ANGEL JOSUE VALENCIA

contact@angelvalencia.me
https://angelvalencia.me

EDUCATION

University of Ottawa, Ottawa, ON, Canada *Sep 2020 - Present*
Ph.D. in Electrical & Computer Engineering
Advisor: Pierre Payeur

University of Ottawa, Ottawa, ON, Canada *Jan 2018 - June 2020*
M.A.Sc. in Electrical & Computer Engineering
Advisor: Pierre Payeur

Escuela Superior Politécnica del Litoral, Guayaquil, Ecuador *May 2011 - Nov 2016*
B.Eng. in Electronics & Automation
Advisor: Douglas Plaza Guingla

EXPERIENCE

SMART Lab, uOttawa *Sep 2020 - Present*
Graduate Research Assistant *Canada*

FIEC, ESPOL *Apr 2017 - Jan 2018*
Laboratory Instructor *Ecuador*

CVR Lab, ESPOL *Jan 2016 - Jan 2017*
Undergraduate Research Assistant *Ecuador*

TEACHING

University of Ottawa

- Graduate TA, CEG4158: Computer Control in Robotics *Fall 2018-2020*
- Graduate TA, ELG5163: Machine Vision *Winter 2019*

Escuela Superior Politécnica del Litoral

- Undergraduate TA, FIEC01800: Electrical Networks Laboratory *Fall 2013-2015*
- Undergraduate TA, FIEC00190: Electronics II *Fall 2014*
- Undergraduate TA, FIEC05538: Industrial Instrumentation *Winter 2016*

TECHNICAL SKILLS

Computer Languages	C/C++, Python, Matlab/Octave, CUDA, UNIX Shell, LaTeX
Operating Systems	ROS, Ubuntu, Arch Linux, Windows
Libraries	OpenCV, Open3D, PCL, SciPy, PyTorch
Tools	Vim, Git

SCHOLARSHIPS & AWARDS

CALDO/SENESCYT Master Scholar *2018-2020*
uOttawa International Admission Scholar *2020-2024*

PUBLICATIONS

Conferences

- **A. J. Valencia**, F. Nadon, P. Payeur, "Toward Real-Time 3D Shape Tracking of Deformable Objects for Robotic Manipulation and Shape Control," IEEE SENSORS, 2019.
- D. Plaza Guingla, R. M. Idrovo, **Angel J. Valencia**, C. Salazar Lopez, "Enhancing the Performance of the Particle Filtering Optimization Algorithm for the Tuning of PID Controllers", International Conference on Control, Mechatronics and Automation (ICCMA), 2017.
- **A. J. Valencia**, R. M. Idrovo, A. D. Sappa, D. Plaza Guingla, D. Ochoa, "A 3D vision based approach for optimal grasp of vacuum grippers", IEEE International Workshop of Electronics, Control, Measurement, Signals and their application to Mechatronics (ECMSM), 2017.

Journals

- **A. J. Valencia**, P. Payeur, "Combining Self-Organizing and Graph Neural Networks for Modeling Deformable Objects in Robotic Manipulation," Front. Robot. AI, 2020.
- F. Nadon*, **A. J. Valencia***, P. Payeur, "Multi-modal Sensing and Robotic Manipulation of Non-Rigid Objects: A Survey," Robotics, 2018.

Thesis

- **A. J. Valencia**, "3D Shape Deformation Measurement and Dynamic Representation for Non-Rigid Objects under Manipulation," MASc Thesis, University of Ottawa, 2020.
- **A. J. Valencia***, R. M. Idrovo*, "Diseño e implementación de un sistema de reconocimiento y manipulación de frutas utilizando visión artificial y brazo robótico industrial," BEng Thesis, Espol, 2016.

POSTERS, TALKS & VIDEOS

Posters

- **A. J. Valencia**, R. M. Idrovo, A. D. Sappa, D. Plaza Guingla, "A Fruit Recognition and Handling System Using Artificial Vision and Industrial Robot", IEEE Ecuador Technical Chapter Meeting (ETCM), 2016.

GRADUATE COURSES

University of Ottawa

- ELG6184: Pattern Classification and Experiment Design — *Winter 2018*
- ELG5163: Machine Vision — *Winter 2018*
- CSI5138: Introduction to Deep Learning and Reinforcement Learning — *Fall 2018*
- ELG5161: Robotics: Control, Sensing and Intelligence — *Fall 2018*
- ELG5378: Image Processing and Image Communications — *Winter 2019*
- ELG5124: Virtual Environments — *Fall 2020*

LANGUAGES

English Fluent
Spanish Native

EXTRA-CURRICULAR ACTIVITIES

Attended IEEE ROSE 2019 Conference
Attended Ontario Summer School on HPC 2019