Address: 511 Lynch Avenue NW,
Atlanta, GA- 30318
Phone No.: (770)-905-6376

ABHISHEK CHOUDHURY

abhishek.c@gatech.edu

Education

MS in Material Science and Engineering	Georgia Institute of Technology, Atlanta, GA	July, 2010
B.Tech., Metallurgical & Materials Engineering	National Institute of Technology Karnataka, India	May, 2007

Relevant Coursework

- Optoelectronic Systems
- Microelectronic Systems Packaging
- Polymers for Electronic and Photonic applications
- Impedance and Dielectric Spectroscopy
- Electronic Substrate Fabrication
- Finite element methods (“Prediction and minimization of microelectronic substrate warpage using FE analysis”)

Work Experience

August 2008 – till date

Employer: 3D Systems Packaging Research Center (Georgia Institute of Technology)
Position: **Graduate Research Assistant**
Description: Fabrication and reliability assessment of ultra-fine pitch copper pillar based interconnects for chip-to-substrate using adhesive bonding. Working to improve the thermo-mechanical reliability of Cu pillar interconnects using finite element analysis. (Advisor: Professor Rao Tummala/Project: EMAP)

January 2008 – May 2008

Employer: Department of Materials Engineering (Indian Institute of Science, Bangalore)
Position: **Project Assistant**
Description: Fabricated and characterized ultra-fine grained Al alloys for aerospace applications using severe plastic deformation methods. (Advisor: Professor Satyam Suwas/Project Sponsor: Boeing)

June 2007 – December 2007

Employer: Ceramic Synthesis & Processing Lab, Global Research Centre (GE India Technology Pvt. Ltd.)
Position: **Consultant**
Description: Developed low cost methods to grow p-type absorber layer for non-silicon based thin film solar cells.

Patent

- *“Method and Structure for Fine Pitch Cu Bump Bonding with Adhesives”*, application for US patent, serial #61/225,015.

Publication and Technical Report

- *“Low temperature, low profile ultra-fine pitch copper-to-copper interconnections for chip last embedded actives”*, to be presented in Electronic Components and Technology Conference, Las Vegas, June 2010.
- *“Highly reliable, 30µm pitch copper interconnects using nano-ACF/NCF”*, Electronic Components and Technology Conference, San Diego, May 2009.
- “*Enhancement of strength in Al alloy AA3103 through Accumulative Roll Bonding (ARB)*” - Presented in 60th Annual Technical Meeting, Jamshedpur, 15-16 November 2006, jointly organized by the Indian Institute of Metal (IIM) and Tata Steel Ltd.
- “*Development of non-silicon based thin film solar cells*” - a GE internal (class 3) technical report, July-December 2007, submitted with GE Global Research Bangalore, India

Honors and Awards

- **1st position** in ENGINEER 2006 – the technical symposium at NITK Surathkal for presenting a paper entitled *“Analysis of alligatoring defect during mushy state rolling”*.
- **Best Paper Award** in AMALGAM 2006 – the technical symposium at IIT Madras for presenting a paper entitled *“Analysis of axial Compressive Stress in Cenosphere-Epoxy Cored Jute Skin Sandwich using ANOVA”*.

Technical Skills

Packaging Skills
Class 10 Clean-room User, Flip-chip Assembly, Reliability Assessment, Failure Analysis, Substrate Fabrication and Metallization, Silicon Wafer Processing

Characterization Skills
XRD, SEM, SAM, UV spectroscopy, FTIR spectroscopy, Four-point-probe measurement, Profilometry

Computer Skills
C, MATLAB, ANSYS, ABAQUS, AUTO CAD, Origin, MS Office, MS Outlook

Professional Affiliation

- Student Member of SMTA, CPMT and IEEE.

Extra Curricular Achievements

- **Joint Convener** of the Indian Society for Technical Education, NITK chapter for the academic year 2006-2007.
- **Event Coordinator** for Incident 2007, the annual cultural festival of NITK Surathkal.
- Elected as **Class Representative** in sophomore year in college.