

Joel R. Edinberg
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Education

Cornell University, College of Engineering, Ithaca, New York - Class of 2006
Masters of Engineering in Engineering Physics
Cumulative GPA: 3.60/4.00

Cornell University, College of Engineering, Ithaca, New York Class of 2005
Major: Engineering Physics
John McMullen Dean Scholarship recipient, four-year academic excellence scholarship
Cumulative GPA: 3.46/4.00

**Work
Experience**

Writer – www.2dineforboston.com January 2012 – May 2012
• Write weekly reviews of restaurants within the greater boston area. This includes taking pictures of the food and promoting the reviews and website through social media. Also provide other content to the site through reviews of sponsored events and recipes.

Optical Engineer – Advanced Technologies Group October 2006 – October 2011
Mintera Inc. (Acquired by Oclaro Inc. in July 2010), Acton, MA
• Reported to the CTO. Researched and developed new technology for future products. Determined proper use of feedback loops for controlling the products. Built prototypes of future products. Tested components to use in products. Designed proper optical test benches to test performance of our products and internal components.

Teaching Assistant – Lasers and Photonics August 2005 – May 2006
Cornell University, Ithaca, NY
• Helped students with assignments, supervised lab and helped students build a nitrogen laser, graded assignments, made solution sets.

Research Assistant – Xu Group June 2004 – May 2005
Cornell University, Ithaca, NY
• Assisted graduate students with their research in compensating nonlinearities in fiber optic amplification systems. Helped align free space optics, assembled and calibrated interferometers for data collection.

Saxophone Teacher 1999 - 2006
Fairfield, CT and Ithaca, NY.
• Develop lesson plans for individual students ages 10 and up. This included finding fun, interesting, and challenging music for students to work on and developing long term plans for musical development.
• Taught proper technique for good tone and fingering technique as well as music theory for jazz improvisation

Music Teacher 2001-2002
Horizons Day Camp, Fairfield, CT
• Taught inner city children, grades K-3, how to play recorder and read music and prepared them all for a recital.

Relevant Academic Courses	Lasers and Photonics • Quantum & Nonlinear Optics • Applied Solid State Physics • Quantum Mechanics • Biophysical Methods • Mathematical Physics • Elements of Astrophysics • Electronic Circuits (lab) • Computer-Instrumentation Design • Computational Engineering Physics • Introduction to Computer Programming • Signals and Systems I and II (lab)
Academic Research Projects	<ul style="list-style-type: none"> • Applied theory from nonlinear optics to electronic signals to effectively create new types of sound effects. This involved creating and running a simulation of the effects both using synthesized sounds and recorded sound samples. • Researched a device to mitigate the effects of self-phase modulation in chirped pulse amplification under the joint supervision of Prof. Chris Xu and Prof. Frank Wise. This involved building a femtosecond pulsed fiber laser, designing the device, simulating the system, and assembling and testing the device.
Patents and Publications	<p>P. Mamyshev, J. Edinberg, "Self adaptive receivers not requiring FEC feedback," Mintera Inc. 20102010 (Currently being filed under Oclaro, inc.)</p> <p>G. Zhu, J. Edinberg and C. Xu, "Nonlinear distortion free fiber-based chirped pulse amplification with self-phase modulation up to 2π," <i>Opt. Exp.</i>, Vol.15, No. 5, pp. 2530-2534, 2007</p>
Applicable Skills	<p><i>Computer Languages:</i> Matlab, Mathematica, VPI, Experience with C/C++ and Labview</p> <p><i>Computer Programs:</i> Logic Pro, Finale, GarageBand, Excel, Word, PowerPoint, iMovie</p> <p><i>Language:</i> Comprehension of Spanish</p> <p><i>Musical Instruments:</i> Saxophone, Flute, Drum set, Clarinet, Piano, Didgeridoo</p>
Activities/ Interests	Thai and Chinese Kickboxing (training), Skiing, Hiking, Cooking