

CURRICULUM VITAE

PERSONAL DETAILS

Name: Miguel Tavares Coimbra
Date of Birth: 15/05/1975
Nationality: Portuguese
Address: Rua Clube dos Caçadores, 905, 1º DTTZ
4430-057 Vila Nova de Gaia
Portugal
E-mail: mcoimbra@fc.up.pt
Webpage: www.dcc.fc.up.pt/~mcoimbra

EDUCATION

- 2004-2006 Post-Doc studies at IEETA, University of Aveiro, Portugal. Work consisted in using computer vision methods for the creation of computer tools for clinical analysis of a variety of video exams. Examples include automatic annotation of endoscopic capsule exams, single particle tracking for low SNR confocal microscopy exams, and numerical quantification of patient 3D motion during epileptic seizures.
- 1999-2004 PhD in Electronic Engineering, Queen Mary, University of London, “Compressed Domain Processing with Applications to Surveillance”. Research consisted in the study of compressed domain information of encoded digital video. This resulted in the development of fast tools that approximate traditional image and video processing methods. The test scenario for these tools was a real underground train CCTV surveillance system.
- 1993-1998 BEng in Electrical and Computer Engineering with specialization in Telecommunications, at Faculdade de Engenharia da Universidade do Porto, Portugal. Final average: 16. Distinction for graduating in the top 5% of students.

PROFESSIONAL AND ACADEMIC EXPERIENCE

- 2006-... Assistant Professor of the Computer Science Dep., Faculty of Sciences of the University of Porto, Portugal.
- 1998-1999 Researcher at INESC-Porto. Worked in the VIDION project in collaboration with RTP, the Portuguese public television provider. Work consisted in the development of the ‘Search workstation’ for RTP’s multimedia digital archive. It included search, real-time navigation and on-line visualization of results.

PUBLICATIONS - JOURNAL PAPERS

1. L. Rodrigues, R. Sampaio, M. Coimbra, “Contrast Medium Volume Optimization in Abdominal CT on Basis of Lean Body Weight”, in *American Journal of Biomedical Engineering*, vol.3(6A), Dec 2013, pp.22-26.
2. F. Riaz, F.B. Silva, M. Dinis-Ribeiro, and M. Coimbra, "Impact of Visual Features on The Segmentation of Gastroenterology Images Using Normalized Cuts", accepted for publication in *IEEE Transactions on Biomedical Engineering*.
3. F.B. Silva, M. Dinis-Ribeiro, M. Coimbra, et al., "Endoscopic assessment and grading of Barrett’s esophagus using magnification endoscopy and narrow band imaging: impact of structured learning program and experience on the accuracy of the Amsterdam classification system", in *Scandinavian Journal of Gastroenterology*, Nov 2012.
4. F. Riaz, F.B. Silva, M. Dinis-Ribeiro, and M. Coimbra, "Invariant Gabor Texture Descriptors for Classification of Gastroenterology Images", in *IEEE Transactions on Biomedical Engineering*, vol. 59/10, Oct 2012, pp. 2893-2904.

5. C. Ye, B.V.K. Vijaya Kumar, M. Coimbra, "Heartbeat Classification using Morphological and Dynamic Features of ECG Signals", in *IEEE Transactions on Biomedical Engineering*, vol. 59/10, Oct 2012, pp. 2930-2941.
6. M. Coimbra, M. Mackiewicz, M. Fisher, C. Jamieson, J. Soares, J.P. Silva Cunha, "Computer Vision Tools for Capsule Endoscopy Exam Analysis", invited paper in *Eurasip NewsLetter*, vol. 18/1, March 2007, pp. 1-19.
7. J.P. Silva Cunha, M. Coimbra, P. Campos, J. Soares, "Automated Topographic Segmentation and Transit Time Estimation in Endoscopic Capsule Exams", in *IEEE Transactions in Medical Imaging*, vol. 27/1, Jan. 2008.
8. M. Coimbra, and J.P. Silva Cunha, "MPEG-7 visual descriptors – Contributions for automated feature extraction in capsule endoscopy", in *IEEE Trans. Circuits and Systems for Video Technology*, vol. 16/5, 2006, pp. 628-637.
9. M. Coimbra, and M. Davies, "Approximating optical flow within the MPEG-2 compressed domain" in *IEEE Transactions on Circuits and Systems for Video Technology*, Volume: 15 , Issue: 1 , Jan. 2005, pp. 103-107.

FINANCED PROJECTS

1. GEMINI – GastroEnterology Made INteractIve; Funding Organization: IT; Role: PI; Total Funding: 39.970€; Own Funding: 31.080€; Duration: 2 years; Finishes in May 2016
2. Future Health - Health Monitoring in Future Cities; Funding Organization: QREN; Role: PI; Funding: 366.879€; Duration: 2.5 years
3. HeartSafe - Assessing Heart Function for Unsupervised Homecare Applications through Multi-Channel Auscultation; Funding Organization: FCT; Role: Co-PI (IT Team Leader); Funding: 199.864€; Duration: 2 years
4. CellNote Touch - Touch-based Interactive Annotation of Cellular Images; Funding Organization: IT; Role: PI; Funding: 46.400€; Duration: 2 years
5. DECA-Bio - Dependent Component Analysis of Biological Signals; Funding Organization: IT; Role: Co-PI (IT Porto Team Leader); Funding: 35.700€; Duration: 2 years
6. CAGE - Computer Assisted Gastroenterology Examination; Funding Organization: FCT; Role: PI; Funding: 145.000€; Duration: 3 years
7. DigiScope - DIGItally enhanced stethosCOPE for clinical usage; Funding Organization: FCT; Role: PI; Funding: 120.000€; Duration: 3 years
8. MovEpi3D - Motion quantification of 3D body motion during epileptic seizures; Funding Organization: FCT; Role: Researcher; Funding: 128.796€; Duration: 3 years
9. GERES-Med - Grid-Enabled REpositorieS for medical applications; Funding Organization: FCT; Role: Researcher; Funding: 199.560€; Duration: 2 years
10. CapView – Automated Tools for Endoscopic Capsule Exam Analysis; Funding Organization: FCT; Role: Researcher; Funding: 87.300€; Duration: 3 years

OTHER INDICATORS

2	PhD Alumni
18	MSc Alumni
62	Conference Papers
31	Technical Program Committees of International Conferences
6	PhD Academic Committees
3	PhD Steering Committees
1	European Doctorate Committee
18	MSc Academic Committees