Dr. Michael Y. Levy

mail2MYL@gmail.com

Curriculum Vitae

Contact St. John's University

Information Mathematics & Computer Science

mail2MYL@gmail.com

914 609 7538

St. John's Hall, Room 334R 8000 Utopia Parkway Queens, New York 11439

Objective Academic appointment in Mathematics.

AREAS OF SPECIALIZATION Algebra, Precalculus, Calculus, Vector Calculus, Mechanics, Statistical Mechanics, and

N Control Theory.

EDUCATION National Science Foundation, Postdoctoral Fellow,

Instituto de Energía Solar (2008-10)

Georgia Institute of Technology, Atlanta, Georgia

Ph.D., Electrical and Computer Engineering (2008)

• Mathematical analysis of next-generation solar cells

M.S., Electrical and Computer Engineering (2004)

• Mathematical analysis of next-generation solar cells

Portland State University, Portland, Oregon

B.S., Physics (2001)

B.S., Electrical and Computer Engineering (2001)

• Minor, Mathematics (speciality of Group Theory and Numerical Analysis)

Appointments St. John's University, New York, New York

Adjunct Associate Professor, Dept. of Math and Comp. Sci. (1/2019 -)

Adjunct Assistant Professor, Dept. of Math and Comp. Sci. (9/2018 - 12/2018)

Hunter College (CUNY), New York, New York

Adjunct Associate Professor, Dept. of Physics and Astronomy (8/2019 -6/2020)

Baruch College (CUNY), New York, New York

Adjunct Assistant Professor, Dept. of Mathematics (8/2018 - 12/2018)

New York City College of Technology (CUNY), New York, New York

Adjunct Associate Professor, Dept. of Computer Engineering Tech. (8/2019 -)

Adjunct Assistant Professor, Department of Physics (8/2018 - 6/2019)

Adjunct Assistant Professor, Department of Mathematics (8/2017 - 6/2018)

Adjunct Assistant Professor, Dept. of Computer Engineering Tech. (8/2015 - 6/2019)

Interim Researcher Associate, City College of New York (2010-2011)

Model and analyze deeply-depleted metal-oxide-semiconductor photodetectors

Visiting Lecturer, Politecnico di Torino (Feb., 2010)

Intensive course on science and engineering of photovoltaic solar-energy conversion

Interim Researcher Associate, University of Delaware (2005-2008)

Senior personnel on National Renewable Energy Laboratory sub-contract Supervise research of two junior personnel

Research Assistant, Georgia Institute of Technology (2002-2004)

Themodynamic analysis of next-generation solar cell

Numerical analysis of radiation flows

PROFESSIONS

President, National-Accord Party, www.NationalAccord.us (7/2013-)

Owner, Honeycomb Money Management (7/2013-12/2019), Brooklyn, New York

Staff Scientist, Emcore Corporation (8/2012-1/2013)

Write grants for externally-funded research and development

Principal Engineer, U.S. Department of Energy (1/2012-6/2012)

Internal and external reviewer of grant applications

Undergraduate Researcher, University of Maryland, College Park (Summer 2000)

Undergraduate Researcher, Portland State University (1999-2000)

Grants, Awards & Honors

Professional Staff Congress (CUNY) Professional Development Grant (2020)

National Science Foundation fellowship for post-doctoral research (2008-2010)

National Science Foundation grant for dissertation enhancement (2006-2008)

Georgia Institute of Technology Presidential Fellow (2001-2004)

Most-creative booth award for solar-powered Earth Day demonstration (2003)

University of Maryland grant for undergraduate summer research (2000)

Zucker award for IEEE Industrial Electronics Society conference (2000)

Member of Tau Beta Pi engineering honor society (2000)

Boeing scholarship for undergraduate studies (1999-2001)

Bronx High School of Science awards for achievement in mathematics (1993)

Bronx High School of Science awards for achievement in physics (1993)

Publications & Communications

Books

M.Y. Levy, "Treatise on Political Stability & Inlexibility," in process. (Book proposal available in my research portfolio. Preprint of earlier version available as "Electoral Stability and Rigidity," *arXiv*:1608.05038 [q-fin.EC], 2016.)

BOOK CHAPTERS

M.Y. Levy "Maturity of Photovoltaic Solar-Energy Science," Solar Cells / Book 3, ISBN 978-953-307-1343-0, 2011.

PEER-REVIEWED JOURNAL ARTICLES

- M.Y. Levy, "Temperature of a Martket," in process.
- D. Fuertes Marrón, E. Cánovas, **M.Y. Levy** ..., "Optoelectronic evaluation of the nanostructuring approach to chalcopyrite-based intermediate band materials," *Solar Energy Materials & Solar Cells*, 94(11), 073103, 2010.
- M.Y. Levy and C. Honsberg, "Absorption Coefficients of Intermediate-Band Media under Parabolic-Band Approximations," *Journal of Applied Physics*, 106(7), 073103, 2009.
- M.Y. Levy and C. Honsberg, "Intraband absorption in solar cells with an intermediate band," *Journal of Applied Physics*, 104(11), 113103, 2008.
- M.Y. Levy and C. Honsberg, "Solar cell with an intermediate band of finite width," *Physical Review B*, 78(16), 165122, 2008.
- S.P. Bremner, M.Y. Levy, and C.B. Honsberg, "Limiting efficiency of an intermediate band solar cell under a terrestrial spectrum," *Applied Physics Letters*, 92(17), 17110, 2008.
- M.Y. Levy and C. Honsberg, "Nanostructured absorbers for multiple transition solar cell," *IEEE Transactions on Electron Devices*, 55(3), 706-11, 2008.
- S.P. Bremner, M.Y. Levy, and C.B. Honsberg, "Analysis of tandem solar cell efficiencies under Am1.5G spectrum using a rapid flux calculation method," *Progress in Photovoltaics*, 16(3), 225-33, 2007.
- M.Y. Levy and C. Honsberg, "Rapid and precise calculations of energy and particle flux for detailed-balance photovoltaic applications," *Solid State Electronics*, 50(7-8), 1400-1405, 2006.

Papers Published in Conference Proceedings

- M.Y. Levy, "Dependence Structure of Hyperball Distribution," 2020 International Conference of Applied and Engineering Mathematics, in process for July 2020.
- D. Fuertes Marrón, ..., M.Y. Levy ..., "Optoelectronic evaluation of the nanostructuring approach to chalcopyrite-based intermediate band materials," 2009 E-MRS Fall Meeting, Strasbourg, France, (June 8-12, 2009).
- A. Martí, ..., M.Y. Levy, ..., "IBPOWER: Intermediate Band Materials and Solar Cells for Photovoltaics with High Efficiency and Reduced Cost," 34rd IEEE Photovoltaic Specialists Conference, Philadelphia, Pennsylvania, (June 7-12, 2009).
- S. Jacobs, M.Y. Levy, C.B. Honsberg, "Silicon multiple exciton generation/p-n junction hybrid solar cell," 33rd IEEE Photovoltaic Specialists Conference, San Diego, California, (May 12-16, 2008).
- S.P. Bremner, ..., M.Y. Levy, C.B. Honsberg, "Growth of InAs Quantum Dots on GaAsSb for the Realization of a Quantum Dot Solar Cell," 33rd IEEE Photovoltaic Specialists Conference, San Diego, California, (May 12-16, 2008).

- M.Y. Levy, N.J. Ekins-Daukes, and C. Honsberg, "Photoluminescent signature of absorbing medium with deep levels based upon absorbtion coefficients derived from parabolic band approximation", 22nd European Photovoltaic Solar Energy Conference, Milan, Italy (September 3-7, 2007), 435-5.
- S.P. Bremner, M.Y. Levy, C.B. Honsberg, "Nanostructured Solar Cells for High Efficiency Photovoltaics", 22nd European Photovoltaic Solar Energy Conference, Milan, Italy (September 3-7, 2007), 75-8.
- M.Y. Levy and C. Honsberg, "Minimum effect of non-infinitesimal intermediate band width on the detailed balance efficiency of an intermediate band solar cell," 4th World Conference on Photovoltaic Energy Conversion, Waikoloa, Hawaii, (May 8-12, 2006), 71-74.
- M.Y. Levy and C. Honsberg, and A. Luque, "Precise and rapid calculations of energy and particle flux for detailed-balance photovoltaic applications," 20th European Photovoltaic Conference, 2005, 445-448.
- M.Y. Levy, C. Honsberg, A. Martí, and A. Luque, "Quantum dot intermediate band solar cell material systems with negligible valence band offsets," *IEEE Photo-voltaic Specialists Conference*, 2005, 90-3.
- M.Y. Levy, A. Martí, C. Honsberg, and A. Luque, "Band properties of a quantum dot intermediate band solar cell," 19th European Photovoltaic Conference, 2004, Vol. 2(2), 1411-4.

Unpublished Papers Presented at Conferences

M.Y. Levy, A. Martí, ..., "Deep-Level Transient Spectra and Absorption Spectra of Prototype Intermediate-Band Solar Cells," 2009 MRS Fall Meeting, Boston, Massachusetts, (November 30 - December 4, 2009).

SEMINARS AND SYMPOSIA

- M.Y. Levy "Application of Density Matrices to Elections," presented at Brooklyn Technical High School. New York, USA, December. 2019.
- M.Y. Levy "Flux calculations using Riemann zeta integrals," presented at Imperial College. London, UK, Sept. 2008.
- M.Y. Levy, "Lock-in technique," presented at: Universidad Politécnica de Madrid. Madrid, Spain, Feb. 2009.
- M.Y. Levy, "Prototype intermediate-band solar cells," presented at: Lawrence Berkeley National Laboratory. Berkeley, CA, July 2009; Stanford University. Palo Alto, CA, July 2009; and Polytechnic Institute of New York University. New York, NY, Dec. 2009.
- M.Y. Levy, "Absorption spectroscopy and deep-level transient spectroscopy of Intermediate-Band Solar Cells," presented at: Massachusetts Institute of Technology. Cambridge, MA, Dec. 2009; General Electric. Niskayuna, NY, Jan. 2010; and Politecnico di Torino. Torino, Italy, Feb. 2010.

M.Y. Levy "Energy conversion: high-efficiency photovoltaics," presented at: Universidad Politécnica de Madrid, Madrid, Spain, Apr. 2010; Columbia University, New York, NY, Apr. 2010; Harvard University, Cambridge, MA, May 2010; Massachusetts Institute of Technology, Cambridge, MA, May 2010; City College of New York, New York, NY, Oct. 2010; Brooklyn College of CUNY, New York, NY, Feb. 2011; Mount Holyoke College, South Hadley, MA, March 2011; Army Research Laboratory, Adelphi, MD, Apr. 2011; Saginaw Valley State University, Saginaw, MI, Jul. 2011; NASA Glenn Research Facility, Cleveland, OH, Jul. 2011; Brookhaven National Laboratory, Upton, NY Sept. 2011; U.S. Department of Energy, Washington, DC, Nov. 2011; and Emcore Corporation, Albuquerque, NM, June 2012.

Workshops

M.Y. Levy "Augusta Ada Byron King: Analyst, Metaphysician, and Founder of Scientific Computing," presented at Minority Science and Engineering Improvement Program. New York City College of Technology, NY, Oct. 2016.

Professional Service

Head Judge of Mathematics, New York Science and Engineering Fair (2018) Judge of Mathematics, New York Science and Engineering Fair (2017) Reviewer for Journal of Applied Physics and Solid-State Electronics Judge of graduate student award, Materials Research Society Fall meeting (2007) Lead conference organizer, Green Winter Convergence, Atlanta, Georgia (2003) Treasurer of IEEE student branch, Portland State University (2000) Vice president Tau Beta Pi student branch, Portland State University (2000)

TECHNICAL SKILLS

Programming

Python, C, C++, MATLAB

Instrumentation and Control

Labview

Social Media

Contributor to Math Stack Exchange (2016-)

Contributor to Stats Stack Exchange (2019-)

Contributor to Wikipedia (2015-)

Languages

English (native speaker) Spanish (fluent)