



Curriculum vitae Europass

Personal information

First name, Surname(s) **Codruta Orniana, Ancuți**

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Nationality romanian

Date of birth

Work experience

2015 - 2017 **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 - 2017 ▪ **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

[07] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer and Philippe Bekaert "Color Balance and Fusion for Underwater Image Enhancement". **IEEE Transactions on Image Processing**, Jan, 2018. **impact factor 5.071 (Q1)**.

[06] Cosmin Ancuti, **Codruta O. Ancuti**, Christophe De Vleeschouwer and Mateu Sbert "Decolorizing by Fusion". **IEEE ACCESS** The Mutidisciplinary Open Access Journal, October, 2018. **impact factor 3.557(Q1)**.

[05] **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 5.071 (Q1)**.

[04] **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 5.071 (Q1)**.

[03] 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 2.892 (Q1)**.

[02] 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 2.046 (Q1)**.

[01] 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

[07]**Codruta O. Ancuti**, " Computer Vision in Python pentru Raspberry Pi", ArTPress, 2018, **ISBN 978-973-108-883-9**

[06] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer, Radu Timofte "I-HAZE: a dehazing benchmark with real hazy and haze-free indoor images", International Conference on Advanced Concepts for Intelligent Vision Systems, **LNCS, Springer**, Poitiers, France, 24-27 Sept 2018

[05] **Codruta O. Ancuti**, S. Mischie, Cosmin Ancuti, Gabriel Gasparesc: " Raspberry Pi- Notiuni introductive si programare in Python", ArTPress, 2017, **ISBN 978-973-108-777-1**

[04] 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

[03] **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

[02] **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.

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

Conference Proceedings

ISI Thompson Conferences

- [26] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer, Radu Timofte "I-HAZE: a dehazing benchmark with real hazy and haze-free indoor images", International Conference on Advanced Concepts for Intelligent Vision Systems, LNCS, Springer, Poitiers, France, 24-27 Sept 2018
- [25] Cosmin Ancuti, **Codruta O. Ancuti**, H. Balta "Effective Local Backscattering Estimation for Underwater Image Enhancement", OCEANS 2018 MTS/IEEE Charleston, US, Oct 2018
- [24] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer, Radu Timofte "O-HAZE: a dehazing benchmark with real hazy and haze-free outdoor images", 2018 NTIRE, IEEE CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION WORKSHOPS (CVPRW), Salt Lake City, US 2018
- [22] Cosmin Ancuti, **Codruta O. Ancuti**, Radu Timofte et al. "NTIRE 2018 Challenge on Image Dehazing: Methods and Results", 2018 NTIRE, IEEE CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION WORKSHOPS (CVPRW), Salt Lake City, US 2018
- [23] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer, "EFFECTIVE LOCAL AIRLIGHT ESTIMATION FOR IMAGE DEHAZING", 2018 25TH IEEE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING (ICIP), Athens, Greece, 2018
- [22] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer, Rafa Garcia and L. Neumann, "COLOR TRANSFER FOR UNDERWATER DEHAZING AND DEPTH ESTIMATION", 2017 24TH IEEE INTERNATIONAL CONFERENCE ON IMAGE PROCESSING (ICIP), Beijing, China, 2017
- [21] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer, Rafa Garcia, "Locally Adaptive Color Correction for Underwater Image Dehazing and Matching", 2017 NTIRE, IEEE CONFERENCE ON COMPUTER VISION AND PATTERN RECOGNITION WORKSHOPS (CVPRW), Honolulu, US 2017
- [20] 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.
- [19] 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.
- [18] 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.
- [17] 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.
- [16] **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.
- [14] 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

[13] 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**).

[12] **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

[11] **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**).

[10] **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.

[09] 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**).

[08] **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.

[07] 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.

[06] 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.

[05] **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.

[04] **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

[03] **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.

[02] **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

[01] **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

[08] **Codruta O. Ancuti**, Cosmin Ancuti, Christophe De Vleeschouwer,R. Garcia "A semi-global color correction for underwater image restoration", In Conference Abstracts and Applications ACM SIGGRAPH ,Los Angeles, US, August, 2017.

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

- [06] **Coduta 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.
- [05] **Coduta 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.
- [04] **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.
- [03] **Coduta 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.
- [02] Cosmin Ancuti, **Coduta O. Ancuti** and Philippe Bekaert, "Image Deblurring by Corresponding Regions". In Conference Abstracts and Applications ACM SIGGRAPH, Los Angeles, USA, August 11-15, 2008.
- [01] 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.