

CONTACT
INFORMATION

Physical Engineer
Faculty of Engineering
[Universidad Tecnológica de Pereira - UTP](#)
M. Eng. Masters in Electrical Engineering -
Digital Signal Processing
[Faculty of Engineering](#)
Universidad Nacional Autónoma de México -
UNAM
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RESEARCH
INTERESTS

Biomedical signal and image processing. Especially, related to the development of software tools for reconstruction of tomographic images. In recent years, during part of the master's degree and this first year of the doctorate, I have had an approach to the reconstruction problem in data from "Optoacoustic Tomography" and "Single Particle Analysis - Crio-EM" techniques.

EDUCATION

Universidad Tecnológica de Pereira, Pereira, Colombia.

Physical Engineering, August 2010 GPA: 4.5 (5.0 scale)

- Title: *Methodology design for texture characterization in images of firearm triggered bullets for automatic matching.*
- Qualification: *Outstanding.*

Universidad Nacional Autónoma de México, Mexico City.

M. Eng. Electrical Engineering, July 2017 GPA: 9.67 (10.0 scale)

- Title: *Mouse cryo-slices segmentation using fuzzy logic principles.*
- Qualification: *Approved with Honorable Mention.*

HARDWARE AND
SOFTWARE
SKILLS

Computer Programming:

- C, C++, Qt, MATLAB, python .

Productivity Applications:

- \LaTeX , LyX, MS Office package, Open office and others.

Operating Systems:

- Linux*, Mac-OS and Windows.

HONOR AND
AWARDS

Universidad Nacional Autónoma de México: Mention *Distinguished student*, 2017.

Universidad Tecnológica de Pereira: Mention *Distinguished student*, 2010.

Universidad Tecnológica de Pereira: Scholarship *Jorge Roa Martínez*, 2010.

RESEARCH

Projects:

- *Methodology design for texture characterization in images of firearm triggered bullets for automatic matching.*
Supported by the VI investigation projects announcement of Universidad Tecnológica de Pereira.
- *High performance computing strategies for the SISCOM system in the detection of epileptogenic foci.*
Supported by the “Young researchers and innovators” program 2010 - Colciencias (Colombian Department of Science, Technology and Innovation).
- *High performance computing strategies to perform curvilinear reformatting and voxel-based morphometry to detect cortical dysplasias.*
Supported by the “Young researchers and innovators” program 2011 - Colciencias (Colombian Department of Science, Technology and Innovation).

Research group member:

- “Research group on Physical Engineering (GIIF)” Recognized by the Colombian Department of Science, Technology and Innovation (COLCIENCIAS).
Membership: **January 2006 - September 2010.**
- “Neurociencias del Risaralda” Recognized by the Colombian Department of Science, Technology and Innovation (COLCIENCIAS).
Membership: **Septiembre 2010 - Junio 2015 .**
- “Grupo de Visualización, Imágenes, Señales y Patrones (VISP)” Recognized by the National Council for Science and Technology of Mexico (CONACYT).
Miembro: **Julio 2016 - Actualidad .**

PUBLICATIONS

- [1] J. Méndez, J. H. Rivera, J. A. Soto. *Extracción de características de textura para cotejo de proyectiles en balística.* Scientia et Technica, Vol 1 (44). 2010. Publicado.
- [2] J. Méndez, J. H. Rivera, J. A. Soto. *Reconocimiento de texturas en imágenes de proyectiles para identificación automática de armas.* Ciencia e Ingeniería Neogranadina Vol 22 (1) . 2012. Publicado.
- [3] Diseño de metodología para caracterizar imágenes de proyectiles. J. Méndez y J. H. Rivera, Editorial Académica Española, año 2014. ISBN 978-3-659-08438-6.

EVENTS

PARTICIPATION

memoirs

- J. Méndez, J. H. Rivera, W. Serna, J. P. Trujillo. *Ictal-interictal SPECT subtraction co-registered to MRI in epilepsy foci detection.* VI Congreso internacional de Ingeniería Física, Mexico D. F., 2012.
- W. Serna, J. P. Trujillo, J. Méndez, J. H. Rivera. *Principios de básicos de la generación de imágenes por tensores de difusión.* VI Congreso internacional de Ingeniería Física, Mexico D. F., 2012.

Congress

- XXIII Congreso Nacional de Física, Colombia - 2009.
- VI Congreso Internacional de Ingeniería Física, México - 2012.

WORK EXPERIENCE

Universidad Católica de Pereira, Pereira-Colombia.

Teacher.

August 2014 - March 2015

- Mathematics IV - Basic Sciences Faculty (2014-2)
- Calculus I - Basic Sciences Faculty (2014-2)
- Linear Algebra - Basic Sciences Faculty (2014-2)

Universidad tecnológica de Pereira, Pereira-Colombia.

Teacher.

August 2013 - March 2015

- Physics I - Basic Sciences Faculty (2013-2)
- Biomedical Instrumentation - Faculty of Engineering (2013-2)
- Physics III - Basic Sciences Faculty (2014-1)
- Biomedical Instrumentation - Faculty of Engineering (2014-1)
- Physics III - Basic Sciences Faculty (2014-2)

Universidad de Caldas, Manizales-Colombia.

Teacher.

August 2010 - December 2010

- Physics I - Faculty of Engineering.
- Thermodynamics - Agronomy program.
- Physics I - II (lab). Faculty of Engineering.

REFERENCES

M. Sc. Hugo Armado Gallego Becerra

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M. Sc. Ricardo López

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