



Eliezer Bernart

Curriculum Vitae - October, 2016

Summary

I am based in Porto Alegre - Brazil, currently pursuing a Ph.D. in Computer Science at Federal University of Rio Grande do Sul (Institute of Informatics). I hold a M.S. in Computer Science from the same university and a B.Eng. in Computer Engineering from Universidade do Oeste de Santa Catarina. I am specializing in image processing, computer vision and pattern recognition. Free software enthusiast and GNU/Linux user. My current research interests include medical image processing, computer-aided diagnosis and statistical learning methods.

Education

- 2016 – ... **Ph.D. in Computer Science**, *Federal University of Rio Grande do Sul - UFRGS*, Porto Alegre - RS - Brazil.
- 2015 **M.S. in Computer Science**, *Federal University of Rio Grande do Sul - UFRGS*, Porto Alegre - RS - Brazil.
- 2010–2014 **B.Eng. in Computer Engineering**, *Universidade do Oeste de Santa Catarina*, Joaçaba - SC - Brazil.
First Class Honours, Full Scholarship.

Masters Thesis

- Title *Detection and Diagnosis of Melanocytic Skin Lesions using Local and Contextual Features*
- Supervisors Prof. Dr. Sergio Bampi & Prof. Dr. Jacob Scharcanski
- Description The thesis proposed a novel unsupervised method for melanocytic macroscopic image segmentation considering suspicious regions, and also a novel approach for lesion classification using local and contextual features to estimate a probabilistic index of malignancy for each lesion.

Undergraduate Research

- Title *Player segmentation and detection in multi-sports courts using ordinary cameras*
- Supervisor Prof. M.S. Karl Phillip Buhr

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Description The research resulted in an automated method for tracking players in indoor sports and extract valuable information about their behavior during the match using videos recorded with ordinary cameras and computer vision techniques.

Experience

Vocational

- 2016 **Invited Lecturer**, *Universidade do Oeste de Santa Catarina*, Chapecó - SC - BR.
I was invited to teach a Computer Vision course for undergraduated students in the Computer Engineering department.
- 2014 **Internship**, *Universidade do Oeste de Santa Catarina*, Joaçaba - SC - BR.
I worked in a project for tracking players in indoor sports and extract valuable information about their behavior during the match using videos recorded with ordinary cameras.
- 2013 **Internship**, *Odeme Dental Research, Inc*, Luzerna - SC - BR.
Perform integration between the machine for micro tensile tests developed by the company and their current software. The modifications allowed controlling the machine and gathering information from experiments using the serial port.

Volunteering

- 2012 – ... **Community member**, *OeSC-Livre*.
I am a volunteer in the OeSC-Livre user group, helping in social media marketing, supporting events and projects, helping users through the IRC channel, and spreading the word about Linux and open source software.
- 2013–2014 **Code and content contributor**, *Webplatform.org*.
I was an active community member at WebPlatform.org, implementing Semantic MediaWiki templates and forms, and contributing with content related to HTML, CSS and JavaScript.
- 2013–2014 **Firefox Student Ambassador**, *Mozilla Foundation*.
As a Firefox Student Ambassador I worked promoting Firefox, supporting Firefox OS and fighting for an open and free Web to everyone. I was the Joaçaba Firefox Club's leader, worked in the meetings' organization, blog posting and marketing.

Awards

- 2015 **Medal of Merit** - Universidade do Oeste de Santa Catarina - Awarded to the best student in the class.
- 2014 **Certificate of Achievement - Honorable Mention** - ACM - Awarded to students who participated in the ACM International Collegiate Programming Contest.
- 2008 **Honor Mention at 4th Brazilian Mathematical Olympiad** - CNPq - Awarded to the students selected for the final phase of Brazilian Mathematical Olympiad.

Papers

BERNART, E; SCHARCANSKI, J.; BAMPI, S.. **Segmentation and classification of melanocytic skin lesions using local and contextual features**. Image Processing (ICIP), 2016 IEEE International Conference on, p. 2633-2637, 2016.

BERNART, E; ZORTEA, M.; SCHARCANSKI, J.; BAMPI, S.. **Unsupervised Segmentation and Categorization of Skin Lesions Using Adaptive Thresholds and Stochastic Features**. Vision Letters, v. 1, p. 24, 2015.

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BEZ, J. L.; BERNART, E. E.; DOS SANTOS, F. F.; SCHNORR, L. M.; NAVAUX, P. O. A.. **Performance and Energy Efficiency Analysis of HPC Physics Simulation Applications in a Cluster of ARM Processors**. Concurrency and Computation: Practice and Experience. (*Accepted*).

Communication Skills

- 2016 Oral presentation "Computer Vision: from Image Processing to Image Understanding" at Universidade do Oeste de Santa Catarina (Joaçaba - SC- Brazil)
- 2016 Workshop presentation "Introduction to Image Processing using Python" at Universidade do Oeste de Santa Catarina (Joaçaba - SC- Brazil)
- 2015 Oral presentation "Computer Vision and its Roles Towards the Future of Computing" at Universidade do Oeste de Santa Catarina (Joaçaba - SC- Brazil)
- 2015 Workshop presentation "A Pratical Introduction to Parallel and Distributed Processing" at Universidade do Oeste de Santa Catarina (Joaçaba - SC- Brazil)
- 2014 Oral presentation "The Lifecycle of an Web Especification" at The Developers Conference (Florianópolis - SC - Brazil)
- 2014 Oral presentation "Development of Multi-Platform Applications Based on the Web" at Universidade Regional Integrada do Alto Uruguai e das Missões (Erechim - RS - Brazil)

Languages

Portuguese **Mothertongue**

English **Advanced**

Conversationally fluent

French **Basic**

Basic words and phrases only

Interests

- Image Processing
- Medical Imaging
- Machine Learning
- Statistical Learning
- Information Theory
- Image Forensics

Membership

IEEE **Student Member**


IEEE SPS **Student Member**

ACM **Student Member**

SBC **Student Member**

Brazilian Society of Computer Science

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