

ANGEL JOSUE VALENCIA

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

EDUCATION

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| University of Ottawa, Ottawa, ON, Canada
Ph.D. in Electrical & Computer Engineering
Advisor: Pierre Payeur | <i>Sep 2020 - Present</i> |
| University of Ottawa, Ottawa, ON, Canada
M.A.Sc. in Electrical & Computer Engineering
Advisor: Pierre Payeur | <i>Jan 2018 - June 2020</i> |
| Escuela Superior Politécnica del Litoral, Guayaquil, Ecuador
B.Eng. in Electronics & Automation
Advisor: Douglas Plaza Guingla | <i>May 2011 - Nov 2016</i> |

EXPERIENCE

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| FIEC-ESPOL
<i>Laboratory Instructor</i> | <i>Apr 2017 - Jan 2018</i>
<i>Ecuador</i> |
| <ul style="list-style-type: none">· Part of teaching staff at Electrical Networks Laboratory.· Maintain laboratory equipment and inventory management.· Redesign of existing experiments in collaboration with other teaching staff and faculty members.· Train teaching assistants overseeing students during lab sessions. | |
| CVR-ESPOL
<i>Research Assistant</i> | <i>Jan 2016 - Jan 2017</i>
<i>Ecuador</i> |
| <ul style="list-style-type: none">· Part of team at Vision and Robotics Center.· Design an industrial robotic vision system for packaging of tropical fruit.· Develop a vision based grasping point detection optimized for vacuum grippers. | |

TEACHING

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| University of Ottawa | |
| <ul style="list-style-type: none">· Graduate TA, CEG4158: Computer Control in Robotics· Graduate TA, ELG5163: Machine Vision | <i>Fall 2018-2020</i>
<i>Winter 2019</i> |
| Escuela Superior Politécnica del Litoral | |
| <ul style="list-style-type: none">· Undergraduate TA, FIEC01800: Electrical Networks Laboratory· Undergraduate TA, FIEC00190: Electronics II· Undergraduate TA, FIEC05538: Industrial Instrumentation | <i>Fall 2013-2015</i>
<i>Fall 2014</i>
<i>Winter 2016</i> |

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 (ICCM), 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

- 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

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| · ELG6184: Pattern Classification and Experiment Design | <i>Winter 2018</i> |
| · ELG5163: Machine Vision | <i>Winter 2018</i> |
| · CSI5138: Introduction to Deep Learning and Reinforcement Learning | <i>Fall 2018</i> |
| · ELG5161: Robotics: Control, Sensing and Intelligence | <i>Fall 2018</i> |
| · ELG5378: Image Processing and Image Communications | <i>Winter 2019</i> |
| · ELG5124: Virtual Environments | <i>Fall 2020</i> |

LANGUAGES

English	Fluent
Spanish	Native

EXTRA-CURRICULAR ACTIVITIES

Attended IEEE ROSE 2019 Conference

Attended Ontario Summer School on HPC 2019