

MARTIN ROA VILLESCAS

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EDUCATION

Ph.D. candidate (ongoing)

Feb 2018 - present

Eindhoven University of Technology (TU/e), The Netherlands

5-year Ph.D. Educational Program

M.Sc. in Embedded Systems

Sep 2011 - Aug 2013

Eindhoven University of Technology (TU/e), The Netherlands

– GPA: 8/10

– Thesis: 3D Face Reconstruction using Structured Light on an ARM-based Hand-held Device

B.Sc in Electronic Engineering

Aug 2005 - Jul 2010

Universidad Nacional de Colombia (UNAL), Sede Manizales

– GPA: 4.6/5.0

– Thesis: Design and implementation of a classifier of common bird species at the Rio Blanco reserve (Manizales, Colombia) on a mobile device

EXPERIENCE

University Teacher

Nov 2020 - present

Eindhoven University of Technology (TU/e), The Netherlands

Courses: Autonomous Vehicles (5AID0), Embedded Visual Control (5LIA0)

Teaching Assistant

Nov 2018 - present

Eindhoven University of Technology (TU/e), The Netherlands

Courses: Computation I (5ELA0), Intelligent Architectures (5LIL0), Embedded Systems Laboratory (5LIB0)

Embedded Systems Designer

Nov 2013 - Jan 2018

Philips Research, Eindhoven, The Netherlands

Design, implementation, and documentation of embedded software/electronics

Research Assistant

Aug 2009 - Nov 2009

Universidad Nacional de Colombia (UNAL), Sede Manizales

Project: Multiple classifier systems for the automatic recognition of seismic events at the Cerro Machín-Cerro Bravo volcanic complex

Teaching Assistant

Aug 2008 - Jun 2009

Universidad Nacional de Colombia (UNAL), Sede Manizales

Courses: Analog Electronics I, Electronic Design

HONORS AND DISTINCTIONS

Huygens Scholarship

Sep 2011 - Aug 2013

Dutch Ministry of Education, Culture and Science

Full M.Sc. scholarship at Eindhoven University of Technology (TU/e)

Best GPA

Aug 2005 - Jul 2010

UNAL, Sede Manizales

Best GPA (4.6/5.0) in the B.Sc. in Electronic Engineering (class 2005-2010)

PAES Scholarship*Aug 2005 – Jul 2010*

UNAL, Sede Manizales

Full B.Sc. scholarship at UNAL, Sede Manizales

National Robot Olympics*Sep 2009*

Universidad Pontificia Bolivariana, Sede Medellín

First place in the line-follower category

UNAL Line Follower Robot Contest*May 2009*

UNAL, Sede Manizales

First place

PUBLICATIONS

- **M. R. Villegas, P. W. A. Wijnings, S. Stuijk and H. Corporaal**, “*Partial Evaluation in Junction Trees*,” in 2022 25th Euromicro Conference on Digital System Design (DSD), Maspalomas, Spain, 2022, pp. 429-437, doi: 10.1109/DSD57027.2022.00064.
- **M. Roa Villegas, B. de Vries, S. Stuijk, and H. Corporaal**, “*Real-time Audio Processing for Hearing Aids using a Model-based Bayesian Inference Framework*” in Proceedings of the 23th International Workshop on Software and Compilers for Embedded Systems (SCOPE ’20). Association for Computing Machinery, New York, NY, USA, 82–85, 2020.
<https://doi.org/10.1145/3378678.3397528>
- **B. Ergül, T. van de Laar, M. Koudahl, M. Roa Villegas, and B. de Vries**, “*Learning Where to Park*”. Poster session presented at 1st International Workshop on Active Inference (IWAI 2020), Ghent, Belgium.
<https://biaslab.github.io/pdf/iwai2020/learning-where-to-park.pdf>
- **M. Roa Villegas, F. van Heesch, and G. de Haan**, “*3D Face Reconstruction using Structured Light on a Hand-held Device*”. Master’s Thesis, Eindhoven University of Technology, Eindhoven, The Netherlands, August 2013.
<https://pure.tue.nl/ws/files/46965337/777871-1.pdf>; 3D
- **M. Roa Villegas and M. Orozco Alzate**, “*Bird in the Hand: An Electronic Field Guide App for Bird Watchers*,” in IEEE Potentials, vol. 31, no. 2, pp. 8-14, March-April 2012.
<http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6169888&isnumber=6169882>

LANGUAGES

- **Spanish:** Native
- **English:** Fluent
- **Dutch:** Fluent

REFERENCES

Carlos Enrique Ruiz

Professor Emeritus, Honorary and Ad Honorem

UNAL, Sede Manizales

Carrera 17 No. 71-87

Manizales (Caldas), Colombia

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Full Professor

UNAL, Sede Manizales

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