Patatri Chakraborty

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**Education**

Bachelor of Science in Mechanical engineering

University at Buffalo

2014 -present | Graduation Date: 2018 (expected)

**Related Experience**

**Composite materials research lab, the University at Buffalo**

Research Assistant

Buffalo, New York | September 2015 – present

Analyzed the effects of different carbon based fillers in a 3d printed polymer resin sample. In my first project, I used different fillers in the resin to enhance its electrical properties. In my next few projects I am analyzed different properties of the polymer based resin over the course of time. I am doing all my research work under Dr. Deborah Chung. Under her supervision I have:-

* A conference paper for the RAPID+TCT conference (May 8-11, 2017)
* Published a journal article for Elsevier, Sensors and actuators A.
* Submitted a journal article as a co-author for review and publication on Smart materials and structures.
* Accepted article for publication for journal of Material Science, composites part B.
* Conducting more stress/strain experiments on 3D printed samples to eventually write another paper.

**Human factors in Industrial and systems engineering, the University at Buffalo**

Research Assistant

Buffalo, New York | December 2016 – present

I am currently working on a project related to stress level on doctors and different factors which influence it under Dr. Lora Cavuoto and is expected to write and submit a paper for publication in the next few months.

**Virtual Reality applications and Control Dynamics, the University at Buffalo**

Research Assistant

Buffalo, New York | February 2017 – present

I am currently working on a conference paper related to Virtual Reality and control dynamics under Dr. Aaron Estes and the paper has been recently accepted for presentation and publication in the 4th International Conference on Control, Dynamic Systems, and Robotics (CDSR'17).

**Center for Co-design for Chip, Package, System (C3PS), Georgia Institute of Technology**

Research Assistant

Atlanta, Georgia | May 2017 – August 2017

I worked as a Research Assistant under Prof. Madhavan Swaminathan, John Pippin Chair in Microsystems Packaging and Electromagnetics, Director of Center for Co-design for Chip, Package, and System (C3PS) Georgia Tech on Flexible Hybrid Electronics.

**Oil and natural gas corporation, India.**

Undergraduate student intern | May 2015 – August 2015

Worked as a student intern in mechanical engineering for one of the best oil and natural gas companies in India. I did my final project on directional drilling and received a certificate of merit from my supervisor for my excellent work and contribution in the project.

**Independent research project**

As a very curious and enthusiastic student of mechanical engineering, I have been working on an independent research project related to sustainable energy which I have recently submitted for review and acceptance.

I am also working on another research project based on computational fluid dynamics using ANSYS fluent which I submitted for acceptance at Elsevier and I hope it would get accepted in the next couple of months.

**Honors**

Undergraduate student research funding by CURCA (2016)

Third rank holder in state for English Olympiad (2013)

First rank holder in state for Math Olympiad (2012)

Ranked among top 5% students in the UNSW international science Olympiad (2010)

Certificate of excellence for outstanding performance as student intern (2015)

2nd prize winner for state level debate competition organized by US Consulate general to India for which the consulate general gave me a letter of recommendation (2009)

Certificate of excellence for state level science seminar (2009)

Received a certificate of excellence and merit on CURCA poster presentation, UB (2017)

Received certificate of excellence as an outstanding presenter at SUNY SURC conference at Fredonia (2017)

**Technical Skills**

**Computer skills**

Languages – Basic, C, Java, C++, SQL, Creo parametric, ANSYS fluent, MATLAB.

**Language skills**

Fluent in English, Hindi, Bengali, Noakhali, Assamese and Sylethi.

**Publications**

**Journal articles**

1. ***Patatri Chakraborty***, Naga B. Gundrati, Chi Zhou and D.D.L. Chung, “Effect of stress on the capacitance and electric permittivity of three-dimensionally printed polymer, with relevance to capacitance-based stress monitoring”, Sensors and Actuators A, 263C, 380-385 (2017).
2. Chung DDL, ***Chakraborty P***, Gundrati NB, Zhou C. Piezoelectric behavior discovered in three-dimensionally printed polymer. Nature Research. Submitted.
3. Gundrati NB, ***Chakraborty P***, Zhou C, Chung DDL. First observation of the effect of the layer printing sequence on the molecular structure of three-dimensionally printed polymer, as shown by in-plane capacitance measurement. Composites, Part B, under final review.
4. Gundrati NB, ***Chakraborty P***, Zhou C, Chung DDL. First report of the effects of printing conditions on the molecular structure of three-dimensionally printed polymer. Smart Mater Structures, submitted.
5. ***Chakraborty P***, Acharjee A. STUDY OF A HYBRID ORC SYSTEM COMBINING GEOTHERMAL AND WIND RESOURSES WITH MCDA FOR SUSTAINABLE ENERGY. Journal for Environmental progress and sustainable energy. Submitted.
6. ***Chakraborty P***, Biswas N. CFD Analysis of Hydrodynamic Bearing Performance over the Different Varying Parameters with a Taguchi DOE Model. Tribology letters, Springer. Submitted.

**Conference Papers**

1. ***Chakraborty P,*** Estes Aaron. Piezoelectric sensors in Virtual reality motion and position sensing. 4th International Conference on Control, Dynamic Systems, and Robotics (CDSR'17). August 21 - 23, 2017.
2. Gundrati NB, ***Chakraborty P***, Zhou C, Chung DDL. Capacitance-based Nondestructive Evaluation of Three-dimensionally Printed Polymer. RAPID+TCT conference, May 8-11 2017.