

Christopher W. Maloney

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OBJECTIVE: To obtain a Ph.D. in microsystems and perform research in the field of nanolithography.

EDUCATION: **Ph.D., Rochester Institute of Technology**
Major: Microsystems Engineering (Expected 2015)
Research: Nanolithography

Bachelor of Science, Rochester Institute of Technology
Major: Microelectronic Engineering

Bachelor of Science, Roberts Wesleyan College
Major: Physics
Minor: Math

EMPLOYMENT: **Rochester Imaging Detector Lab: Rochester, New York** May 2009 – May 2011

Senior Design Student

Characterization of a Geiger-mode avalanche photodiode – Including the design of a light tight enclosure designed for optical testing, diode IV testing and analysis, and characterizing the detector to extract various parameters.

Engineering Co-op

Hybridization of a CMOS detector (NASA Grant Number NNX07AG99G) – Developed advanced bump-bonding hybridization process implementing lift-off resist, in addition to fabricating a low-noise PIN silicon detector.

Design of a LIDAR optical system (NASA Grant Number NNX08AO03G) – Designed an optical system consisting of both receiving and transmitting optics for LIDAR applications.

National Semiconductor: South Portland, Maine June 2008 – August 2008

Process Engineering Co-op

TEL Unity upgrade project – Made process adjustments to MERIE plasma etch chamber after ceramic chamber upgrade in order to pass quals and manufacture product.

Private Consultation: Rochester, New York November 2010 – Present

Tutoring and Mentoring

High School Students – Tutoring students in physics from Greece Odyssey High School as well as mentoring students in order to ensure a smooth transition from high school to college at Roberts Wesleyan College.

SMFL CERTIFIED

TOOLS:

AME P5000	GCA Stepper
Amray 1830 SEM	LAM4600 Al Etcher
Branson Asher	SCS Resist Coater
CEE Resist Developer	Suss MA 150 Aligner
CEE Resist Spinner	SVG Track
CVC 601 Sputter	Tencor P2 Profilometer
Denton Sputter	Wet Bench – AL Etch and Solvent Strip
Drytek Quad	

COMPUTER

SKILLS:

Windows OS	WIN4145	Linux OS
Microsoft Office	Maple 11	Design Architect
Java/C++	PSPICE	ATLAS
SRIM	JMP-IN	ATHENA
Knights	SolidWorks	Expert
LabView	Matlab	PROLITH

LEADERSHIP

EXPERIENCE:

Society of Physics Students President – Roberts Wesleyan Chapter
Society of Physics Students Vice-President – Roberts Wesleyan Chapter
Roberts Wesleyan College – Men’s Soccer Captain and Track & Field Captain
Boy Scouts of America Eagle Scout
Greece Odyssey Boy’s Varsity Soccer Assistant Coach
Student Mentor

HONORS:

Donald D. Kerlee Engineering Award
Ogden Family Physics Scholarship
Achievement Scholarship
Mendal & Bertie Dick Scholarship
Selected students exhibit Christian character, satisfactory academic standing, important team contributor and good college citizenship
Junior Engineering Technical Society (JETS) TEAMS competition
Ranked 1st in New York State, 20th in the Nation - 2006 Competition
American Chemical Society – Chemistry Achievement Award June 2004

PUBLISHED

PAPERS:

1. *Hybridization of a sigma-delta-based CMOS hybrid detector* K. E. Kolb, N. C. Stoffel, B. Douglas, C. W. Maloney, A. D. Raisanen, B. Ashe, D. F. Figer, T. Tamagawa, B. Halpern, and Zeljko Ignjatovic, Proc. SPIE 7742, 77420C (2010), DOI:10.1117/12.857510

INTERESTS:

Running, Soccer, Sailing