

# Benjamin Sarti

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## Objective

French Electrical and General Engineer **holding a Working Holiday Visa for New Zealand** and looking for a full-time job in software development, telecommunications, automation, systems or test engineering.

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## Experience

### Famoco

NEW DELHI, INDIA

#### IT Support Engineer

Jun. 2016 – Present

- Helping our clients to integrate their Android applications on [NFC](#) readers;
- Developed Android applications to interact with Famoco devices (NFC, connectivity, notifications, ...) for technical support and presales.

### CPQD

CAMPINAS, BRAZIL

#### R&D Engineer

Aug. 2014 – May 2016

- *Optical amplifiers*: simulations with MATLAB and OptiSystem to optimize EDF and Raman amplifiers performance. Laboratory automation with LabVIEW and Matlab for optical characterizations. Used serial, GPIB, ethernet and USB communications to control different processors and measuring instruments. Integration tests (hardware + firmware) using command-line user interfaces.
- *Integrated Tunable Laser Assembly*: built a laboratory setup for automated optical characterization using Python and C. Controlled the integrated lasers through serial port and writing hexadecimal commands in the processor registers. Controlled the measuring instrument (Optical/Electrical Spectrum Analyzers, polarization meters) using PyVISA.
- *Packaging for integrated photonics*: automated DC motors and piezoelectric transducers using Python for free space alignment of polarization multiplexers. The control was done sending hexadecimal commands to the controllers registers through serial port.

#### Intern

Jul. 2013 – Aug. 2014

*Optical networks*: implemented [dynamic channels equalization algorithms](#) in C++ on CPqD's testbed and controlled a cascade of optical nodes independently using multithreading. The nodes were controlled using Software Defined Networking and NETCONF protocol. Each node, forming a PII control loop, was constituted of three embedded subsystems (an optical amplifier, an Optical Channel Monitor and a Wavelength Selective Switch) that were controlled by BeagleBords or their own hardware.

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## Education

### Universidade Estadual de Campinas

CAMPINAS, BRAZIL

#### Master of Electrical Engineering

Jul. 2014 – Dec. 2015

Nonlinear programming, Information theory, Optical links and Probability theory.  
*Dissertation title*: "[Field Calibration Procedure for Enhanced Automatic Gain Control of Distributed Counter-Propagating Raman Amplifiers](#)."

École Centrale Marseille

MARSEILLE, FRANCE

**Engineer's Degree (French *Diplôme d'Ingénieur*)**

Sept. 2010 – Nov. 2014

Multidisciplinary formation in sciences (Mathematics, Physics); in engineering (Solid and Fluid Mechanics, Heat transfer, Chemistry, Electronics, ...) and in social sciences (Management, Economics, foreign languages,...).

Universidade Estadual de Campinas

CAMPINAS, BRAZIL

**Bachelor of Electrical Engineering**

Jul. 2012 – Jul. 2014

Telecommunications, Electronics, Control Engineering and Power Engineering.

**Embedded systems projects:**

- Programmed micro-controllers with Process Expert and Code Warrior. Controlled physical systems using GPIO pins and interruptions.
- Built an digital-to-analog converter using a R-2R ladder and a Raspberry Pi.

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## Skills

**Programming Languages:** Python, MATLAB, LabVIEW, Java, XML, C and C++.

**Operating Systems:** Linux, Windows and Android.

**Others:** OptiSystem, L<sup>A</sup>T<sub>E</sub>X, Git, Jira, TestLink, Zoho, MySQL, Confluence, EAGLE, Inventor.

**Natural languages:** Fluent in English, French and Portuguese. Intermediate in Spanish.

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## Publications

- J. Januario, M. G. Alabarce, **B. Sarti**, N. G. Gonzalez, and J. R. F. Oliveira, "[Experimental demonstration of overshoot suppression for cascaded WSS-based ROADMs](#)," in *Optical Fiber Communication Conference*, Los Angeles, Optical Society of America, pp. Tu3H-5., 2015.
  - **B. Sarti**, M. G. Alabarce, Benoît C. M. Roulle, Israel J. G. Cassimiro, Uiara C. Moura, J. R. F. Oliveira and Max H. M. Costa, "[Field calibration procedure for enhanced automatic gain control of distributed Raman amplifiers](#)," in *2015 SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference*, Porto de Galinhas, 2015.
  - Y. Fei, A. Fumagalli, M. G. Alabarce, **B. Sarti**, U. C. Moura, N. G. Gonzalez, and J. R. F. Oliveira, "[Estimating EDFA output power with an efficient numerical modeling framework](#)," in *International Conference on Communications*, London, IEEE, pp. 5222-5227, 2015.
  - **B. Sarti**, J. R. F. Oliveira, M. G. Alabarce, Uiara C. Moura, "Processo de calibração em campo dos amplificadores Raman distribuídos contra-propagantes para operação no modo de controle automático de ganho," INPE Brazil, patent application number BR 10 2015 011437-0, filed on May 2015.
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## Other competences and interests

**Tennis competitions:** best [French ranking](#): 15.

**Music:** 10 years of musical theory formation at [Amnéville City music academy](#) with validation of the 3 first cycles. Has been playing the trumpet for 7 years and was a member of several orchestras.

**Others:** fitness training, Japanese animations and board games.