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Curriculum Vitae (Updated 29-11-2017)

Jonathan Cepeda-Negrete, PhD

Website: www.campusirapuatosalamanca.ugto.mx/profesores/cepeda

Professional Experience

- Aug 2017 – Present* **Full-time professor (Associate C)**
Universidad de Guanajuato
Campus Irapuato-Salamanca
Division de Ciencias de la Vida (DICIVA)
Irapuato, Guanajuato, Mexico.
- Sep 2014 – Jul 2017* **Teacher by subject**
Universidad de Guanajuato
Campus Irapuato-Salamanca
Division de Ingenierías (DICIS)
Salamanca, Guanajuato, Mexico.

Education

- Jan 2013 – Aug 2016* **PhD in electrical engineering**
Universidad de Guanajuato DICIS,
Salamanca, Guanajuato, Mexico
- Jan 2011 – Dec 2012* **MEng in electrical**
Universidad de Guanajuato DICIS,
Salamanca, Guanajuato, Mexico

Oct 2005 – Feb 2011 **BEng in communications and electronics**

Universidad de Guanajuato DICIS,
Salamanca, Guanajuato, Mexico

Thesis

Jonathan Cepeda-Negrete: *Dark image enhancement using perceptual color spaces*. 08/2016,

Degree: PhD in electrical engineering,

Supervisor: Raul E. Sanchez-Yanez

Jonathan Cepeda-Negrete: *Sistema experto para la selección de algoritmos de constancia de color*.

12/2012, Degree: MEng in electrical,

Supervisor: Raul E. Sanchez-Yanez

Jonathan Cepeda-Negrete: *Modelado de sistemas difusos de múltiples entradas y salidas*. 02/2011,

Degree: BEng in communications and electronics,

Supervisor: Raul E. Sanchez-Yanez

Research Experience

May – Aug 2015 **Research Visit at University of Amsterdam.**

University of Amsterdam, Faculty of Science, Informatics Institute (Collaborative Project: Intrinsic Image Decomposition in RGB-D by Deep Learning)

QS World University Ranking 2015, Placed #50

Supervisor: Theo Gevers, h-index 46 (Google Scholar).

Awards & Grants

Nov 2016 Award: Highest honor awarded for academic excellence ranking in complete Doctoral Program (1st place). PhD in Electrical Engineering program

Nov 2015 Award: Highest honor awarded for academic excellence ranking in 2015 (1st place). PhD in Electrical Engineering program

May – Jul 2015 Grant: CONACYT MIXTA No. 388681/290936.

Dec 2014 The best student member of LaViRIA group 2014.

Jan 2013 – Dec 2016 Grant: CONACYT PhD scholarship No. 388681/254884.

Dec 2012 Award: Laureate Master Thesis.

Jan 2011- Dec 2012 Grant: CONACYT master scholarship No. 388681/290611.

Nov 2007 Award: Highest honor awarded for academic excellence ranking (1st place).
Engineering degree in Communications and Electronics

Skills & Activities

Skills Computer Vision, Image Enhancement, Color Constancy, Digital Image Processing, Classification, Algorithms, Fuzzy Logic, Pattern Recognition, Signal, Image and Video Processing, Feature Extraction, Computer Graphics

Languages English (Toefl ITP 530 score) (B2 CEFR, EFKA test) in 2016,
Spanish (Native);

Programming C, C++, MATLAB, Latex, Java, Processing.

Languages

Interests Research and Teaching
Programming

Publications in JCR Journals

Rocio A. Lizarraga-Morales, Jonathan Cepeda-Negrete, Fernando E. Correa-Tome and Raul E. Sanchez-Yanez: *Textile defect detection using local binary features in a rough-set-based approach*. (submitted to) **Textile Research Journal**. (October 2017).

Jonathan Cepeda-Negrete, Raul E. Sanchez-Yanez, Fernando E. Correa-Tome and Rocio A. Lizarraga-Morales: *Dark image enhancement using perceptual color transfer*. **IEEE Access (IF 3.24)**, Vol 5, pp. 1 (Early access), ISSN 2169-3536 <http://dx.doi.org/10.1109/ACCESS.2017.2763898>

Elisee Ilunga-Mbuyamba, Jonathan Cepeda-Negrete, J. Gabriel Avina-Cervantes, Mario A. Ibarra-Manzano and Claire Chalopin: *Automatic selection of localized region-based active contour models using image content analysis for brain tumor segmentation*. **Computer in Biology and Medicine (IF 1.521)**, Vol. 91 (1-December), pp. 69-79, ISSN 0010-4825 <https://doi.org/10.1016/j.combiomed.2017.10.003>

Victor H. Jimenez-Arredondo, Jonathan Cepeda-Negrete and Raul E. Sanchez-Yanez: *Multilevel color transfer on images for providing an artistic sight of the world*. **IEEE Access (IF 3.24)**, Vol 5, pp. 15390-15399, ISSN 2169-3536 <http://dx.doi.org/10.1109/ACCESS.2017.2732359>

Jonathan Cepeda-Negrete, Raul E. Sanchez-Yanez: *Automatic selection of color constancy algorithms for dark image enhancement by fuzzy rule-based reasoning*. **Applied Soft Computing (IF 3.54)**. Volume 28, March 2015, pp 1-10, ISSN 1568-4946, <http://dx.doi.org/10.1016/j.asoc.2014.11.034>

Publications in peer-review Journals

Fernando J. Navarro-Avila, Jonathan Cepeda-Negrete, and Raul E. Sanchez-Yanez: *Toward the Labeled Segmentation of Natural Images Using Rough-Set Rules*. **Lecture Notes in Computer Science**. Volume 9703, 2016, pp.74-83. <http://dx.doi.org/10.1007/978-3-319-39393-8>.

Jonathan Cepeda-Negrete, Raul E. Sanchez-Yanez: *Gray-World Assumption on Perceptual Color Spaces*. **Lecture Notes in Computer Science**. Volume 8333, 2013, pp. 493-504. http://dx.doi.org/10.1007/978-3-642-53842-1_42.

Jonathan Cepeda-Negrete, Raul E. Sanchez-Yanez: *Experiments on the White Patch Retinex in RGB and CIELAB Color Spaces*. **Acta Universitaria**. Volume 22(NE-1), 2012, pp. 21-26. <http://dx.doi.org/10.15174/au.2012.337>

Publications in Proceedings

Jonathan Cepeda-Negrete, Raul E Sanchez-Yanez: *Experiments on image enhancement for night vision and surveillance*. **1st International Workshop on interactive and spatial computing**. December 2015. Dallas, Texas.

Alberto Lopez-Alanis, Raul E Sanchez-Yanez and Jonathan Cepeda-Negrete: *Notes on visual saliency detection*. **1st International Workshop on interactive and spatial computing**. December 2015. Dallas, Texas.

Jonathan Cepeda-Negrete, Raul E. Sanchez-Yanez: *Algoritmos de constancia de color para el mejoramiento de imágenes oscuras*. **V Congreso Internacional de la Ciencia de Sistemas**, pp. 15-20 , October 2013. Yuriria, Guanajuato.

Jonathan Cepeda-Negrete, Raul E Sanchez-Yanez: *Combining Color Constancy and Gamma Correction for Image Enhancement*. **2012 IEEE Ninth Electronics, Robotics and Automotive Mechanics Conference (CERMA)**, pp. 25-30, November 2012. Cuernavaca, Morelos. <http://dx.doi.org/10.1109/CERMA.2012.12>

Jonathan Cepeda-Negrete, Raul E Sanchez-Yanez: *Color Constancy Algorithms in Practice*. **First Robotics Summer Meeting (ROSSUM 2011)**. June 2011. Xalapa, Veracruz.

Teaching

- Visión por computadora (Computer Vision). Sep-Dec 2014. 4.5 hrs/week. Undergraduate level
- Fundamentos de los sistemas de información (Basic programming). Aug-Dec 2015. 4 hrs/week. Bachelor level.

- Fundamentos de los sistemas de información (Basic programming). Jan-Jun 2016. 4 hrs/week. Bachelor level.
- Fundamentos de los sistemas de información (Basic programming). Aug-Dec 2016. 4 hrs/week. Bachelor level.
- Cálculo Integral (Integral Calculus) Aug-Dec 2016. 4 hrs/week.
- Métodos Numéricos (Numeric Methods) Aug-Dec 2016. 4 hrs/week.
- Programación para Ingeniería (Programming for engineering) Aug-Dec 2016. 4 hrs/week.
- Geometría Computacional (Computer Graphics) Aug-Dec 2016. 4 hrs/week.
- Geometría Computacional (Two courses) (Computer Graphics) Jan-Jun 2017. 4 hrs/week.
- Programación para Ingeniería (Programming for engineering) Jan-Jun 2017. 4 hrs/week.
- Matemáticas para Artes en Propedeutico (Maths for arts) Jan-Jun 2017. 4 hrs/week.
- Cálculo Integral (Integral Calculus) Jun-Jul 2017. 20 hrs/week.
- Ecuaciones Diferenciales (Differential equations) Aug-Dec 2017. 4 hrs/week.
- Probabilidad y estadística (Probability and statistics) Aug-Dec 2017. 4hrs/week.

Other professional activities

- Member of the Cultural committee of the Campus Irapuato-Salamanca 2017-2018.
- Member of the organizing committee of "*Jornadas Digitales: Fronteras digitales*". UG DICIS 2017.
- Reviewer and judge of "Expo Emprendedor local 2017". Cecyte Guanajuato plantel Romita 2017.
- Member of the organizing committee of "*Foro: El futuro de la ingeniería mecánica agrícola en México*". UG DICIVA 2017.
- Member of the organizing committee of "*Jornadas Digitales: Señas de Identidad*". UG DICIS 2016.
- Reviewer of a research four papers of IEEE Access Journal.
- Reviewer of a research paper of IEEE Transactions on Image Processing (Aug 2016).
- Member of the organizing committee of the "*8th Mexican Conference on Pattern Recognition (MCPR 2016)*", 22-25 June 2016.
- Member of the "*Consejo Universitario de Campus*" Irapuato-Salamanca (UG), 2015-2016.
- Member of the "*Comisión Especial*" to the Campus Rector designation Irapuato-Salamanca (UG) 2016.
- Member of the organizing committee of "*2012 International Mexican Conference on Computer Science (ENC 2012)*".
- Reviewer of a research paper in Vol 22. (NE-1) of the Acta Universitaria journal.

Thesis, Supervisor

Bachelor

"Segmentación etiquetada de imágenes naturales usando reglas de conjuntos aproximativos",

José Fernando Navarro Avila, University of Guanajuato DICIS, Sep 2015.

"Evaluación automática de estéticas en imágenes",

Alejandra Rostro Gonzalez, University of Guanajuato DICIS, in progress.

Master

"Detección del ritmo cardiaco a partir del análisis de secuencias de imágenes",

Gesley Geyn Tarazona Guerrero, University of Guanajuato DICIS, Dec 2017.

Thesis, Reviewer

"Diseño de guitarra expandida como controlador de procesos digitales en tiempo real",

President of the committee in the exam of graduation. Pedro Herrera Delgado. Artes Digitales (May 2017).

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Vocal of the committee in the exam of graduation. Maria Ángeles . Artes Digitales (Dec 2017).

Lectures and talks

Invited

- "Herramientas tecnológicas en las artes digitales". División de Ingenierías CIS UG. 25 November 2017.
- "Processing como herramienta para ingenieros y artistas". Universidad Tecnológica de Salamanca (UTS). 25 October 2017.
- "Aplicaciones basadas en el procesamiento y análisis de imágenes por color". División de Ingenierías CIS UG. 12 October 2017.
- "Processing: Una facil y excelente herramienta en la ingeniería y las artes digitales". División de Ingenierías CIS UG. 12 October 2017.
- "Procesamiento de imágenes por color". División de Ciencias de la Vida CIS UG. 27 September 2017.
- "Inteligencia Computacional en el procesamiento de imágenes a color". Universidad Tecnológica de Salamanca (UTS). 23 October 2014.
- "Procesamiento y análisis de imágenes en la FIMEE". Centro de Estudios de Salamanca (CETESA). 18 February 2014.
- "Ingeniería e Inteligencia". Universidad de La Salle Bajío. Campus Salamanca, December 2011.

- "Física". 1er Feria de las Ciencias en la Escuela Particular Incorporada "RIAMA" A.C, 2006.

Conferences

- "Toward the Labeled Segmentation of Natural Images Using Rough-Set Rules", (English) Mexican Conference on Pattern Recognition (MCPR 2016), Guanajuato, Gto., June 2016.
- "Procesamiento y análisis de imágenes por color", Seminarios de posgrados en ingeniería eléctrica, Salamanca, Gto., December 2015.
- "An overview of night vision in digital image processing" 4th Congreso en proyectos de investigación de posgrado de ingeniería eléctrica, Salamanca, Gto., 22 November 2013.
- "Procesamiento de imágenes usando algoritmos de constancia de color y espacios perceptuales" 3th Congreso en proyectos de investigación de posgrado de ingeniería eléctrica, Salamanca, Gto., November 2013.
- "Gray-World assumption on perceptual color spaces", (English) VI Pacific-Rim Symposium on Images and Video Technology (PSIVT), Guanajuato, Gto., November 2013.
- "Algoritmos de constancia de color para el mejoramiento de imágenes oscuras", V Congreso Internacional de la ciencia de sistemas, Yuriria, Gto., October 2013.
- "Sistema experto para la selección de algoritmos de constancia de color", 1er Congreso en proyectos de investigación de posgrado de ingeniería eléctrica, Salamanca, Gto., October 2012.
- "Combining Color Constancy and Gamma Correction for Image Enhancement" (English), *In Proc. Ninth Electronics, Robotics and Automotive Mechanics CERMA 2012*, Cuernavaca, Morelos, November 2012.
- "Experiments on the White Patch Retinex in RGB and CIELAB Color Spaces", 2012 International Mexican Conference on Computer Science (ENC2012), Salamanca, Gto., March 2012.
- "Color Constancy in Practice", ROSSUM, Xalapa, Veracruz, June 2011.