



Curriculum vitae Europass

Personal information

First name, Surname(s) **Codruta Orniana, Ancuți**
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Nationality romanian
Date of birth 21.03.1979

Work experience

- 2015 - present** **Researcher** University of Girona (Spain)
Projects : **Enhancing Techniques For Navigation System of AUV**
- 2013 - present** **Lecturer Dr. Ing.** University Politehnica Timișoara, Departament of Measurements and Optical Electronics, Faculty of Electronics and Telecommunication
- 2012 - 2013** **Assistant Professor** Dr. Ing. University Politehnica Timișoara, Departament of Measurements and Optical Electronics, Faculty of Electronics and Telecommunication
- 2008 - 2013** **Researcher** University Hasselt (Belgium)- *computational photography, applied perception, substitution systems for visually impaired persons, computer vision.*
Projects : **3D Video-based navigation aids for visually impaired**
 - Research and development - fundamentals problems in computational photography, substitution systems for visually impaired persons and applied perception**A novel scene representation for digital media**
 - 3D video billboard clouds reconstruction
- 2005 - 2008** **Researcher** University Hasselt (Belgium) – *Human Computer Interaction*
Projects : **Lab- ICT Experience prototyping**
 - Multi-disciplinary user-centered design software development to increase the overall user experience (e-storyboarding)
 - Investigating and implementing possible solutions for various applications user oriented (user-centered design)**OCOMIS**
 - Flexible applications development with OSGi framework (Open Services Gateway initiative)
 - Model-based portable interface development with UIML (User Interface Markup Language)

2002 - 2005 Software developer - **Siemens VDO**

Projects: HVAC

- Reseach and developoment automatic system for testing (LabView, TestStand, C/C++)
- test applications for cluster instruments (LabView)

Education and training

2015 - present ▪ **Fellow Researcher.** University of Girona (Spain) Enhancing Techniques For Navigation System of AUV

2008 – 2011 ▪ **PhD. University Hasselt, Belgium.** Doctoral thesis „Perceptual Decolorization and Dehazing of Images and Videos”, Advisor: Prof. Dr. Philippe Bekaert

2002 - 2003 ▪ **Master of Science. University Politehnica Timișoara,** Faculty of **Automatics and Computer Science,** Embedded Systems (organized by Siemens). Advisor: Prof. Dr. Virgil Tiponuț.

1997 - 2002 ▪ **BsC. University Politehnica Timișoara,** Faculty of **Electronics and Telecommunication**

Skills and other Competencies

Research area

- **Computational photography**
- Image enhancement (conversion tehncics to recover details using single images and videos)
- Image decolorisation (color image conversion to grayscale)
- High Dynamic Range Imaging / tone mapping
- Computer vision
- Substitution systems for visually impaired persons

Language(s) Romain (nativ) , English (fluent), French (medium level - writing)
German (medium level - writing), Dutch (medium level - writing)

Computer skills

- Windows, DOS, OSEK,
- Microsoft Office™ (Word™, Excel™, PowerPoint™)
- Latex, XML

Programming languages C/C++, C#, Java, PHP, Matlab, Simulink
LabView, TestStand, Multisim, SPICE, VHDL, Assembler
Pascal, FoxPro

Driving licence Categy B

Codruta O. Ancuti- List of Publications

PhD Thesis

Codruta O. Ancuti: "Perceptual Declorization and Dehazing of Images and Videos", Hasselt University, Belgium, 2011, supervisor prof. Philippe Bekaert

Publications in Journals

[01] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer and Alan C. Bovik "Single-Scale Fusion: An Effective Approach to Merging Images". **IEEE Transactions on Image Processing**, October, 2016. **impact factor 3.735.**

[02] **Codruta O. Ancuti**, Cosmin Ancuti . " *Single image dehazing by multi-scale fusion* ". **IEEE Transactions on Image Processing**, 22(8):3271-82, Aug, 2013, **impact factor 3.735.**

[01] Cosmin Ancuti, **Codruta O. Ancuti** "*Effective Contrast-Based Dehazing for Robust Image Matching*. **IEEE Geoscience and Remote Sensing Letters**, accepted for publication, vol 11(12), March, 2014. **impact factor 2.228.**

[04] Cosmin Ancuti, **Codruta O. Ancuti** and Philippe Bekaert, "Deblurring by Matching". In **Computer Graphics Forum** ,Vol. 28, Nr. 2, pp. 619 – 628, Blackwell publishing, 2009. **impact factor 1.542.**

[05] Cosmin Ancuti, **Codruta O. Ancuti** and Philippe Bekaert, "An Efficient Two Steps Algorithm for Wide Baseline Image Matching". **Journal of Visual Computer**, 25 : 5-7, pp. 677 - 686, Wiley & sons, ISSN 0178-2789, Dec. 2009. **impact factor 1.06.**

Books and book chapters

[06] Cosmin Ancuti, **Codruta O. Ancuti** and P. Bekaert. "Single Image Restoration of Outdoor Scenes". **Book chapter in Lecture Notes in Computer Science, Volume 6855, pp 245-252.** Springer, 2011, **ISBN 978-3-642-23677-8**, Springer-Verlag Berlin Heidelberg 2010

[07] **Codruta O. Ancuti**, Cosmin Ancuti, Chris Hermans and Philippe Bekaert. "A Fast Semi-Inverse Approach to Detect and Remove the Haze from a Single Image". **Book chapter in Computer Vision – ACCV 2010, (LNCS), Volume 6493, pp 501-514,** Springer, 2011, **ISBN 978-3-642-19308-8**, Springer-Verlag Berlin Heidelberg 2011

[08] **Codruta O. Ancuti**, Cosmin Ancuti, Chris Hermans and Philippe Bekaert. "Image and Video Decolorization by Fusion". **Book chapter in Computer Vision – ACCV 2010, (LNCS), Volume 6492, pp 79-92,** Springer, 2011, **ISBN 978-3-642-19314-9**, Springer-Verlag Berlin Heidelberg 2011.

[09] Cosmin Ancuti, **Codruta O. Ancuti**, "Processing Images by Local Information", **ISBN, 978-973-108-431-2**, ArTPress, 2011.

Conference Proceedings

ISI Thompson Conferences

[10] Cosmin Ancuti, **Codruta O. Ancuti**, Christophe De Vleeschouwer and Alan C. Bovik , "*Night-time dehazing by fusion.*". In Proceedings of IEEE International Conference on Image Processing (IEEE ICIP), ISBN: 978-1-4673-9961-6, ISSN: 2381-8549, Phoenix, USA, Sept., 2016.

[11] Cosmin Ancuti, **Codruta O. Ancuti** and Christophe De Vleeschouwer, "*D-HAZY: A dataset to evaluate quantitatively dehazing algorithms*". In Proceedings of IEEE International Conference on Image Processing (IEEE ICIP), ISBN: 978-1-4673-9961-6, ISSN: 2381-8549, Phoenix, USA, Sept., 2016.

[12] Cosmin Ancuti and **Codruta O. Ancuti**, "*Laplacian-guided image decolorization*". In Proceedings of IEEE International Conference on Image Processing (IEEE ICIP), ISBN: 978-1-4673-9961-6, ISSN: 2381-8549, Phoenix, USA, Sept., 2016.

[13] Cosmin Ancuti, **Codruta O. Ancuti**, Christophe De Vleeschouwer and Alan C. Bovik , "*Multi-scale Underwater Descattering*". In Proceedings of International Conference on Pattern Recognition (ICPR 2016), Cancun, Mexico, Dec., 2016.

[14] **Codruta O. Ancuti**, " Variational Segmentation under Variable Illumination Conditions". IEEE International Symposium ELMAR (IEEE ELMAR 2016), Zadar, Croatia, Sept., 2016.

[15] Cosmin Ancuti, **Codruta O. Ancuti**, and Philippe Bekaert, "Enhancing Underwater Images and Videos by Fusion", In Proc. IEEE Computer Vision and Pattern Recognition (IEEE CVPR), Providence, USA, 16-21 June 2012, **ISBN** 978-1-4673-1228-8.

[16] Cosmin Ancuti , **Codruta O. Ancuti** and Philippe Bekaert. "Fusion-based Restoration of the Underwater Images". IEEE International Conference on Image Processing (IEEE ICIP), Brussels, Belgium, Sept, 2011, **ISBN**: 978-1-4577-1303-3

[17] Mark Gerrits, Bert de Decker, Cosmin Ancuti, **Codruta O. Ancuti**, Tom Haber, and Philippe Bekaert, "Stroke-based Creation of Depth Maps". IEEE International Conference on Multimedia & Expo, (IEEE ICME), Barcelona, Spain, July, 2011, ISBN: 978-1-61284-350-6 (**top 15% accepted papers**).

[18] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, "Enhancing by Saliency-guided Decolorization", In Proc. IEEE Computer Vision and Pattern Recognition (IEEE CVPR), Colorado Springs, USA, June, 2011, (**22% rate of acceptance**), ISBN: 978-1-4577-0395-9

[19] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert. "Decolorizing Images for Robust Matching". In Proceedings of 17th IEEE International Conference on Image Processing (IEEE ICIP), pg. 149- 153 , ISBN: 978-1-4244-7993-1 ISSN: 1522-4880, Hong Kong ,September, 2010. (**oral -20% rate of acceptance**).

[20] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert. " Effective Single Image Dehazing by Fusion". In Proceedings of 17th IEEE International Conference on Image Processing (IEEE ICIP), pg. 3541- 3545 , ISBN: 978-1-4244-7993-1 ISSN: 1522-4880, Hong Kong ,Sep., 2010.

[21] Cosmin Ancuti, **Codruta O. Ancuti** and Philippe Bekaert. "Video Super-Resolution Using High Quality Photographs". In Proceedings of 35th IEEE International Conference on Acoustics, Speech, and Signal Processing (IEEE ICASSP), pg. 862 - 865 , ISBN: 978-1-4244-4295-9, ISSN 1520-6149, Dallas, USA, 2010. (**oral - 20% rate of acceptance**).

[22] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert. "CC-SIFT: Exploiting Chromatic Contrast for Wide-Baseline Matching". In Proceedings of 35th IEEE International Conference on Acoustics, Speech, and Signal Processing (IEEE ICASSP), pg. 938 - 941 , ISBN: 978-1-4244-4295-9, ISSN 1520-6149, Dallas, USA, 2010.

[23] Cosmin Ancuti , **Codruta O. Ancuti** and Philippe Bekaert. A Patch-Based Approach to Restore Videos Using Additional Stills ". In Proceedings of IEEE ELMAR , ISBN: 978-1-4244-6371-8, pg 143-146, Zadar, Croatia, 2010.

[24] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert. " Guiding visual attention in grayscale images for auditory substitution systems ". In Proceedings of IEEE ELMAR , ISBN: 978-1-4244-6371-8, pg 139-142, Zadar, Croatia, 2010

[25] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, "ColEnViSon: Color Enhanced Visual Sonifier. A Polyphonic Audio Texture and Salient Scene Analysis.". In Proceedings of International Conference on Computer Vision Theory and Applications (VISAPP), Lisbon, Portugal, February 5-8, 2009.

[26] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, "Active Systems Decisions Enhancement Using User Model in Pervasive Computing Enviroments" In Proceedings of IEEE International Conference on Pervasive Services, July 15-20 , 2007. ISBN: 1-4244-1325-7

[27] **Codruta O. Ancuti**, Michele Fumarola, Steven Palmaers, Kris Luyten, Karin Coninx, General Adaptable Services Manager for Pervasive Computing Environments, Proc. of IEEE ITI 2007. ISBN: 953-7138-09-7

BDI Conferences

[28] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, "Enhancing Underwater Images by Fusion". In Conference Abstracts and Applications ACM SIGGRAPH , Vancouver, Canada, August, 2011.

[29] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, " Layer-based Single Image Dehazing by Per-Pixel Haze Detection ". In Conference Abstracts and Applications ACM SIGGRAPH ASIA, Seoul, Korea, December, 2010.

[30] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert "Fusion-based Image And Video Decolorization", In Conference Abstracts and Applications ACM SIGGRAPH ASIA, Seoul, Korea, December, 2010.

[31] Cosmin Ancuti, **Codruta O. Ancuti** and Philippe Bekaert, "A Framework to Improve Matching Results of Widely Separated Views". In Proceedings of International Conference on Computer Vision Theory and Applications (VISAPP), Vol. 1, pg. 474-480, ISBN: 978-989-674-028-3 , Angers, France, May 17-21, 2010.

[32] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, " Robust Grayscale Conversion for Vision-Substitution Systems". In Proceedings of International Conference on Computer Vision Theory and Applications (VISAPP), Vol. 1, pg. 130-136, ISBN: 978-989-674-028-3 , Angers, France, May 17-21, 2010.

[33] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert, "Preserving visual saliency in image to sound substitution systems". In Proceedings of SPIE Human Vision and Electronic Imaging (HVEI 2009), San Jose, USA, January 19-21 , 2009.

[34] **Codruta O. Ancuti**, Cosmin Ancuti and Philippe Bekaert "An Effective Grayscale Conversion with Applications to Image Enhancement", In Conference Abstracts and Applications ACM SIGGRAPH ASIA, Yokohama, Japan, December, 2009.

[35] Cosmin Ancuti, **Codruta O. Ancuti** and Philippe Bekaert, "Image Deblurring by Corresponding Regions". In Conference Abstracts and Applications ACM SIGGRAPH, Los Angeles, USA, August 11-15, 2008.

[36] Cosmin Ancuti, **Codruta O. Ancuti** and Philippe Bekaert, "Robust matching of images across large viewpoint changes". In Proceedings of Visualization, Imaging and Image Processing (VIIP 2008), Palma de Mallorca, Spain, September 1-3 , 2008.