

# ROCHELLE SIMONE LAWRENCE, MSc.

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*Aiming to Deliver Industry-Leading Advancements in the Science and Technology Field*

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Energetic, dependable person with academic and internship experience in the field of Computer Science. In addition, my highly skilled background in science has given me transferable knowledge such as thinking outside of the box, excellent presentational skills, being a team player and overall being a goal oriented individual.

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## CORE COMPETENCIES

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### Programming Skills

CSS|HTML|Java | JavaScript | Linux |Ruby on Rails| R Statistical | Python

### Laboratory Instrumentation Skills

Differential Scanning Calorimetry (DSC) | Electron Microscopy | Mercury Porosimeter | NMR spectroscopy | Rheologimeter | Scanning Electron Microscopy | Thermogravimetry Analysis (TGA) | UV-Vis spectroscopy | X-ray diffraction | Zeta Potential

### Software Manipulations

Modelling Software (*Mdynamix, Materials Studio, Ab initio methods, DFT simulations*) | Microsoft Office (*Word, Excel and PowerPoint*)

### Language Proficiency

**English-** Native | **French** - Fluent (Advanced Level DALF C1 certification) | **Spanish** - Intermediate Level ( Grade 1- Caribbean Education Council (CXC), Hogskolan Dalarna Certification (2011) | **Swedish** – Elementary Level (Hogskolan Dalarna Certification)

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## EDUCATION

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- **BSc. Computer Science (expected end date August 2017) Current GPA 3.7**– University of the People – Online, USA
  - **MSc. in Materials Chemistry** (2011) - Stockholm University – Stockholm, Sweden
  - **BSc. in Food Chemistry (*major*), Chemistry (*minor*), (Hons.)** (2007) - University of the West Indies, Mona Campus- Kingston, Jamaica
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## EXPERIENCE

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September 2015 - Present

Winfield Skola, Cheb, Czech Republic

**TEACHER FOR ENGLISH AS FOREIGN LANGUAGE**

- Teach English to students ranging from children to adults.
- Conduct lesson planning, including many interactive activities tailored for varying ages.
- Prepare students for TOEIC examination.

July 2015 - September 2015

OHSL laboratory John Hopkins University, USA

**RESEARCH ASSISTANT (ONLINE)**

- Designed and conducted background research for new or existing projects
- Succinctly summarized large amounts of secondary research
- Was the first point of contact for collaborators on projects
- Maintained organization and timelines among the internal team

February 2014 – July 2014

LivePerson Inc. , Israel

**COMPUTER SCIENCE INTERN (ONLINE)**

- Worked with a team comprising of Java engineers and interns to implement a Proof of concept (PoC) around the concept of utilizing Web Real-Time Communication (WebRTC) to add video engagement in LivePerson Chats.
- Explored capabilities that complement and improve the video engagement.

September 2011 –January 2013

University of the West Indies (UWI), Jamaica

**RESEARCH ASSISTANT**

**Project Research – *Solid Oxide Fuel Cells (SOFCs), Thermodynamics***

- Provided a mathematical model for analyzing Solid Oxide Fuel Cells (SOFCs) performance in order to provide detailed insight and enable focused development. Calculations involved manipulation of the Butler-Volmer Equation, neutrality approximation, Nernst- Planck equation and thermodynamic analysis.

October 2007 - April 2008

Lyceé Marie Curie, Vire, France

**TEACHER FOR ENGLISH AS FOREIGN LANGUAGE**

- Taught English to students' age 14 – 18 years old.
- Assisted teachers with lesson planning.
- Prepared students for Oral Baccalaureate Examinations.
- Worked with teachers to develop innovative interactive activities for the students.

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**PUBLICATION**

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Lawrence, R., Laaksonen, A., Wang, Y., Zhong-Yuan, L. (2013). Molecular Dynamics Study of Aqueous Solution of Polyethylene Oxide. Critical Test of Force Field Models. Journal of Soft Materials, Volume 11 (Issue 4)  
<http://www.tandfonline.com/doi/full/10.1080/1539445X.2012.669221#.VEMCOSLF8zt>

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## RESEARCH PROJECTS

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- ***Zeolite granulation: Study of the interaction between polymer and Zeolite 13X***
  - Detailed analysis and comparison of the polymers, Polyacrylic acid (PAA), Polyethylene glycol (PEG), Polyvinyl alcohol (PVA) interaction with Zeolite 13X
  - Three week stage at INSA, Lyon, France
  - Oral Presentation at the Science Conference, UWI, Mona, Jamaica
- ***Molecular Dynamics Study of Aqueous Solution of Polyethylene Oxide. Critical Test of Force Field Models***
  - Force field (FF) comparison of the following: FF developed by Smith with Lorentz-Bertholet combining rules (LBC FF), empirical combining rules (EMP FF), quantum-chemistry-based combining rules (QCB FF), CHARMM FF, and the FF adopted in Cordeiro, Zschunke and Müller-Plathe's work (CZM FF)

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## AFFILIATION AND INTERESTS

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### *Affiliation*

- Member of Amnesty International – A non-profit organization seeking to protect human rights globally

### *Interests*

- CareerFoundry Online Web Development Course Certification (**January 2016-June 2016**), Germany
- Commis Chef, Level 2 (2014) - HEART NVQ-J Certification, Jamaica
- Guitar (2013) – Certification from University of Berkley, USA
- Songwriting (2013) – Certification from University of Berkley, USA

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## REFERENCES

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- Available upon request

