

Jonathan Rafael Patiño López

Guanajuato University

- D.C.NyE - Mathematics Department
 - Jonathan Rafael-Patiño • jonhrafe@cimat.mx
 - Computer Science student strongly interested in Medical Imaging, Computer Vision and Parallel Programming.
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Education

- **Guanajuato University** **Guanajuato, Mexico**
Mathematics Department B.S. Computer Science *2008 – 2013*
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Foreign Languages

Spanish (Native Speaker)

English (fluent)

French (beginner)

Computing Skills (years of experience)

Languages: C(4), C++(4), MATLAB (3), R(1), Java(1), PHP(1), HTML(2), MySQL(1), Python(beginner), Processing (2).

Computing platforms: Windows, Unix.

Applications: L^AT_EX, Image processing softwares, Microsoft Office(Word, PowerPoint, Excel, ...), Medical Image Data Analysis Tools(FSL, ITK-Snap, Camino Software,...)

C/C++ libraries: OpenGL(2), OpenCV(2), CUDA(1), QT(2), Cinder(1).

Areas: Computer Vision, Image Processing, Parallel Computing, Computer Graphics.

Undergraduate work experience and realizations

- **Centre of Mathematics Investigation (CIMAT)** **Guanajuato, Gto**
Software Developer *2011*

- Development of a visual detector for searching of products in shelves using a large product database and identification of price labels.

Software Developer *2010*

- Development of database of medical images in MySQL and a user's graphical interface for remote access and information management in PHP.

- **University of Guanajuato (Mathematics Department)** **Guanajuato, Gto**
Teaching experience *2010-2012*

- Collaboration in the Guanajuato's Informatic Olympiad (Coaching).

Teaching experience *2010*

- Professor in the First State Training Program in Computer Science for High-School teachers (University of Guanajuato).

- **Independent Projects**

Software Developer - "Artist" *2012*

- Presentation of the work "Sinpasis Tripartita" in the 40th International Cervantino Festival.

Participation in conferences

2010

- Campus Party Speech in Game Development
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Academic Projects

Robotic Project: "Inverse Kinematics for the interactive posture control of articulated figures."

Parallel Programming: "Robust Spatial Regularization for the Optical Flow Computation in Transparent sequences using CUDA."

Computer Graphics: "Metaballs and Isosurfaces with OpenGL."

Robotic Project: "Visibility Graph for Path Planning using a Quad-Trees."

Research Experience and Publications

- *Mexican International Conference on Artificial Intelligence*

2011

- *Jonathan Rafael-Patiño, Alonso Ramirez-Manzanares and Mariano Rivera.* Estimation of anisotropic water diffusion indexes on axon bundle crossings

Scientific journal University of Guanajuato

2010

- *Alonso Ramírez-Manzanares, Jonathan Rafael-Patiño y Manzar Ashtari.* Denoising of brain DW-MR data by single and multiple diffusion kernels. Acta Universitaria Volume 20, Number 3 - September-December 2010

2010 IEEE Electronics, Robotics and Automotive Mechanics Conference

2010

- *Alonso Ramírez-Manzanares, Jonathan Rafael-Patiño y Manzar Ashtari.* "Single and Multi Diffusion-Tensor Based Kernels for Anisotropic Filtering of Brain DW-MR Images," CERMA, p.399-404.

Guanajuato Gto, November 2011