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## EDUCATION

### Doctor of Philosophy in Computer Engineering (Ph.D.)

WatForm Lab, University of Waterloo, Waterloo, ONTARIO, CANADA

Ph.D. Thesis: Context-Sensitive Staged Static Taint Analysis for C using LLVM

October 2009 – March 2015 (resigned with a GPA=88%)

### Diplom-Informatiker (Dipl.-Inf. [equivalent to a "Master's degree in Computer Engineering"])

AGBS, University of Bremen, Bremen, Bremen, GERMANY

Master's degree Thesis: Statistical test case generation for reactive systems

October 01, 2002 – May 25, 2007 (graduated with grade A)

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## SOFTWARE CREATIONS

### ERP SOFTWARE SYSTEM 'YEROTH-ERP-3.0-STANDALONE'

October 2015 – Currently | Free open source code: <http://github.com/xnoubissinoundou/yeroth-erp-3.0>

### CONTEXT-SENSITIVE STAGED STATIC TAINT ANALYSIS FOR C USING LLVM ('YEROTH-SAINT')

October 2009 – October 2015 | Free open source code: <http://github.com/xnoubissinoundou/yeroth.rd.saint>

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## PROFESSIONAL EXPERIENCE IN SOFTWARE ENGINEERING

### YEROTH R&D, Douala, LITTORAL, CAMEROON

Software Engineering FULL PROFESSOR, CEO

October 2015 – Currently

### WatForm Lab, University of Waterloo, Waterloo, ONTARIO, CANADA

TEACHING ASSISTANT (Software quality assurance, and testing)

October 2009 – March 2015

### IBM Toronto Software Lab, Markham, ONTARIO, CANADA

C++ SOFTWARE DEVELOPER (JAVA-J9 Just-In-Time compilation optimization)

January 2012 – August 2012

### SIEMENS Medical Solutions, Erlangen, Bayern, GERMANY

C++ JUNIOR SOFTWARE DEVELOPER (RADIOTHERAPY DMIP communication protocol for 'LINAC-Siemens')

November 2007 – July 2009

### Greenpeace e.V, Hamburg, Hamburg, GERMANY

MANUAL SOFTWARE TESTER (SOFTWARE 'MOVE' for managing Greenpeace e.V, delivered by GERMAN COMPANY 'sd&m')

March 2007 – April 2007

### Bergmann Automaten GmbH, Rellingen, Hamburg, GERMANY

SOFTWARE DEVELOPER C++, J2EE (communication protocols implementation (e.g.: 'SIPv2'),

'JAVA-servlets' XML-servers for BERGMANN SYSTEMS VENDING MACHINES)

April 2005 – April 2007

### AGBS-University of Bremen, Bremen, Bremen, GERMANY

C++ SOFTWARE SYSTEM DEVELOPER (plugin to generate C++ code for 'UML-statecharts', 'Borland-Together')

September 2006 – February 2007

### ZMML-University of Bremen, Bremen, Bremen, GERMANY

WEB DEVELOPER HTML5, CSS (web site development, and self evaluation test creation for students)

February 2003 – March 2005

### We4IT GmbH, Bremen, Bremen, GERMANY

INTERN-SOFTWARE DEVELOPER MySQL, J2EE (J2EE web application for medical personal training management)

June 2005 – July 2005

### bremen4u GmbH, Bremen, Bremen, GERMANY

INTERN-WEB DEVELOPER, SYSTEM ADMINISTRATION MySQL, RedHat linux, PHP, HTML5, CSS

March 2004

## SOFTWARE ENGINEERING TOOLS COMPETENCES

### FUNCTIONAL PROGRAMMING LANGUAGES

Haskell, ML, Scala

### OBJECT ORIENTED PROGRAMMING LANGUAGES

C / C++, Java

### OPERATING SYSTEMS

'DEBIAN LINUX', 'MICROSOFT WINDOWS OS (08, 10, ETC.)'

### PROGRAM EXECUTABLE PACKAGE MANAGERS

dpkg (debian package manager), Inno Setup package manager (for MS WINDOWS)

### RELATIONAL DATABASE MANAGEMENT SYSTEMS

MySQL, SQLite

### SCRIPTING PROGRAMMING LANGUAGES

AWK, BASH, Python

### WEB APPLICATIONS DEVELOPMENT PROGRAMMING LANGUAGES

CSS, HTML5, J2EE, PHP

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## SUMMER SCHOOLS PARTICIPATION

1. **NATIONAL SCIENCE FOUNDATION, SRI INTERNATIONAL, First Summer School on Formal Techniques, MENLO COLLEGE, ATHERTON, CALIFORNIA, USA (May 22, 2011 – May 27, 2011)**

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## TEACHING ASSISTANTSHIP EXPERIENCE

**IAI CAMEROUN, NKOL ANGA'A, YAOUNDÉ, CENTER, CAMEROON (Octobre 2015, 3 semaines)**

1. COMPUTER ARCHITECTURE FOR COMPUTER SOFTWARE ENGINEERING

**UNIVERSITY OF WATERLOO, WATERLOO, ONTARIO, CANADA (Octobre 2009 – Mars 2015)**

1. COMPILERS (DEREK RAYSIDE, PH.D.)
2. COMPUTER NETWORKS (MAHESH TRIPUNITARA, PH.D.)
3. FOUNDATIONS OF SOFTWARE ENGINEERING (IGOR IVKOVIC, PH.D., deceased in NOVEMBER 2020)
4. METHODS AND TOOLS FOR SOFTWARE ENGINEERING (IGOR IVKOVIC, PH.D., deceased in NOVEMBER 2020)
5. PROGRAMMING FOR PERFORMANCE (PATRICK LAM, PH.D.)
6. SOFTWARE TESTING, QUALITY ASSURANCE AND TESTING (PATRICK LAM, PH.D.)

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## PUBLICATIONS

**AGBS, UNIVERSITY OF BREMEN, BREMEN, BREMEN, GERMANY**

**A SEMANTIC COMPARISON BETWEEN TIMED-CSP AND TIMED-AUTOMATA,**

1. INDEPENDENT STUDY, UNIVERSITY OF BREMEN, GERMANY, JANUARY 2005, SUPERVISED BY **PROF. DR. RER. NAT. HABIL. JAN PELESKA.**

**STATISTICAL TEST CASE GENERATION FOR REACTIVE SYSTEMS,**

2. MASTER'S DEGREE IN COMPUTER ENGINEERING THESIS, UNIVERSITY OF BREMEN, MAY 25, 2007, SUPERVISED BY **PROF. DR. RER. NAT. HABIL. JAN PELESKA**, AND **PROF. DR. PHIL. NAT. ROLF DRECHSLER.**

**WATFORM LAB, UNIVERSITY OF WATERLOO, WATERLOO, ONTARIO, CANADA**

**JUNIT 4 TUTORIAL, UNDERGRADUATE COURSE LECTURES NOTES**

1. 'SOFTWARE TESTING, QUALITY ASSURANCE AND TESTING', UNIVERSITY OF WATERLOO, ONTARIO, CANADA, OCTOBER 31, 2009, SUPERVISED BY **ASSISTANT PROFESSOR PATRICK LAM, PH.D..**

2. **STATICALLY VERIFYING API USAGE RULES USING TRACEMATCHES**,  
PH.D. DOCTORAL THESIS IN COMPUTER ENGINEERING (COMPUTER SOFTWARE ENGINEERING),  
UNIVERSITY OF WATERLOO, ONTARIO, CANADA, **DECEMBER 20**, 2011,  
**SUPERVISED BY ASSISTANT PROFESSOR PATRICK LAM, PH.D..**
3. **DYNAMIC TAINT ANALYSIS FOR PHP IN QUERCUS**,  
PH.D. GRADUATE COURSE PROJECT 'program analysis for web applications',  
UNIVERSITY OF WATERLOO, ONTARIO, CANADA, **APRIL 30**, 2013,  
**SUPERVISED BY FULL PROFESSOR FRANK TIP, PH.D..**
4. **CONTEXT-SENSITIVE STAGED STATIC TAINT ANALYSIS FOR C USING LLVM**,  
PH.D. DOCTORAL THESIS IN COMPUTER ENGINEERING (COMPUTER SOFTWARE ENGINEERING),  
UNIVERSITY OF WATERLOO, ONTARIO, CANADA, **MARCH 10**, 2015,  
**SUPERVISED BY ASSOCIATE PROFESSOR PATRICK LAM, PH.D., AND**  
**ASSISTANT PROFESSOR VIJAY GANESH, PH.D..**