

SAPTADEEP PAL

Age/Sex/Nationality: 24/Male/Indian

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EDUCATION

Ph.D., Electrical Engineering **2015 – Present**

University of California Los Angeles

Advisors: Prof. Puneet Gupta & Prof. Subramaniam S. Iyer

Master of Science, Electrical Engineering **2015 – Present**

University of California Los Angeles

GPA: 3.9/4.0

Bachelor of Technology, Electrical Engineering **2011 – 2015**

Indian Institute of Technology, Patna, India

Institute Silver Medal for Department Rank #1 and Best Thesis Project Award, GPA 9.3/10

EXPERIENCE

Graduate Student Researcher **2015 - Present**

NanoCAD Laboratory and CHIPS, University for California Los Angeles

Advisor: Prof. Puneet Gupta and Prof. Subramaniam S. Iyer

Ongoing Projects:

- (1) Design methodologies and analysis of system fragmentation and IP-based re-integration of multi-core processor system.
- (2) Exploring new architectural schemes for heterogeneous integration and module upgradable systems
- (3) Analysis of novel technology features and physical design for sub-10nm node
- (4) Design of circuits and methodologies for efficient computing using stochastic logic
- (5) Design of Test-structures for Cu-Cu interconnect on Silicon Interconnect Fabric.

Center for Telecommunications Value Chain Research, Ireland **May 2014 – August 2014**

Trinity College Dublin

Advisor: Prof. Marco Ruffini and Alan Hill

Topic: Development of an efficient Dynamic Bandwidth Allocation algorithm for Long Reach Passive Optical Network

Robert Bosch Center for Cyber Physical Systems, Bengaluru **Dec 2013 – Jan 2014**

Indian Institute of Science

Advisor: Prof. Bharadwaj Amrutur

Topic: Bluetooth Low energy sensor platform development for remote neonatal monitoring and intervention

Center for Telecommunications Value Chain Research, Ireland **May 2013 – July 2013**

Trinity College Dublin

Advisor: Prof. Marco Ruffini and Prof. David B. Payne

Topic: LR-PON deployment strategies (DISCUS EU-FP7 Project) and efficient layout architecture

Advanced Networks Laboratory, Kharagpur **May 2012 – July 2012**

Indian Institute of Technology Kharagpur

Advisor: Prof. Debasish Datta and Dr. Aneek Adhya

Topic: Disaster resilient connection provisioning for backbone datacenter networks

PUBLICATIONS

- (1) A. Bajwa, S. Jangam, **S. Pal**, N. Marathe, E. Lui, M Goorsky, S. S. Iyer., “Process development and material characterization of Cu-Cu thermo-compression bonding (TCB) for high-conductivity electrical interconnects”, *Proceedings of 49th International Symposium on Microelectronics*, Oct 11-13, 2016, Pasadena
- (2) Z. Wan, S. Jangam, **S. Pal**, A. Bajwa and S. S. Iyer., “Fine Pitch Silicon Interconnect Fabric for Scaled-out Neuromorphic Systems”, *International Electronic Devices Meeting, 2016* (In Review)
- (3) **Pal, S.**, Zukowski, C., Nag, A., Payne, D., and Ruffini, M., “Cable Length Minimization in Long- Reach-PON Planning for Sparsely Populated Areas”, *IEEE Optical Network Design and Modelling 2014*, Stockholm, Sweden
- (4) **Pal, S.**, Pandian, S., Ray, K.C., “FPGA Implementation of Stream Cipher Using Toeplitz Hash Function”, *International Conference on Advances in Computers, Communication and Informatics 2014*, New Delhi, India

TECHNICAL SKILLS

Programming: C, C++, Python

Mathematical Processing: MATLAB, IBM ILOG CPLEX

Scripting: Python, Perl, Tcl, Shell

VLSI Design: Verilog, VHDL, HSpice, Virtuoso, Spectre, ModelSim

Physical Design: Cadence Innovus, Genus, OpenAccess, MentorGraphics Calibre, Synopsys Design Compiler, ICCompiler

FELLOWSHIPS and AWARDS

- (1) GuruKrupa Fellowship and EE Department Fellowship awarded to attend Graduate School at UCLA
- (2) Institute Silver medal for highest cumulative GPA among graduating student of EE, IIT Patna, Class of 2015
- (3) Best Bachelors of Technology Thesis Project award, Department of Electrical Engineering, 2015
- (4) State Merit Scholarship, 2008

REFERENCES

Prof. Puneet Gupta, UCLA

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Prof. Subramaniam S. Iyer, UCLA

email: s.s.iyer@ucla.edu

Prof. Yatendra Kumar Singh, IIT Patna

email: yatendra@iitp.ac.in

Prof. Marco Ruffini, Trinity College Dublin

email: marco.ruffini@tcd.ie