

JAMES B. DRAGAN
220 Smith St, Merrick NY 11566
jdragan30@gmail.com
(516) 521-9751

DATE OF BIRTH

July 21, 1992

Mineola, NY

EDUCATION: STATE UNIVERSITY OF NEW YORK AT STONY BROOK, STONY BROOK, NY

B.S. Physics — GPA 3.53
Advisor Dr. Harold J. Metcalf

May 2014

RESEARCH

Stimulated Adiabatic Rapid Passage (STIRAP), Stony Brook University. *May 2012-Dec 2012*

- We excite a beam of 2^3S metastable helium atoms to Rydberg States (n=15 -50) using Stimulated Rapid Adiabatic Passage (STIRAP). It is done as atoms pass through two, slightly overlapped laser beams at 796 nm and 389 nm in the counter-intuitive order, coupled by the intermediate 3^3P state. Funded by ONR.

Adiabatic Rapid Passage, Stony Brook University. *Jan. 2013- Present*

- Optical forces were studied by means of Adiabatic Rapid Passage on metastable Helium. Current experiments involve stimulated Doppler shifts through detuning to determine the velocity spread of the ARP force. Funded by ONR.

Research Journal <http://laser.physics.sunysb.edu/~dragan/>

WORKS PRESENTED

Symposium on Undergraduate Research at OSA's 96th Annual Meeting:

Frontiers in Optics 2012/ Laser Science XXVIII Meeting *Rochester NY, October 15th 2012*
"Using STIRAP to Excite Helium Atoms to Rydberg States"

Celebration of Undergraduate Research & Creativity

Stony Brook University, April 24th 2013
"Using Laser Light to Excite Helium Atoms to High Energy States"

Symposium on Undergraduate Research at OSA's 97th Annual Meeting:

Frontiers in Optics 2013/ Laser Science XXIX Meeting *Orlando FL, October 7th 2013*
"Generating Robust Forces by Pulsed Adiabatic Rapid Passage on Metastable Helium"

EMPLOYMENT

Lax Hut Unlimited Inc. March 2008- Feb. 2010.

Singletons at Tobay Beach June- August 2010 and 2011.

The Woodlands June- August 2012.

The Carlyle on the Green June- August 2013.

SKILLS

Programming: C++, Fortran, Gnuplot, HTML/CSS, ImageJ, L^AT_EX, Maple, Mathematica, MATLAB, Microsoft Office.

Operating Systems: Windows, Mac OS X, Linux, UNIX

Studio Art Machine Shop, Wood Shop, Soldering, Plaster Mold Making, Raku Firing.

ACTIVITIES/ORGANIZATIONS

SBU Men's Lacrosse Club, President 2012-2013, Vice President 2011-2012, Member 2010-2011

WUSB 90.1fm, On-Air Radio DJ, Studio Engineer 2010-2012

Sports Club Council, 2010-2013

Society of Physics Students (SPS)

Optical Society of America (OSA)

American Physical Society (APS)

AWARDS AND HONORS

Sigma Phi Sigma, National Physics Honor Society, Inducted May 2013

National Honor Society

National Spanish Honor Society

National Math Honor Society

AP Scholar

Captain of Varsity Lacrosse (Twice Lettered)

REFERENCES

Harold J. Metcalf, Distinguished Teaching Professor, Ph.D

Harold.Metcalf@stonybrook.edu

(631) 632-8185/632-8184

Vladimir J. Goldman, Professor, Ph.D

Vladimir.goldman@stonybrook.edu

(631) 632-9000/8162

Maria Concepcion Gonzalez-Garcia, Associate Professor, Ph.D

concha@insi.physics.sunysb.edu

(631) 632-7971

Leonardo Rastelli, Associate Professor, Ph.D

Leonardo.Rastelli@stonybrook.edu

(631) 632-4158