/01/2007 – 31/12/2009  
**Principal Researcher:** prof. Jordi Vitrià
- **Title:** Multimodal Interaction in Pattern Recognition and Computer Vision  
**Funded by:** Ministry of Education and Science, Spain (CSD2007-00018)  
**Duration:** 1/10/2007 – 31/12/2012  
**Principal Researcher (CVC):** dr. Angel Sappa  
**Principal Researcher (General Coordinator):** prof. Enrique Vidal
- **Title:** Augmented Multi-party Interaction with Distance Access (AMIDA) – Traineeship Program  
**Funded by:** EU Project IST-033812, FP6  
**Duration:** 1/02/2008 – 31/10/2008  
**Principal Researcher:** dr. Daniel Gatica-Perez
- **Title:** Machine Learning Techniques for Large-Scale Vision Systems: Applications to Object Recognition  
**Funded by:** Ministry of Education and Science, Spain (TIN2009-14404-C02)  
**Duration:** 1/01/2010 – 31/12/2013  
**Principal Research:** dr. Jordi Vitrià
- **Title:** Inferring Trends in People’s Life from Everyday Experiences  
**Funded by:** Ministry of Education and Science, Spain (TIN2010-09703-E)  
**Duration:** 1/07/2010 – 30/06/2011  
**Principal Researcher:** dr. Bogdan Raducanu
- **Title:** Robot Companions for Citizens (Coordinated Action - FET FLAGSHIP PILOT)  
**Funded by:** European Union (FP7-ICT-2011-FET-F # 284951)  
**Duration:** 1/05/2011 – 30/04/2012  
**Principal Researcher (CVC):** dr. Bogdan Raducanu  
**Principal Researcher (Spanish Coordinator):** prof. Paul Verschure  
**Principal Researcher (General Coordinator):** prof. Paolo Dario
- **Title:** Beauty is in the AI of the beholder: computer vision meets neuro-visual aesthetics  
**Funded by:** Ministry of Economy and Competitivity, Spain (TIN2013-49982-EXP)  
**Duration:** 1/09/2014 – 28/02/2017  
**Principal Researcher:** Alejandro Parraga

### 4.3 Other Projects

Below is a list of recent EU project proposals I have been involved with. The projects passed the evaluation threshold, but were not selected for funding

- **RosCol – Robots as Sociable Colleagues** (submitted to FP7-ICT-2013-10)  
Coordinator: dr. Marc Hanheide, Univ. of Lincoln (UK)
- **RoDi – Robotic Training Assistant for People at Risk of Dementia** (submitted to H2020-ICT-24-2015)  
Coordinator: dr. Bogdan Raducanu
- **VeRIDis - Versatile Robotic Interview-based Diagnostic System** (submitted to ECHORD++ Call for Experiments on Robotics for Comprehensive Geriatric Assessment (CGA) Challenge – 2015)  
Coordinator: ELTEIS (Spain)

Other:

- **RoboMaid** – Domestic Service Robot for Household Chores (submitted to ECHORD++ 2nd Call for Experiments - 2015)  
Coordinator: **dr. Bogdan Raducanu**

#### 4.4. Teaching Activities

- Computational Intelligence – Undergraduate course (Fall 2005/2006 and 2006/2007)
- Social Robotics (Master Course, Spring 2006)
- Face Recognition and Biometric Techniques (Master Course, Spring 2013-2016)

#### 4.5. Supervision Activities

- Co-supervision of a Master student (2006)
- Co-supervision of an undergraduate student (2006)
- Co- Supervision of a Master student (2011) (together with dr. Fadi Dornaika, from Ikerbasque Science Foundation and the University of the Basque Country):  
Title of the Master Thesis: **Face Recognition on Riemannian Manifolds**
- Co- Supervision of a Master student (2016) (together with dr. Fadi Dornaika, from Ikerbasque Science Foundation and the University of the Basque Country):  
Title of the Master Thesis: **Evaluating facial feature extraction techniques for automatic aesthetic analysis**
- Co- Supervision of a Master student (2016) (together with dr. Jose Manuel Alvarez, from NICTA, Australia):  
Title of the Master Thesis: **Bidirectional Conditional Generative Adversarial Networks**
- Co-supervision of a Ph.D. student (together with dr. Joaquin Salas, from CICATA-IPN, Instituto Politécnico Nacional, Mexico)  
Title of the Ph.D. Thesis: **Generation of Ground Truth Data Sets to Evaluate Intrinsic Image Algorithms for Shadow Detection** (Graduation date: June 2013)
- Co-supervision of a Ph.D. student (together with dr. Joaquin Salas, from CICATA-IPN, Instituto Politécnico Nacional, Mexico)  
Title of the Ph.D. Thesis: **Assistive Technology for Face-to-Face Social Interaction of Blind People** (Graduation date: July 2016)

## 5. Relevant Publications (peer-reviewed)

### 5.1. Journals and Book Chapters

48. M.E. Meza, J.R. Terven, **B. Raducanu**, and J. Salas. Assessing the Influence of Mirroring on the Perception of Professional Competence using Wearable Technology. *Accepted for publication in: Transactions on Affective Computing*. Available online (as of Sept. 8<sup>th</sup>, 2016): <http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7563358>
47. J. R. Terven, **B. Raducanu**, M.E. Meza, J. Salas. Head-Gestures Mirroring Detection in Dyadic Social Interactions with Computer Vision-based Wearable Devices. *Neurocomputing Journal*, Vol. 175 (part B), 866-876, 2016
46. M. Graña, **B. Raducanu** (Guest Editors). Special Issue of *Neurocomputing Journal* on “Bioinspired and Knowledge Based Techniques and Applications”, Vol. 150 (part A), February 2015
45. J. R. Terven Salinas, J. Salas, **B. Raducanu**. Robust Head Gestures Recognition for Assistive Technology. LNCS8495: *Pattern Recognition*, J.F. Martínez-Trinidad et al. (Eds.), pp 152-161, Springer-Verlag, 2014
44. C. Isaza, J. Salas and **B. Raducanu**. “Rendering Ground Truth Data Sets to Detect Shadows Cast by Static Objects in Outdoors”. *Multimedia Tools and Applications*, 70(1):557-571, 2014
43. J. R. Terven Salinas, J. Salas, **B. Raducanu**. New Opportunities for Computer Vision-Based Assistive Technology Systems for the Visually Impaired, *IEEE Computer*, 47(4):52-58, April 2014
42. **B. Raducanu**, F. Dornaika. Embedding New Observations via Sparse-Coding for Non-Linear Manifold Learning, *Pattern Recognition*, 47(1):480-492, 2014

41. F. Dornaika, A. Bosaghzadeh, **B. Raducanu**. Efficient Graph Construction for Label Propagation Based Multi-observation Face Recognition, LNCS8212: Human Behavior Understanding, A. A. Saleh et al. (eds.), pp. 124-135, 2013
40. J. R. Terven Salinas, J. Salas, **B. Raducanu**. Estado del Arte en Sistemas de Vision Artificial para Personas Invidentes, *Komputer Sapiens*, Vol. I, pp. 20-25, June 2013 (in *spanish*)
39. **B. Raducanu** and F. Dornaika. "Texture-independent recognition of facial expressions in image snapshots and videos". *Machine Vision and Applications*, 24(4):811-820, 2013
38. F. Dornaika, A. Moujahid and **B. Raducanu**. "Facial Expression Recognition Using Tracked Facial Actions: Classifier Performance Analysis". *Engineering and Applications of Artificial Intelligence*, 26(1):467-477, 2013
37. F. Dornaika, A. Assoum and **B. Raducanu**. "Automatic Dimensionality Estimation for Manifold Learning through Optimal Feature Selection". LNCS7626: SSPP & SPR, G.L.Gimel'farb et al. (eds.), pp. 575-583, Springer-Verlag, 2012
36. **B. Raducanu** and F. Dornaika. "Out-of-Sample Embedding by Sparse Representation". LNCS7626: SSPP & SPR, G.L.Gimel'farb et al. (eds.), pp. 336-344, Springer-Verlag, 2012
35. C. Isaza, J. Salas and **B. Raducanu**. "Evaluation of Intrinsic Image Algorithms to Detect the Shadows Cast by Static Objects Outdoor", *Sensors*, Vol. 12, pp. 13333-13348, 2012
34. **B. Raducanu** and F. Dornaika. "Pose-Invariant Face Recognition in Videos for Human-Machine Interaction". LNCS7584: ECCV 2012 - Workshops and Demonstrations, A. Fusiello et al. (eds.), Vol. II, pp. 566-575, Springer-Verlag, 2012
33. F. Dornaika and **B. Raducanu**. "Analysis and Recognition of Facial Expressions in Videos Using Facial Shape Deformation". *Facial Expressions: Dynamic Patterns, Impairments and Social Perceptions* S.E. Carter et al. (eds.), pp. 157-178, Nova Publishers, 2012
32. **B. Raducanu** and F. Dornaika. "A Supervised Non-linear Dimensionality Reduction Approach for Manifold Learning". *Pattern Recognition*, Vol.45(6):2432-2444, 2012
31. **B. Raducanu**, D. Gatica-Perez. "Inferring Role Patterns Through Nonverbal Analysis in Competitive Meetings". *Multimedia Tools and Applications*, 56(1):207-226, 2012
30. S. Escalera, X. Baró, J. Vitrià, P. Radeva, **B. Raducanu**. "Social Network Extraction and Analysis Based on Multimodal Dyadic Interaction". *Sensors*, Vol.12, pp. 1702-1719, 2012
29. **B. Raducanu** and F. Dornaika. "A Discriminative Non-Linear Manifold Learning Technique for Face Recognition". *Communications in Computer and Information Science* (CCIS 254, Part IV), A. Abd Manaf et al. (Eds.), pp. 339-353, Springer-Verlag, 2011
28. F. Dornaika and **B. Raducanu**. "Subtle Facial Expression Recognition in Still Images and Videos". *Advances in Face Image Analysis: Techniques and Technologies*, Zhang Yu-Jin (ed.), pp. 259-277, IGI Global, 2011.
27. C. Isaza, J. Salas, **B. Raducanu**. "Toward the Detection of Urban Infrastructure Edge Shadow". LNCS6474: Advanced Concepts for Intelligent Vision systems, J. Blanc-Talon et al. (eds.), Vol. I, pp. 30-37, Springer-Verlag, 2010
26. **B. Raducanu**, J. Vitrià, A. Leonardis (Guest Editors). Special Issue of Image and Vision Computing Journal on "Online Pattern Recognition and Machine Learning Techniques for Computer Vision: Theory and Applications". Vol. 28(7), July 2010
25. **B. Raducanu**, F. Dornaika. "Natural Facial Expression Recognition Using Dynamic and Static Schemes". LNCS5875: Advances in Visual Computing, G. Bebis et al. (eds.), Vol. I, pp. 730-739, Springer-Verlag, 2009
24. F. Dornaika, **B. Raducanu**. "3D Face Pose Detection and Tracking using Monocular Videos: Tool and Application". *IEEE Transactions on Systems, Man and Cybernetics (part B)*, Vol. 39(4), pp. 935-944, 2009
23. **B. Raducanu** and F. Dornaika. "Dynamic vs. static recognition of facial expressions". LNCS5355: Ambient Intelligence, E. Aarts et al. (eds.), pp. 13-25, Springer-Verlag, 2008

22. **B. Raducanu**, J. Vitrià. "Face Recognition: A Cognitive Perspective". Special Issue of Int'l Journal on Pattern Recognition and Artificial Intelligence on Brain, Vision and Artificial Intelligence, Vol. 22(5), pp.899-913, 2008
21. **B. Raducanu**, J. Vitrià. "Online Nonparametric Discriminant Analysis for Incremental Subspace Learning and Recognition". Pattern Analysis and Applications, Vol.11(3-4), pp.259-268, 2008
20. **B. Raducanu**, J. Vitrià. "Learning to Learn: from Smart Machines to Intelligent Machines". Pattern Recognition Letters, Vol.29(8), pp.1024-1032, 2008
19. F. Dornaika, **B. Raducanu**. "Facial Expression Recognition for Human Computer Interaction Applications". Encyclopedia of Artificial Intelligence, Rabuñal et al. (eds.), Vol. II, pp. 625-631, IGI Global, London, 2008
18. F. Dornaika, **B. Raducanu**. "Inferring Facial Expressions from Videos: Tool and Application". Signal Processing: Image Communication, Vol. 27, pp.769-784, 2007
17. **B. Raducanu**, J.Vitrià. "Incremental Subspace Learning for Cognitive Visual Processes". LNCS4729: Advances in Brain, Vision and Artificial Intelligence, Mele et al. (eds.), Springer-Verlag, pp.214-223, 2007
16. F. Dornaika, **B. Raducanu**. "Efficient Facial Expression Recognition for Human Robot Interaction". LNCS4507: Computational and Ambient Intelligence, Sandoval et al. (eds.), pp. 700-708, Springer-Verlag, 2007
15. **B. Raducanu**, J. Vitrià. "A Robust Particle Filter-Based Face Tracker Using Combination of Color and Geometric Information. LNCS4141: Image Analysis and Recognition, A. Campilho et al. (eds.), Springer-Verlag, Vol. I, pp. 922-933, 2006
14. **B. Raducanu**, J.Vitrià. "Aprendiendo a aprender: De máquinas listas a máquinas inteligentes". Una Perspectiva de la Inteligencia Artificial en su 50 Aniversario, A. Fernandez-Caballero et al. (eds.), Univ. Castilla-La Mancha Press, Vol. I, pp.34-45, 2006 (*spanish only*)
13. **B. Raducanu**, J. Vitrià. "Real-Time Face Tracking for Context-Aware Environments". Recent Advances in Artificial Intelligence Research and Development, J. Vitrià et al. (eds.), IOS Press, Amsterdam, Vol. 113, pp.91-98, 2005
12. **B. Raducanu**, M. Graña, F. X. Albizuri, A. D'Anjou. "A Probabilistic Hit-or-Miss Procedure Based on Morphological Multiscale Fingerprints", Pattern Analysis and Applications, Vol. 7, pp.128-143, 2004
11. F. X. Albizuri, M. Graña, **B. Raducanu**. "Statistical Transmission Delay Guarantee for Nonreal-Time Traffic Multiplexed with Real-Time Traffic". Computer Communications, 26(12):1365-1375, 2003
10. **B. Raducanu**, M. Graña, F. X. Albizuri. "Morphological Scale Spaces and Associative Morphological Memories: Results on Robustness and Practical Application". Journal of Mathematical Imaging and Vision, 19(2):113-131, 2003
9. **B. Raducanu**, P. Markopoulos. Applications of Vision-Based Attention-Guided Perceptive Devices to Aware Environments. LNCS2875: Ambient Intelligence, E. Aarts et al. (eds.), pp. 410-418, Springer-Verlag, 2003
8. **B. Raducanu**, P. Sussner, M. Graña. "Steps towards one-shot vision-based self-localization". Biologically Inspired Robot Behavior Engineering, M. Graña et al. (eds.), pp. 365-393, Springer-Verlag, 2002
7. M. Graña, **B. Raducanu**. "Increasing the Robustness of Heteroassociative Morphological Memories for Practical Applications". Mathematical Morphology, H. Talbot et al. (eds.), CSIRO Publishing, Sydney, Australia, pp. 379-388, 2002
6. M. Graña, **B. Raducanu**, P. Sussner, G. X. Ritter. On Endmember Detection in Hyperspectral Images with Morphological Associative Memories. LNCS2527: Advances in Artificial Intelligence, F.J. Garijo et al. (eds.), Springer-Verlag, pp. 526-535, 2002
5. **B. Raducanu**, M. Graña. "Morphological Techniques for Human Face Localization". In Image Processing III: Mathematical Methods, Algorithms and Applications, J. M. Blackledge et al. (eds.), Horwood Publishing Center, pp. 179-200, 2001
4. **B. Raducanu**, M. Graña, F. X. Albizuri, A. D'Anjou. "Face Localization Based on the Morphological Multiscale Fingerprints". Pattern Recognition Letters, 22(3-4):359-371, 2001

3. **B. Raducanu**, M. Graña. "On the Application of Heteroassociative Morphological Memories to Face Localization". LNCS2085: Bio-inspired Applications of Connectionism, J. Mira et al. (eds.), Springer-Verlag, pp. 563-570, 2001
2. **B. Raducanu**, M. Graña, P. Sussner. "Advances in Mobile Robots Self-Localization using Morphological Neural Networks". Mobile Robot Technology, pp. N/A, J. Sasiadek (eds.), Pergamon Press (Elsevier), pp. N/A, 2001
1. **B. Raducanu**, M. Graña. "Testing Some Morphological Approaches to Face Localization". Mathematical Morphology and Its Applications to Image and Signal Processing, J. Goutsias et al. (eds.), Kluwer Academic Publishers, Dordrecht (The Netherlands), pp. 415-424, 2000

## 5.2. Conference Proceedings

39. G. Perarnau, J. van de Weijer, **B. Raducanu**, and J. M. Álvarez. Invertible Conditional GANs for image editing. Workshop on Adversarial Training, NIPS2016, Barcelona, Spain, December 2016
38. A. Gomez, **B. Raducanu**, M. Torres, and J. Salas. Automatic Scene Interpretation using a Wearable Camera for Visually Impaired People. Workshop on Deep Learning for Pattern Recognition, ICPR2016, Cancun, Mexico, December 2016 (POSTER)
37. M. Exposito Ventura, **B. Raducanu** and C.A. Parraga. Aesthetics without semantics: a new dataset of natural scenes devoid of semantic content. Vision Science of Art Conference (VSAC2016), Barcelona, Spain, August 2016 (POSTER)
36. J.R. Terven, **B. Raducanu**, M.-E. Meza, and J. Salas. Evaluating Real-Time Mirroring of Head Gestures using Smart Glasses. Proc. of ICCV2015, Workshop on Assistive Computer Vision and Robotics (ACVR), Santiago de Chile, Chile, December 2015
35. **B. Raducanu**, A. Bosaghzadeh, and F. Dornaika. Multi-observation Face Recognition in Videos based on Label Propagation. Proc. of CVPR2015, Workshop on Analysis and Modeling of Faces and Gestures (AMFG), Boston (MA), June 2015, pp.10-17
34. **B. Raducanu**, A. Bosaghzadeh and F. Dornaika. Facial Expression Recognition based on Multi-view Observations with Application to Social Robotics. Proc. of ACCV2014, Workshop on Computer Vision for Affective Computing. pp.1-16, Singapore, November 2014
33. F. Dornaika and **B. Raducanu**. Out-of-Sample Embedding for Manifold Learning Applied to Face Recognition. Proc. of CVPR2013, Workshop on Analysis and Modeling of Faces and Gestures (AMFG), pp. 862-868, Portland (OR), USA, June 2013
32. C. Isaza, J. Salas and **B. Raducanu**. "Synthetic Ground Truth Dataset to Detect Shadows Cast by Static Objects in Outdoors". Proc. of 1<sup>st</sup> Int'l. Workshop on Visual Interfaces for Ground Truth Collection in Computer Vision Applications (VIGTA), pp.N/A, Capri Island, Italy, May 2012
31. F. Dornaika, A. Bosaghzadeh and **B. Raducanu**. "LSDA Solution Schemes for Modelless 3D Head Pose Estimation". Proc. of Workshop on Applications of Computer Vision (WACV), pp.393-398, Breckenridge (CO), USA, January 2012
30. **B. Raducanu** and F. Dornaika. "Appearance-based Face Recognition Using A Supervised Manifold Learning Framework". Proc. of Workshop on Applications of Computer Vision (WACV), pp. 465-470, Breckenridge (CO), USA, January 2012
29. R. Aylett, G. Castellano, **B. Raducanu**, A. Paiva and M. Hanheide. "Long-term socially perceptive and interactive robot companions: challenges and future perspectives". Proc. of Int'l. Conf. on Multimodal Interaction (ICMI-MLMI), pp. 323-326, Alicante, Spain, November 2011
28. S. Escalera, X. Baró, J. Vitrià, P. Radeva, **B. Raducanu**. "Modelling and Analyzing Multimodal Dyadic Interactions Using Social Networks". Proc. of Int'l. Conf. on Multimodal Interaction (ICMI-MLMI), pp. 1-8, Beijing, PR China, November 2010
27. F. Dornaika, **B. Raducanu**. "Person-specific shape estimation under varying head pose from single snapshots". Proc. of IEEE Int'l. Conf. on Pattern Recognition, pp. 3496-3499, Istanbul, Turkey, August 2010

26. F. Dornaika, **B. Raducanu**. "Single Snapshot 3D Head Pose Initialization for Tracking in Human Robot Interaction Scenario". Proc. of IEEE Conf. on Computer Vision and Pattern Recognition (Workshop on Computer Vision for Human Robot Interaction), pp. 1-8, San Fransisco, CA, USA, June 2010
25. **B. Raducanu**, F. Dornaika. "Dynamic Facial Expression Recognition Using Laplacian Eigenmaps-Based Manifold Learning". Proc. of IEEE Int'l. Conf. on Robotics and Automation, pp. 156-161, Anchorage, AK, USA, May 2010
24. F. Dornaika, **B. Raducanu**. "Simultaneous 3D Face Pose and Person-Specific Shape Estimation from a Single Image Using a Holistic Approach". Proc. of IEEE Int'l Workshop on Applications of Computer Vision, pp. 1-6, Snowbird, Utah, USA, December 2009
23. D. Jayagopi, **B. Raducanu**, D. Gatica-Perez. Characterizing Conversational Group Dynamics using Nonverbal Behaviour. Proc. of IEEE Conf. on Multimedia and Expo, pp. 370-373, New York, NY, USA, June-July 2009
22. **B. Raducanu**, J.Vitrià, D. Gatica-Perez. "You are Fired! Nonverbal Role Analysis in Competitive Meetings". Proc. of IEEE Int'l Conference on Audio, Speech and Signal Processing, pp. 1949-1952, Taipei, Taiwan, April 2009
21. F. Dornaika, **B. Raducanu**. "Constructing Panoramic Views Through Facial Gaze Tracking". Proc. of Int'l. Conference on Multimedia and Expo, pp.969-972, Hannover, Germany, June, 2008
20. F. Dornaika, **B. Raducanu**. "Detecting and Tracking of 3D Face Pose for Human-Robot Interaction". Proc. of IEEE Int'l. Conference on Robotics and Automation, pp. 1716-1721, Pasadena, CA, USA, May 2008
19. **B. Raducanu**, J.Vitrià. "Online Learning for Human-Robot Interaction". Proc. of IEEE Conference on Computer Vision and Pattern Recognition, (Workshop on "Online Learning for Classification"), pp.1-7, Minneapolis, MN, USA, 18-23 June 2007
18. E. Motard, **B. Raducanu**, V. Cadenat, Jordi Vitria. "Incremental On-Line Topological Map Learning for A Visual Homing Application", Proc. of IEEE Int'l Conf. On Robotics and Automation, pp. 2049 – 2054, Rome, Italy, 10-14 April 2007
17. F. Dornaika, **B. Raducanu**. "Recognizing Facial Expressions in Videos Using a Facial Action Analysis-Synthesis Scheme". Proc. of IEEE Int'l. Conf. on Advanced Video and Signal Based Surveillance, pp. 1-8, Sydney, Australia, 22-24 November 2006
16. I. Rañó, **B. Raducanu**, S. Subramanian. "Human Presence Detection and Tracking for A Concierge Robot". Proc. of 5<sup>th</sup> IFAC Symposium on Intelligent Autonomous Vehicles, pp. N/A, Lisbon, Portugal, 5-7 July 2004
15. **B. Raducanu**, S. Subramanian, P. Markopoulos. "Human Presence Detection by Smart Devices". Proc. of Engineering of Intelligent Systems, pp. N/A, Funchal, Island of Madeira, Portugal, 29 Feb-2 March 2004
14. **B. Raducanu**, M. Graña. "On the Application of Morphological Heteroassociative Neural Networks". Proc. of Int'l Conference on Image Processing, pp. 501-504, Thessaloniki, Greece, 7-10 October 2001
13. **B. Raducanu**, M. Graña. "An Approach to Visual Self-Localization for Mobile Robots. Proc. of Middle-East Conference on Simulation and Modelling, pp. 65-69, Amman, Jordan, 3-5 September 2001
12. M. Graña, **B. Raducanu**. "Some Applications of Morphological Neural Networks". Proc. of Int'l Joint Conference on Neural Networks, pp. 2518-2523, Washington D.C., USA, 15-19 July 2001
11. **B. Raducanu**, M. Graña, P. Sussner. "Morphological Neural Networks for Vision Based Self-Localization". **Proc. of Int'l Conference on Robotics and Automation**, pp. 2059-2064, Seoul, South Korea, 21-26 May 2001
10. **B. Raducanu**, M. Graña. "Visual Self-Localization with Morphological Neural Networks". Proc. of European Symposium on Artificial Neural Networks, pp. 25-30, Bruges, Belgium, 25-27 April 2001
9. M. Graña, **B. Raducanu**. "Adaptive Kernels for Morphological Heteroassociative Neural Networks". IS&T/SPIE Proc. of Electronic Imaging, pp. 130-137, San Jose, CA, USA, January 2001
8. **B. Raducanu**, M. Graña. "A Grayscale Hit-or-Miss Transform Based on LevelSets". Proc. of Int'l Conf. on Image Processing, pp. 931-933, Vancouver, Canada, 10-13 September 2000

7. **B. Raducanu**, M. Graña. "Face Localization Based on the Morphological Multiscale Fingerprints". Proc. of Int'l Conf. on Pattern Recognition, pp. 929-932, Barcelona, Spain, 3-8 September 2000
6. **B. Raducanu**, M. Graña. "Morphological Neural Networks for Robust Visual Processing in Mobile Robotics". Proc. of Int'l Joint Conference on Neural Networks, pp. 140-143, Como, Italy, 24-27 July 2000
5. M. Pantic, **B. Raducanu**, L. J. M. Rothkrantz, M. Graña. "Automatic Eyebrow Tracking Using Boundary Chain Code". Proc. of Advanced School for Computing and Imaging, pp.137-143, Heijen, The Netherlands, 15-17 June 1999
4. M. Graña, A. I. Gonzalez, **B. Raducanu**, I. Echave. "Fast Face Localization for Mobile Robots: Signature Analysis and Color Processing". IS&T/SPIE Proc. of Int'l Workshop on Intelligent Robots and Computer Vision, pp. 387-398, Boston, USA, November 1998
3. **B. Raducanu**, M. Graña, A. D'Anjou, F. X. Albizuri. "Artificial Neural Networks for Facial Information Processing: A Review of Recent Approaches". Proc. of European Symposium on Artificial Neural Networks, pp. 369-375, Bruges, Belgium, 22-24 April 1998
2. **B. Raducanu**, M. Graña. "Robust and Fast Face Localization in Image Sequences". Proc. of EUROMEDIA98, pp. 81-85, Leicester, UK, 5-7 January 1998
1. **B. Raducanu**, M. Graña. "An Approach to Face Localization Based on Signature Analysis". Proc. of Int'l Workshop on Audio-Visual Speech Recognition, pp. 109-112, Rhodes, Greece, 26-27 September 1997

## 6. Other activities

### 6.1. Visits at Foreign Universities and Research Centers:

- Between 1/11/1998-30/04/1999, I was a visiting researcher at the KBS (Knowledge Based Systems) department of TU Delft (The Netherlands). I worked in the project ISFER (Integrated System for Facial Expression Recognition), under the supervision of professor L. J. M. Rothkrantz
- Visit to CICATA-IPN (Research Center for Applied Science and Advanced Technology – National Polytechnic Institute of Mexico), Queretaro, Mexico, January 2007
- Between 1/02/2008-31/10/2008, I was a visiting researcher at IDIAP Research Institute, Martigny, Switzerland. My visit was part of the AMIDA Traineeship Program (Multimodal Interaction), under the supervision of dr. Daniel-Gatica Perez
- Visit to the VICOS (Visual Cognitive System) Lab – University of Ljubljana, Slovenia, February 2010

### 6.2. Participation in European Projects/Networks and International Organization

- Augmented Multi-party Interaction with Distance Access (**AMIDA**) – Traineeship Program (EU Project IST-033812, FP6)
- Member of **EuCogII** and **EuCogIII** – 2<sup>nd</sup> and 3<sup>rd</sup>, respectively, European Network for the Advancement of Artificial Cognitive Systems, Interaction and Robotics (2009-2014)
- Served as an expert for the EC in **FP7 – ICT Call 7 – Cognitive Systems and Robotics** (2011)
- Member of the **AICoR** Topic Group (AI and Cognition in Robotics) in **euRobotics - AISBL**

### 6.3. Participation in International Committees:

I serve as a member of IPC for several major conferences, among them: ICIAR, ICIP, ICPR, ICRA, IROS, Ro-MAN, CVPR Workshops, AVSS, ICMI, ICME, ACCV – plus many other.

I served as Area Chair for PSIVT (2010) and WACV (2016).

I also serve as a reviewer for the following journals: *Pattern Recognition Letters*, *Patterns Analysis and Applications*, *IEEE Transactions on Systems, Man and Cybernetics (Part B)*, *Transactions on Neural Networks and Learning Systems*, *Neural Processing Letters*, *International Journal of Humanoid Robotics*, *International Journal of Social Robotics*, *Transactions on Multimedia*, *Machine Vision and Applications*

I served as a reviewer for several Master and Ph.D. thesis.

#### 6.4. Events organizer

- Special session on *Image Processing*, as part of the *Third Middle-East Symposium on Simulation and Modelling*, held in Amman, Jordan, September 2001
- Special session on *Self-Localization and Navigation for Mobile Robots*, as part of conference *Systemics, Cybernetics and Informatics*, held in Orlando (Florida), USA, July 2002
- Special session on *Applications of Computer Vision Techniques for Human-Computer Interaction Systems*, as part of the conference *Systemics, Cybernetics and Informatics*, held in Orlando (Florida), USA, July 2003
- Special session on *Human Presence Detection for Context-aware Systems*, as part of the *International Conference on Computer Vision Theory and Applications*, held in Barcelona, Spain, March 2007
- Workshop *Online Pattern Recognition and Machine Learning Techniques for Computer Vision Applications*, as part of the *International Conference on Computer Vision Theory and Applications*, held in Funchal (Island of Madeira), Portugal, January 2008
- Special Issue of Image and Vision Computing Journal on *Online Pattern Recognition and Machine Learning Techniques for Computer Vision Applications* (July 2010)
- Special Session on *Long-term socially perceptive and interactive robot companions: Challenges and future perspectives*, as part of the ICMI-MLMI2011, Alicante, Spain, November 2011
- Special Issue of Neurocomputing Journal on *Bioinspired and Knowledge Based Techniques and Applications*, February 2015

#### 6.5. Invited talks:

- “*Face Detection and Tracking: First Steps Towards Human-Centered Technology*”, Pattern Recognition and Machine Intelligence Association from Singapore, April 2006
- “*Incremental Subspace Learning for Cognitive Visual Processes*”, Institute of Artificial Intelligence (IIIA-CSIC), Barcelona, Spain, May 2007
- “*You are Fired! Nonverbal Role Analysis in Competitive Meetings*”, IDIAP Research Institute, Switzerland, October 2008
- “*Online Learning: First Steps Towards Cognitive Development*”, University of Ljubljana, Slovenia, February 2010
- “*Human Mental Models for Cognitive Development*”, Microsoft Research Asia (MSRA), Beijing, November 2010
- “*Online Face Recognition based on a Cognitive Learning Paradigm*”, University of the Balearic Island's (UIB), Palma de Mallorca, November 2011
- “*Affective Computing for Human-Robot Interaction*”, University of Lincoln (UK), Lincoln, October 2013
- “*Affective Computing for Human-Robot Interaction*”, INRIA Rhone-Alpes, Grenoble, June 2015

#### 6.6. Participation in exhibitions and industrial fairs

- “Closer to Science”, Palau Robert, Barcelona, Spain (November 2006 – August 2007)
- “Innovation Forum”, Barcelona, November 2006

#### 6.7. Awards

- **Extraordinary Prize** of The University of The Basque Country for the realization and defense of the Ph. D. thesis “Morphological Techniques for Face Localization”, supervised by Prof. Manuel Graña (2003)
- “**I3 – Research Quality Certificate**”, awarded by the Spanish Ministry of Education and Science for the whole scientific career (1995-2007), June 2008
- “**Research Quality Certificate**”, awarded by the Catalan Agency for Research and Universities, October 2008

## 7. Professional skills

- Scientific knowledge: computer vision, image processing, neural networks, mathematical morphology, statistical pattern recognition, machine learning techniques, artificial intelligence, robotics
- Technical knowledge: relational databases, computer networks, TCP/IP and AppleTalk communication protocols, real-time programming
- Programming languages: HTML, Pascal, C/C++, IDL, Matlab, CLIPS, SQL

- Development environments: Varsity (a C++ library package for image processing from Silicon Graphics), Microsoft Visual C++, OpenCV, AIBO Remote Framework, X-Windows programming)
- Operating systems: Windows (9.x, Me, NT, 2000), MacOS (MacOS 9, MacOS X), Unix (Linux, Solaris, Irix)
- Platforms: PC, Macintosh, Silicon Graphics, Sun Workstation, AIBO Robot

## **8. Hobbies**

- Reading, classical music, foreign cultures, languages, travel