

# Larissa Nietner

Larissa Nietner  
45 Grenville Road  
Watertown  
MA 02472  
nietner@mit.edu

## Profile

Energetic and creative engineering student with great expertise in automation and robotics, broad theoretical and practical experience and outstanding academic performance. Brings expeditious results due to keen perception, assertiveness and ability to motivate others.

## Education

Sep 2012 – Jul 2014

**Massachusetts Institute of Technology, Boston, USA**

1<sup>st</sup> semester M.Sc. Mechanical Engineering

Mar 2009 – Jul 2012

**University of Applied Sciences, Constance, Germany**

B.Eng. Mechanical Engineering (Grade average: 1.1)

Friedrich-Naumann-Foundation Scholarship (2012)

Oct 2008 – Mar 2009

**Aachen Technical University, Germany**

B.Sc. Metallurgical Engineering with Business

Oct 2007 – Jul 2008

**University of Warwick, Coventry, Great Britain**

B.Sc. Management

Sept 2004 – Jun 2007

**Technical High School, Überlingen, Germany**

Abitur: Averaging 1.0 – best mark achievable: includes Engineering: A; English: A; Maths: A

Ferry-Porsche-Award for outstanding performance in maths and engineering (2007)

Scheffel-Award for outstanding performance in German Literature (2007)

## Work Experience

03/01 - 06/30/2012

**Bachelors thesis: Determination of automation potential in production processes at stent- and balloon-catheter manufacturer Biotronik AG, Bülach, CH**

- Analysis of production processes regarding complexity, costs, strategic relevance and other important factors
- Generation of a comprehensive list of criteria to cover ease of automation, operational relevance and employee safety, and assignment of weighing factors and coefficients to create an index value that makes a statement about the automation potential of a process

- Application of this guideline on all production processes of the two most important products, and choice of processes that should be automated to improve production efficiency
- Development of single function solutions for all handling tasks and metrology
- Design of automation systems for the chosen processes (2 alternatives each for 4 different production processes), assessment of costs based on list prices and manufacturer quotations, calculation of profitability figures and suggestions on further development

08/01 - 09/31/2011

**Internship at electronic drive manufacturer Maxon Motor AG, Sachseln, CH, in production management**

- Analysis of operations in production of motor assemblies
- Standardization of operation information in ERP system, reallocation of workplaces for reliable capacity planning
- Creation of tools for production planning in IFS (ERP) using MS Access, communication of possible applications to the other production lines
- Suggesting approaches for improvement of production process in the sense of TQM and enhancement of process stability despite high product variation

09/01/2010 - 02/28/2011 and 03/01 - 08/31/2011

**Industrial placement followed by part-time employment at plant engineering company Manz Automation AG, Reutlingen, D**

- Participation in development of new printing technology for automated production of crystalline solar cells
- Design of parts and assemblies using Solid Edge V20 / ST3
- FEM- and CFD-simulations (Ansys V13)
- Completion of technical drawings
- Prototype building and testing
- Requesting quotations, placement and tracking of orders
- Patent and literature research

08/03 - 10/04/2009

**Summer internship at Fraunhofer Institute for Production Technologies and Automation, Stuttgart, D**

- Design of robot parts and assemblies using SolidWorks and ProEngineer, airflow analysis using SolidWorks FloXpress
- Suggestion and choice of parts, i.e. pneumatic and electronic components as well as a suitable 6-axis-robot, request of offers and negotiation with suppliers
- Design of cleanroom environment, planning production process for venal valves in a team
- Coordinating project activities with team members and partnering institutions and companies, finding technical solutions, and asserting deadlines when needed
- Improvement of machine control (Beckhoff PLC) and resolution of diverse control-related problems

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07/01 - 09/19/2008

**Summer internship at engine manufacturer Tognum AG, Friedrichshafen, D**

- Coordinating supplier activities in different countries and different languages, negotiating and reinforcing delivery dates
- Placement of orders, repair-orders and despatch requests according to customers and manufacturing needs using SAP ERP software
- Request of offers and choice of suitable suppliers
- Adjustment of quantities and delivery dates

09/01/2004 – 09/30/2008

**Part-time work after school, on weekends and holidays at car parts manufacturer Seeger GmbH, Salem, D**

- Various responsibilities within quality management department and production (operating machines, controlling running processes, drawing up work instructions)
- Temporarily replaced person responsible for dispatch of goods (coordinate production and quality control with customer needs, leading co-workers with regard to production planning, assignment and control of suppliers)
- Responsibility for the programming of robots for quality control (PLC and industrial robots), from concept stage to movement optimization, and participation in design process (SolidWorks, AutoCAD)
- Help improving processes and eliminate errors

**Skills and Interests**

Languages:        German – mother tongue  
                      English – fluent written and spoken  
                      French – good command of written and spoken language  
                      Chinese – basic knowledge

**Computer software knowledge:**

Mechanical Design:        SolidEdge, SolidWorks, AutoCAD (*very experienced*), ProEngineer (*intermediate*)

Control Systems Engineering:    NI LabView, Siemens LOGO, TwinCAT

Office:                        MS Office 2007 – 2010, Adobe Creative Suite

Programming languages:        Java, PHP, C

**Extracurricular activities**

- Research Assistant at the MIT Center for Polymer Microfabrication (*since 2012*)
- Seminar Tutor for *Thermodynamics* and *Heat Transfer* (*2011 – 2012*)
- Head of Constance student entrepreneurs network (*2011 – 2012*)
- Member of faculty's student body and of study commission (*2010 – 2012*)
- Seminar Tutor for *Mechanics 2* and *Physics*, leading groups of up to 60 students (*2010*)
- Elected member of faculty's students council (*2008 – 2009*)

**Interests**

- Sailing, DIY, drawing, web-programming (*own company founded in 2009*)