

CURRICULUM VITAE

Updated July 2014

NAME Aaron Lee Cecala

Personal

Date of Birth: August 12, 1980
Place of Birth: Springville, NY, USA
Citizenship: USA

CONTACT INFORMATION

Mailing address Department of Biology
Elizabethtown College
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EDUCATION

2009 PhD Neurobiology & Anatomy University of Rochester

Thesis: *Adaptive Control of Primate, Head- Unrestrained Gaze Shifts*
(Advisor: Edward G. Freedman)

2005 M.S. Neurobiology & Anatomy University of Rochester
(Advisor: Edward G. Freedman)

2002 B.S. Neuroscience/Psychology Allegheny College
Cum Laude; Honors in Psychology

Thesis: *"Mapping of Olfactory Responses to CO₂ in the Adult Rat Olfactory Epithelium"* (Advisor: E. Lee Coates)

TEACHING EXPERIENCE

Elizabethtown College (Elizabethtown, PA)

2010 – Present Assistant Professor Biology Department
Bio 111/111L: Molecules, Cells and Animal Systems
Bio 201/202: Human Anatomy and Physiology I & II
Bio 341: Comparative Mammalian Anatomy
Bio 324: General Physiology
Bio 324L: General Physiology Lab
Bio 314: Behavioral Neurobiology
Bio 379: Advanced Studies in Anatomy and
Physiology
Bio 480: Independent Study
 Fall 2013: Skeletal Markers of Disease
Bio 481: Directed Study
 Spring 2013: Pediatric Cardiovascular Disease
Cog Sci 462: Cognitive Science Capstone Course

Research Mentor – Allie Martin '12 (Biology Independent Study)
Dan Silver '12 (Biology Independent Study)
Alisha Martin '13 (Biology Honors Thesis)
Brittany Benjamin '13 (Biology Honors Thesis)
Christopher Macomb '13 (Biology Honors Thesis)
Madison Brown '14 (Biology Honors Thesis)

Honor Thesis Committee Member (Non-Biology, Department Listed)
Liz Shea '12 (Music Therapy)
Joanna Davis '13 (Occupational Therapy)
Emalee Hartman '13 (Occupational Therapy)
Kayla Swope '14 (Occupational Therapy)
Amanda McCaffrey '14 (Sociology & Anthropology)

University of Pittsburgh (Pittsburgh, PA)

Summer 2014 Adjunct Professor Neuroscience Dept.
NROSCI 0080: Brain and Behavior (non-majors)

Research Mentor Lucine Oganessian '16 (University of California-Berkeley; co-mentored with Dr. Matthew Smith, Department of Ophthalmology)

Franklin and Marshal College (Lancaster, PA)

2009-2010	Visiting Assistant Professor	Biology Department
Fall 2009	Bio 373: Neural Control of Movement (Lecture & Lab)	
Fall 2009	FND 158: Biology, Ethics and Society (Lib. Studies)	
Spring 2010	Bio 240: Introductory Neuroscience (Lecture & Lab)	
Spring 2010	Bio 391: Directed Reading: Kinesiology	
Research Mentor	Nitzy Bustamante '11 (Biology Independent Study)	
	Geoff Dreyer '10 (Psychology Collaborative Res.)	

Saint John Fisher College (Pittsford, NY)

2007-2008	Adjunct Professor	Biology Department
Fall 2007	Human Anatomy Lab Instructor (School of Nursing)	
Spring 2008	Zoology Lab Instructor	
Fall 2008	Comparative Chordate Anatomy (Lecture & Lab)	

University of Rochester (Rochester, NY)

Spring 2008 & 2009	Guest Lecturer on Cerebellar Structure and Function Integrative and Systems Neuroscience (NSC 531) Interdepartmental Graduate Program in Neuroscience
Summer 2008	Student Mentor (Sheena Czipri- Bucknell University) Biomedical Sciences Summer Research Experience
	Student Mentor (Luke Shaw- U of Rochester) Center for Visual Sciences Summer Research
Summer 2006	Student Mentor (Nick Hindy-Cornell University) Center for Visual Sciences Summer Research
Fall 2004 & 2005	Teaching Assistant: Mind, Brain, & Behavior 2 nd Year Medical School Curriculum

Allegheny College (Meadville, PA)

2001-2002	Teaching Assistant Junior Seminar Supervisor: E. Lee Coates
2000-2002	Teaching Assistant Physiology of Psychology Laboratory Supervisors: Jeffery Hollerman and Jeffery Cross

Summer 2000 Teaching/Resident Assistant
HHMI-Neuroscience High School Summer
Experience
Supervisor: Jeffery Cross

RESEARCH APPOINTMENTS

University of Pittsburgh (Pittsburgh, PA)

Summer 2013	Visiting Scholar	Department of Otolaryngology (Sponsor: Neeraj Gandhi)
Summer/Fall 2014	Visiting Scholar	Department of Otolaryngology (Sponsor: Neeraj Gandhi)

RESEARCH INTERESTS

Neural mechanisms underlying sensorimotor adaptation/motor learning
Midbrain and cerebellar mechanisms underlying eye-head coordination
Development and aging of sensory and motor systems
Bioethics (specifically neuroethics)
History of science and science education

HONORS AND AWARDS

2013	Finalist for Richard Crocker Outstanding Service to Students Award (Elizabethtown College)
2004-2006	NIH "Training in the Visual Sciences" Fellowship, University of Rochester (PI: David Williams)
2002-2004	NIH T32 Interdepartmental Neuroscience Training Fellowship University of Rochester (PI: Howard Federoff)
2002	Association for Chemoreceptive Sciences (AChemS) travel grant Sponsor: E. Lee Coates
2001	Faculty for Undergraduate Neuroscience (FUN) travel grant Society for Neuroscience Meeting Sponsor: E. Lee Coates
2001	HHMI-Summer Undergraduate Research at Emory (SURE) Emory University, Atlanta, GA Project: Spatial distribution of rodent olfactory epithelial responses to CO ₂ Sponsor: John W. Scott, Department of Cell Biology

2000 HHMI-Summer Research Fellowship
Allegheny College, Meadville, PA
Project: Response of rodent olfactory epithelium to CO₂
Sponsors: E. Lee Coates and Jeffery Cross

INVITED TALKS

November 2013 Millersville University
Title: Gaze Adaptation as a Window into the Neural Mechanisms of Motor Learning
Department of Biology, Animal Behavior Colloquium

July 2012 Harrisburg Area Community College (HACC)
Title: Anatomy of the Nervous System
Guest Lecturer in Human Biology Course (Bio 111)

March 2012 Janelia Farm - Howard Hughes Medical Institute
Title: Dissecting the Neural Circuitry of Target Capture Across Species

October 2011 Harrisburg Area Community College (HACC)
Title: Neuropathology – The Basics
Guest Lecturer in Human Biology Course (Bio 111)

May 2011 Harrisburg Area Community College (HACC)
Title: Neuropathology – The Basics
Guest Lecturer in Human Biology Course (Bio 111)

February 2009 Franklin and Marshall College
Title: Primate Gaze Adaptation: Gaze, Eye, or Head?

May 2006 Annual Neuroscience Retreat, University of Rochester
Title: Human Gaze Adaptation: Gaze, Eye, or Head?

DEPARTMENT AND UNIVERSITY SERVICE

Elizabethtown College

2013-2014 Call to Lead Mentor (Phil Spector '17)

2013-present Faculty Observer to Board of Trustees Meeting
2013 Winter & Fall Meetings
2014 Spring Meeting

Spring 2013 Goldwater Scholarship Nominations (*ad hoc* reviewer)

2012-2015	Academic Council 2012-14: Representative on Core Committee Spring 2015: Vice Chair
2012-present	Cognitive Science Minor Director
2012, 2013	Open Book Program Discussion Leader
Spring 2011-present	Health Professions Advisory Committee (HPAC) Summer 2013 – present: Chair 2012 –present: Website Administrator (with Janice Davis, Biology Coordinator) 2012-present: Medicus (premed club) Advisor
2011-2013	Faculty Athletics Mentor (Men’s Cross Country Team)
2011-2014	Athletics Committee
2011- Present	Science in Motion Advisory Committee
2011- 2014	Scholarship and Creative Arts Day Committee 2012-2014 – Program Subcommittee
2011- 2014	Elizabethtown College Strategic Plan 2011-2012: Community Working Group 2013-2014: “Strengthening and Expanding Programs” Working Group

Franklin & Marshall College

2009-2010	Biological Foundations of Behavior Program Committee
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University of Rochester

2005-2006	Neurobiology & Anatomy Admissions Committee Student Representative
2005-2009	Neurobiology & Anatomy Web Committee Student Representative
2005-2006	Center for Visual Sciences Boynton Colloquium Student Representative
2004-2006	Neuroscience Student Seminar Committee Member

2002-2003

Graduate Student Society Representative
Neuroscience Cluster

PUBLIC OUTREACH

2012-2013

Qualified Scientist for Olivia Ober (Senior research project at Pequea Valley High School)

PUBLICATIONS

***Indicates Elizabethtown College Student**

^Indicates Undergraduate Student

Journal Articles:

*Swope, KM, **Cecala, AL**, Potter, AM. (in preparation). Sexuality and spinal cord injury: An evidence update for occupational therapists. *Occupational Therapy Practice*.

A.L. Cecala, ^I. Smalianchuk, SB Khanna, MA Smith, NJ Gandhi (in preparation). Color Cannot be Used as a Contextual Cue During Rhesus Monkey Saccadic Adaptation.

*Martin, A, *Benjamin, B, *Macomb, C, **Cecala, A.L.** (submitted for review). Can color be used as a context cue during human saccadic adaptation? *BIOS*

A.L. Cecala (2014). Separating Self From Environment: Using a classic paper by Bell as a platform for discussing the role of corollary discharge-like signals in sensory perception and movement control. *Adv. Physiol. Ed.* 38:12-19.

*E. Shea, G.A. Behrens, **A.L. Cecala**. (in press). A Survey of Music Therapists' Understanding of the Neurobiology of Alzheimer's Disease. *J. Music Therapy*

A.L. Cecala (2012). Using a classic paper by Evarts as a platform for discussing cortical control of skeletal muscle in awake, behaving primates. *Adv. Physiol. Ed.*, 36:246-50.

A.L. Cecala, E.G. Freedman (2009). Head-Unrestrained Gaze Adaptation in the Rhesus Macaque. *J. Neurophysiol*, 101(1):164-83

A.L. Cecala, E.G. Freedman (2008). Amplitude Changes in Response to Target Displacements During Human Eye-Head Movements, *Vision Research*, 48(2):149-66.

E.G. Freedman, **A.L. Cecala** (2008). Oblique gaze shifts: head movements reveal new aspects of component coupling. In: Leigh RJ, Kennard C (eds) *Using eye movements as an experimental probe of brain function*. Elsevier, Amsterdam.

Abstracts (professional conferences):

A.L. Cecala, I. Smalianchuk, SB Khanna, MA Smith, NJ Gandhi (in preparation). Color Cannot be Used as a Contextual Cue During Rhesus Monkey Saccadic Adaptation. Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2014. Online.

A.L. Cecala, S. Quessy, E.G. Freedman. Amplitude Changes in Response to Target Displacements During Rhesus Macaque Eye-Head Movements Program *Abstract Viewer/Itinerary Planner*. San Diego, CA: Society for Neuroscience, 2007. Online.

A.L. Cecala, E.G. Freedman. Amplitude Changes in Response to Target Displacements During Human Eye--Head Movements Program No. 858.13. *2005 Abstract Viewer/Itinerary Planner*. Washington, DC: Society for Neuroscience, 2005. Online.

A.L. Cecala, E.L. Coates, and J.W. Scott (2002) Mapping Olfactory Responses to CO₂ in Adult Rats. *Chemical Senses*.

Coates E.L. and **A.L. Cecala** (2001) Topical inhibition of nasal carbonic anhydrase in rats attenuates the olfactory receptor response to CO₂. *Society for Neuroscience Abstracts*. 27:273.09

A.L. Cecala, D.B. Hammers, and E.L. Coates (2001) CO₂-sensitive olfactory receptors in rats. *Chemical Senses*. 26(8):1094.

Abstracts (Elizabethtown College Scholarship and Creative Arts Day):

*Brown, ME, **Cecala, AL** (2014). How does exposure to anatomical terminology affect the scanning patterns of undergraduate students viewing of medical illustrations and anatomical figures?

*Swope, K, **Cecala, AL**, Potter, AM. (2014). Sexuality in Individuals with Quadriplegia or Paraplegia: An Exploration of Adaptive Strategies and Equipment as Well as Educational Techniques for Occupational Therapists.

*Benjamin, B, *Martin, A, *Macomb, C, **Cecala, AL** (2013). Can color be used as a context cue during saccadic adaptation?

*Davis, J, *Hartmann, E, **Cecala, AL**, Waltermire, D (2013). Is the war really over? PTSD's Aftermath.

*E. Shea, G.A. Behrens, **A.L. Cecala**. (2012). A Survey of Music Therapists' Understanding of the Neurobiology of Alzheimer's Disease.

Book Reviews:

A Review of *Neuroeconomics: Decision Making and the Brain* (2nd Edition) edited by Paul Glimcher and Ernst Fehr. *The Journal of Undergraduate Neuroscience Education (JUNE)*, In preparation

A Review of *The Spark of Life: Electricity in the Human Body* by Frances Ashcroft. *The Journal of Undergraduate Neuroscience Education (JUNE)*, In preparation

A Review of *Neuroscience: A Historical Introduction* by Mitchell Glickstein *The Journal of Undergraduate Neuroscience Education (JUNE)*, Fall 2014, 13(1):R5-R6.

A Review of *Beyond the Brain: How Body and Environment Shape Animal and Human Minds* by Louise Barrett. *The Journal of Undergraduate Neuroscience Education (JUNE)*, Fall 2013, 12(1): R1-R2.

A Review of *Creating Modern Neuroscience: The Revolutionary 1950s* by Gordon Shepherd. *The Journal of Undergraduate Neuroscience Education (JUNE)*, Spring 2013, 11(2): R1-R2

GRANTS

Faculty Grant (Elizabethtown College) - \$3,000 – “Neural Substrate Underlying Rhesus Macaque Gaze Shifts to Moving Visual Stimuli” - Funded

Grant (Elizabethtown College) - \$3,500 – Dean's Grant for “Human Anatomy & Physiology Lab Manual Illustration” - Funded

Faculty Grant (Elizabethtown College) - \$2,825 – “Effects of Aging, Context, and Reward on Motor Learning in the Human Oculomotor System” - Funded

Grant (Elizabethtown College) - \$3,000 – Dean/OSRP Grant for “University of Pittsburgh Visiting Scholar Housing Support” - Funded

Sloan Foundation Fellowship - \$50,000 – Not Funded

MANUSCRIPT REVIEW

Journal of Neurophysiology (*ad hoc*)

Open Journal of Neuroscience (*ad hoc*)

BIOS (Tri Beta journal for undergraduate biological research) (*ad hoc*)

Journal of Undergraduate Neuroscience Education (JUNE)

Review Board 2014- present

GRANT REVIEW

Summer 2014 Faculty for Undergraduate Neuroscience – SFN Travel Awards

Spring 2014 National Science Foundation – IOS -Pre-Approval

Spring 2014 National Science Foundation – GRFP Full Length

Fall 2013 National Science Foundation – IOS -Full Length

Spring 2013 National Science Foundation – IOS -Pre-Approval

2010, 2011 Pennsylvania Academy of Sciences

PROFESSIONAL ORGANIZATIONS

2005- Pres. Society for Neuroscience Member

2010- 2011 Lehigh Valley Society for Neuroscience Member

2001- Pres. Faculty for Undergraduate Neuroscience Member

2011- 2012 Institute on Religion in an Age of Science Member

2000-2002 Association for Chemoreceptive Sciences Student Member

1999- Pres. Tri-Beta Member
Allegheny College (Phi Epsilon Chapter)
President (2000-2001), Vice President (2001-2002)

2000- Pres. Psi Chi
Allegheny College, Treasurer (2001-2002)

Member

WORKSHOPS/INVITED CONFERENCES ATTENDED

July 2013 Gordon Conference – Eye Movements: The Motor System
that Sees the World (Stonehill College, Easton, MA)

February 2013 Council for Undergraduate Research - Dialogues
(Washington, DC)

REFERENCES:

Dr. Edward G. Freedman, Associate Professor of Neurobiology and Anatomy

University of Rochester
School of Medicine and Dentistry
601 Elmwood Ave, Box 603
Rochester, New York 14642
phone: 585.273.1892
email: ed_freedman@urmc.rochester.edu

Dr. Marc Schieber, Professor of Neurology

University of Rochester
School of Medicine and Dentistry
601 Elmwood Ave, Box 673
Rochester, New York 14642
phone: 585.275.3369
email: mhs@cvs.rochester.edu

Dr. Theresa Westbay, Associate Professor of Biology

Department of Biology
St. John Fisher College
3690 East Avenue
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phone: 585.385.8156
email: twestbay@sjfc.edu

Dr. Mark Olson, Associate Professor

Department of Biology
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Dr. Thomas E. Murray, Professor of Biology

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Dr. Neeraj Gandhi, Associate Professor, Department of Otolaryngology

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University of Pittsburgh
203 Lothrop St
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