

# CURRICULUM VITAE

– Clovis Peruchi Scotti –

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## PERSONAL DATA

Date of Birth: May, 26<sup>th</sup>, 1986  
Nationality: Italian  
Place of Birth: Cricima (SC), Brazil  
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## AREAS OF INTEREST

Embedded Systems, Robotics, Computer Vision, Mobile Apps, Artificial Intelligence, Linux, Qt, Autonomous Mobile Robots, Image Processing, Process Control.

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## EDUCATION

*March/2005 - March/2010 :*

**Graduation (Bachelor)** in Industrial Control and Automation Engineering<sup>1</sup> in the Federal University of Santa Catarina (UFSC), in Florianópolis, SC, Brazil.

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## PROFESSIONAL EXPERIENCE

*October/2010 – April/2011: Nokia Inc. & Vitamins Design - London, UK*

Nokia Push Snowboarding is an open source effort to produce a *Connected Snowboarding* experience, using smartphones and Bluetooth-connected Sensors to help visualizing and understanding snowboarding<sup>2</sup>. Developed the entirety of the N8/Symbian/Qt application and parts of the Arduino-related code.

*April/2010 – November/2010: I-Park Estacionamentos Inteligentes - Criciuma, Brazil*

I-Park is a young company that develops robotic parking buildings<sup>3</sup>. Responsible for the development of: vision systems that perform inspections on vehicles being parked (e.g. License Plate Recognition, Spatial Limits Checking) using OpenCV (Linux) and of a Deadlock prevention system (QNX).

*January/2010 – March/2010: IDEA Domotics - Ancona, Italy*

IDEA is a student *spin off* that develops domestic automation systems, commercial robotics and wireless sensors networks. Working on the development of a commercial mobile robotics software solution for localization, mapping, navigation and mission management.

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<sup>1</sup>[www.das.ufsc.br](http://www.das.ufsc.br)

<sup>2</sup>[www.pushsnowboarding.com](http://www.pushsnowboarding.com)

<sup>3</sup>[www.i-parksolutions.com](http://www.i-parksolutions.com)

*September/2009 – December/2009: **Universita Politecnica delle Marche - UNIVPM - Ancona, Italy***

Working in the development of an Autonomous Mobile Robot for autonomous inspection of household appliances in a reliability test laboratory.

*August/2006 – August/2009: **Industrial Intelligent Systems - S2i***

S2i<sup>4</sup> is a research group from the Automation and Systems Department of the Federal University of Santa Catarina (UFSC). Working in many different projects which include the development of a graphic environment for training, implementation and management of vision systems (the Harpia Project<sup>5</sup>), implementation and testing of known SLAM<sup>6</sup> techniques and the development of USB communication layer for Inductive Road Car Sensors and its computer drivers for Linux.

*May/2005 – August/2009: **Robota***

Robota<sup>7</sup> is a multidisciplinary study group in autonomous mobile robotics which aims mainly at IEEE's annual student robotics contests. Working as a programmer and robot designer for four years achieving many national and international prizes. Until 2008 developed the majority of the Computer Vision, Localization and Navigation systems embedded in purpose-built robots running Linux.

*August/2005 – August/2006: **Brazilian Digital Television System - SBTVD***

"RFP-16" Development of a Usability Standard for Interactive Digital Television. Developed an experimental Transport Stream generator and analyzer (TRASTE) based on the DVB and MPEG2 standards.

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## TECHNICAL SKILLS

- Advanced programming skills with the C, C++, Python and C# languages.
- Development of Qt/C++ applications for Symbian and Maemo operating systems<sup>8</sup>.
- Software development using the OPENCV library (e.g vision systems for mobile robots<sup>9</sup> and a chess board monitoring system that integrated an autonomous chess player).
- Software development using OPENGL (e.g. a mobile robot 3D simulator<sup>10</sup>)
- Extensive experience with the Debian packaging system.
- Services Oriented robotics software development with the MICROSOFT ROBOTICS DEVELOPMENT STUDIO - MRDS.
- Mobile Robots Electrical and Software Design.
- Extensive experience with Microchip® PIC microcontrollers and with Arduinos.
- Development of GNU/Linux kernel-space device drivers and modules.

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<sup>4</sup><http://s2i.ufsc.br/>

<sup>5</sup>Harpia <http://s2i.das.ufsc.br/harpia/en/home.html>

<sup>6</sup>Simultaneous Localization and Mapping

<sup>7</sup><http://robota.das.ufsc.br>

<sup>8</sup>Push Snowboarding: [www.pushsnowboarding.com](http://www.pushsnowboarding.com)

Source Code: <https://github.com/cpscotti/Push-Snowboarding>

Maemo Developer Profile: <http://maemo.org/profile/view/cpscotti/>

<sup>9</sup>WiDe - <http://robota.das.ufsc.br/mediawiki/index.php/WiDe>

Harpia - <https://launchpad.net/harpia>

<sup>10</sup>RobotaSim3D - <http://robota.das.ufsc.br/mediawiki/index.php/RobotaSim3D>

- Experience with Java and LISP (Scheme) programming languages.
- Experience with WindowsCE/PocketPC programming for embedded vision systems.
- Familiar with the L<sup>A</sup>T<sub>E</sub>X document markup language.
- Familiar with Matlab and Octave mathematical programming languages

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## LANGUAGES

<b>Portuguese</b>	Native Speaker.
<b>English</b>	Very good reading, writing, comprehension and conversation.
<b>Italian</b>	Basic reading, writing, comprehension and conversation.
<b>Spanish</b>	Basic reading, comprehension and conversation.

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## PUBLICATIONS

- Scotti, C. P.; Cesetti, A.; Di Buo, G.; Longhi, S.; **Services Oriented Soft Real-time implementation of SLAM capability for mobile robots.** *The 7th IFAC Symposium on Intelligent Autonomous Vehicles*, 2010, Lecce, Italy
- Cesetti, A.; Scotti, C. P.; Di Buo, G.; Babini, M.; Donnini, R.; Angione, G.; Lattanzi, L.; Cristalli, C.; Longhi, S.; **Field Robot Supporting The Activities Of A Reliability Laboratory Of Household Appliances.** *The 7th IFAC Symposium on Intelligent Autonomous Vehicles*, 2010, Lecce, Italy
- Cesetti, A.; Scotti, C.P.; Di Buo, G.; Angione, G.; Lattanzi, L.; Cristalli, C.; Longhi, S.; **Development of a flexible test platform for household appliance testing based on mobile agents.** *The 2010 IEEE Conference on Automation Science and Engineering*, 2010, Toronto, Canada
- Cesetti, A.; Scotti, C. P.; Di Buo, G.; Longhi, S.; **A Service Oriented Architecture supporting an autonomous mobile robot for industrial applications.** *The 2010 18th Mediterranean Conference on Control & Automation (MED)*, 2010, Marrakech, Morocco
- Erdtmann, M. J. K.; Scotti, C. P.; Stemmer, M. R.; **Pose Control in Mobile Robots.** *Proceedings of the Brazilian Symposium on Industrial Automation, SBAI*, 2007, Florianopolis - SC - Brazil.
- Scotti, C. P.; Lehnhard, G. F.; Donadel, R.; Rigoni R. G. **ROBOTA Team Description Paper.** *IEEE Latin American Robotics Competition, LARC*, 2008, Salvador - BA - Brazil.

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## PRIZES

- IEEE Brazilian Robotics Contest, OPEN Category (2008, Salvador, BA - Brazil). 2<sup>nd</sup> Place (ROBOTA Team)
- Seventh Latin American IEEE Student Robotics Contest, OPEN Category (2007, Monterrey - Mexico). 4<sup>th</sup> Place (ROBOTA Team)
- IEEE Brazilian Robotics Contest, OPEN Category (2007, Florianopolis, SC - Brazil). 1<sup>st</sup> Place (ROBOTA Team)

- VI Robots Challenge, PUC-RS. (2004, Porto Alegre, RS - Brazil). 1<sup>st</sup> Place.
- V Robots Challenge, PUC-RS. (2003, Porto Alegre, RS - Brazil). 2<sup>nd</sup> Place.

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## REFERENCES

These people are familiar with my qualifications:

<b>Adrian Westaway</b>	Co-worker and Director at Vitamins Design
Email:	<a href="mailto:adrian@vitaminsdesign.com">adrian@vitaminsdesign.com</a>
<b>Prof. Sauro Longhi</b>	Professor at UNIVPM and executive chief at IDEA Domotics
Email:	<a href="mailto:sauro.longhi@univpm.it">sauro.longhi@univpm.it</a>
<b>Dr. Gianluca di Buò</b>	Former co-worker and Project Director at IDEA Domotics
Email:	<a href="mailto:gian.idea@gmail.com">gian.idea@gmail.com</a>
<b>Prof. Dr. -Ing. Marcelo R. Stemmer</b>	Professor and coordinator of the S2i group
Email:	<a href="mailto:marcelo@das.ufsc.br">marcelo@das.ufsc.br</a>
<b>Prof. Dr. Carlos Barros Montez</b>	Professor and my coordinator on the SBTVD program
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<b>Eng. Charles Alberton Herdt</b>	DIGITRO Engineer and former co-worker at S2i
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<b>Eng. Mathias Erdtmann</b>	PETROBRAS Engineer and former co-worker at S2i
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