

**Wake Forest School of Medicine
Curriculum Vitae**

NAME: Paul J. Laurienti, M.D., Ph.D.

**CURRENT
ACADEMIC TITLE:** Professor, Department of Radiology

ADDRESS: Department of Radiology
Division of Radiologic Sciences
Wake Forest University School of Medicine
Medical Center Boulevard
Winston-Salem, North Carolina 27157-1088

Telephone: (336) 716-3261
E-mail: plaurien@wakehealth.edu

EDUCATION:

College: University of Colorado at Denver 1986-1987
University of Houston 1987-1991
Houston, Texas
B.S. (Psychology)

Graduate School: Neuroscience Graduate Program 1991-1995
University of Texas Medical Branch
Galveston, Texas
Ph.D.

Dissertation Title: Physiologic Properties and Serotonergic Modulation of the
Parapodial Neuromuscular Junction in *Aplysia Brasiliana*
Dr. James E. Blankenship, Ph.D. - Adviser

Predocctoral: Predocctoral Fellow 1994-1995
NINDS Training Grant
Neuroscience Graduate Program
Marine Biomedical Institute
University of Texas Medical Branch
Galveston, Texas

Honors and Awards: National Student Research Forum's Anatomy 1995
and Neuroscience Poster Award
George Sealy Research Award in Neurology 1995
Galveston Chapter Poster Award 1995
Society of Neuroscience
James E. Beall II Memorial Award in 1996
Anatomy and Neurosciences

Medical School: University of Texas Medical Branch 1995-1999
Galveston, Texas
M.D.

Honors and Awards:	Dean's List	1996, 1997, 1998, 1999
	Honors Graduate	1999
	Alpha Omega Alpha	1998
	Phi Kappa Phi	1998

POSTDOCTORAL TRAINING:

Residency:	Department of Radiology Wake Forest University School of Medicine Winston-Salem, North Carolina	1999
Fellowship:	Postdoctoral Fellow National Institute of Health Training Grant Department of Neurobiology and Anatomy Wake Forest University School of Medicine Winston-Salem, North Carolina Mentor: Dr. Barry Stein	1999-2000

PROFESSIONAL LICENSURE:

United States Medical License Passed USMLE Parts I, II	1997, 1999
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ACADEMIC APPOINTMENTS:

Assistant Instructor School of Allied Health Sciences Division of Human and Basic Science University of Texas Medical Branch Galveston, Texas	1994
Consulting Scientist to Jin Mo Chung, Ph.D. Marine Biomedical Institute University of Texas Medical Branch Galveston, Texas	1997
Research Associate Department of Radiology Wake Forest University School of Medicine	2000-2002
Assistant Professor Department of Radiology Wake Forest University School of Medicine	2002-2006
Associate Department of Biomedical Engineering Division of Radiologic Sciences Wake Forest University School of Medicine	2003-present
Associate Professor Department of Radiology Wake Forest University School of Medicine	2006-2011
Associate Professor Translational Science Institute Wake Forest University School of Medicine	2010-2011

Professor Department of Radiology Wake Forest University School of Medicine	2011-present
Professor Translational Science Institute Wake Forest University School of Medicine	2011-present

PROFESSIONAL APPOINTMENTS AND ACTIVITIES:

National:

NIH Study Sections

Ad hoc Member Clinical/Translational Study Section	June 2011
Ad hoc Member Psychosocial Risk and Disease Prevention (PRDP) Study Section	Sept 2010
Charter Member Medical Imaging Study Section (MEDI)	2006-2010
Ad hoc Member MEDI Study Section	May 2006 Feb. 2006 Oct. 2005 June 2005 Feb. 2005 Oct. 2004
Neuroscience Blueprint Software Design NINDS Study Section	2007
Neuroscience Blueprint Center NINDS Study Section	2006
NCCAM Study Section	2004

NSF Study Sections

Study Section Member Major Instrumentation Grant Review	April 2013
Ad hoc Member Cognitive Neuroscience Study Section	March 2017

VA Study Sections

Ad hoc Member Neurodegenerative Diseases Rehabilitation Research Study Section	March 2017
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NIH Advisory Committees

Member ACCORD – MIND Clinical Trial Planning Committee Bethesda, Maryland	2002
Ad hoc member NIH/NIDA Institutional Review Board	2005

Other National Committees

Grant Reviewer	2010
University of Pittsburgh	2011
Claude Pepper Older Americans Independence Center	
Program Committee	2012
Compenet 2012	
3rd Workshop on Complex Networks	
Melbourne, Florida, USA	
Grant Reviewer	2013
National Science Foundation	
Brain Behavior and Neurosciences Focus Group	2013
Carolinas Medical Center	
University of North Carolina Charlotte	
Charlotte, NC	
Grant Reviewer	2015
Cal-BRAIN Seed Grant Program	
Grant Reviewer	2015
UT-BRAIN Seed Grant Program	

International:

Grant Reviewer	2009
Ireland Health Research Board	
Grant Reviewer	2010
Experimental and Translational Medicine	
Scottish Government	
External Member Dissertation Committee	2010
Concordia University	
Department of Psychology	
Montreal, Canada	
Fellow	2013-present
Leading Causes of Life Initiative	
Winston Salem, NC	
Cape Town, South Africa	
http://www.leading-causes.com	
Grant Reviewer	2014
European Science Foundation	

Editorial work:

Ad hoc reviewer

Brain Research
Brain Tomography
Cerebral Cortex
Cognitive Neurodynamics
Cognitive Processing
European Journal of Neuroscience
Experimental Aging
Experimental Brain Research

Frontiers in Integrative Neuroscience
Human Brain Mapping
Journal of Cognitive Neuroscience
Journal of Experimental Psychology: Human Perception and Performance
Journal of Neurophysiology
Journal of Neuroscience
Neurobiology of Aging
NeuroImage
Neuropsychologia
NeuroReport
Neuroscience
Nuclear Medicine and Molecular Imaging
Perception and Psychophysics
Proceedings of the National Academy of Science
PLoS One
PLoS Computational Biology

INSTITUTIONAL SERVICE:

Faculty Appointments:

Kulynych Center for Memory and Cognition Research Wake Forest University School of Medicine	2005-present
J. Paul Sticht Center on Aging and Rehabilitation Wake Forest University School of Medicine	2008-present
Diabetes Research Center Wake Forest University School of Medicine	2009-present
Translational Science Center Wake Forest University - Reynolda Campus	2009-present
Translational Science Institute Wake Forest University School of Medicine	2010-present
Center for Bimolecular Imaging Wake Forest University School of Medicine	2012-present
Center for Integrative Medicine Wake Forest University School of Medicine	2012-present

Directorships/Chairmanships:

Director Functional Magnetic Resonance Imaging Lecture Series Wake Forest University School of Medicine	2001-2003
Associate Director Medical Student Research Training Program Wake Forest University School of Medicine	2005-2006
Associate Director ANSIR Laboratory Wake Forest University School of Medicine	2006-2008
Assistant Vice Chairman Radiology Research, Department of Radiology Wake Forest University School of Medicine	2006-2009

Co-Director MMS/PhD Program Wake Forest University School of Medicine	2009-2011
Director MD/PhD Program Wake Forest University School of Medicine	2006-2012
Director Medical Student Research Training Program (T35DK007400) Wake Forest University School of Medicine	2009-2012
Chair Research Awards Day Committee Wake Forest University School of Medicine	2012
Director Laboratory for Complex Brain Networks (LCBN) Wake Forest University School of Medicine	2009- present
Director Research Core for Translational Science Center Wake Forest University Reynolda Campus	2010-present

Dean Appointed Committee:

General Clinical Research Center Advisory Committee Wake Forest University School of Medicine	2005-2011
Institutional Review Board Wake Forest University School of Medicine	2006-2007
Graduate School of Biomedical Science Wake Forest University School of Medicine	2006-2011
Wake Forest University Independent Data Safety and Monitoring Board Wake Forest School of Medicine	2008-2012
Intramural Research Support Committee Wake Forest School of Medicine	2008-2010
Wake Forest University Independent Data Safety and Monitoring Board <i>ad hoc</i> Wake Forest School of Medicine	2012-2015
Research Advisory Council Wake Forest School of Medicine	2012-2015

Other Committees and Service:

Member Center for Investigative Neuroscience Wake Forest University School of Medicine Winston-Salem, North Carolina	2001-2004
Interviewer Medical School Admissions Wake Forest University School of Medicine	2001-2005
Member	2001-present

Neuroscience Graduate Program Faculty
Wake Forest University School of Medicine
Member 2002-2003
Kulynych Intramural Grant Review Committee
Wake Forest University School of Medicine

Member 2002-2005
Neuroscience Graduate Program Admissions Committee
Wake Forest University School of Medicine

Member 2002-present
Graduate School Faculty
Wake Forest University School of Medicine

Advisory Board Member 2002-2009
Kulynych Center for Memory and Cognition Research
Wake Forest University School of Medicine

Counselor 2003-2004
Western North Carolina Society for Neuroscience
Wake Forest University School of Medicine

Faculty Advisor 2003-2005
MD/PhD Program
Wake Forest University School of Medicine

Member 2006-2008
Translational Science Institute Committee
Novel and Clinical Translational Methodologies
Wake Forest University School of Medicine

Member 2006-present
Pepper OAIC Data Safety and Monitoring Board
Wake Forest University School of Medicine

Member 2007-present
J. Paul Sticht Center on Aging
Wake Forest University School of Medicine

Member 2008-2010
Translational Science Institute Committee
Research Education, Training and Career Development
Wake Forest University School of Medicine

Member 2009-present
Center for Diabetes Research
Wake Forest University School of Medicine

Reviewer 2009
Internal Mini-Study Section
Office of Research
Wake Forest University School of Medicine

Ad Hoc Member 2010-2012
Committee on Admissions
Wake Forest University School of Medicine

Graduate School Reorganization Task Force Wake Forest University School of Medicine	2010
Member Neurosciences Graduate Executive Committee	2010-present
Member Center Integrative Medicine Wake Forest University School of Medicine	2012-present
Search Committee Member McCreary Endowed Chair Department of Psychiatry and Behavioral Medicine Wake Forest University School of Medicine	2013-2014
Member Pepper OAIC Advisory Committee Wake Forest University School of Medicine	2014-present
Member Centers and Cores Advisory Committee Wake Forest University School of Medicine	2016-present
Member Women in Medicine and Science Wake Forest University School of Medicine	2016-2017
Member Center for Research on Substance Use and Addiction Wake Forest University School of Medicine	2016-present

Institutional Development:

Brain Training 101 Half Century Club Founders' Day Program, Wake Forest University, Winston Salem, NC	02/2011
Is Brain Fitness the Fountain of Youth Dean's Forum, Bridger Field House, Wake Forest University, Winston Salem, NC	02/2011
Breaking Brains Planned Gift Advisory Council, Wake Forest Baptist Medical Center, Winston Salem, NC	10/2013
Aging Brain Translational Science Center's Speakers Bureau, Archdale Senior Center, Archdale, NC	12/2013
Memory: It's About Your Brain and Your Body Dean's Forum, Bridger Field House, Wake Forest University, Winston Salem, NC	03/2014
Memory: It's About Your Brain and Your Body Lexington Medical Center Foundation, Lexington Medical Center, Lexington, NC	05/2014
Rethinking the Brain Homecoming and Reunion Weekend Wake Forest University, Winston Salem, NC	09/2014

Engage Magazine Cover Story 12/2014
 Wake Forest Baptist Medical Center Development Office
 Video Interview: <https://vimeo.com/111744750>

Memory: It's About Your Brain and Your Body 03/2014
 Dean's Forum, Bridger Field House, Wake Forest University,
 Winston Salem, NC

Memory: It's About Your Brain and Your Body 05/2014
 Lexington Medical Center Foundation, Lexington Medical Center,
 Lexington, NC

Connected Systems 10/2015
 Wake Forest Baptist Medical Center Comprehensive Campaign
 Launch Celebration, Winston Salem, NC
<https://vimeo.com/141178258>

PROFESSIONAL MEMBERSHIPS AND SERVICE:

Texas Society for Biomedical Research UTMB Student Chapter	1993-1995
Society for Neuroscience, Galveston Chapter	1993-1996
Sigma Xi National Research Honor Society	1993-present
Society for Neuroscience	1993-2010
American Medical Association	1995-1999
Texas Medical Association	1995-1999
Organization for Human Brain Mapping	2000-present
International Multisensory Research Forum	2002-present
Western North Carolina Society for Neuroscience	2003-present

HONORS AND AWARDS:

The National Institutes of Health LRP Scholar	2003-2009
Wake Forest University "New Investigator in Clinical Sciences Award"	2005
Wake Forest University "Outstanding Mid-Career Faculty Research Award"	2011
Linda and Phillip Lader Renaissance Weekend Fellow	2012
Wake Forest University "Team Science Award"	2014
Academy of Radiology Research Distinguished Investigator Award	2016
Wake Forest University "Team Science Award"	2017

SELECTED MEDIA COVERAGE:

Caffeine National Geographic Cover Story	01/2005
A Brain on Caffeine Current TV Segment https://www.youtube.com/watch?v=2QkvclQrEBk	03/2006
Caffeine's Effects on the Human Brain ABC News reported by Lisa Stark http://abcnews.go.com/WNT/video/caffelines-effects-human-brain-interacts-blood-flow-lisa-stark-health-16141081	04/2012
Emergency Room Cases Involving Energy Drinks Increase ABC News reported by Lisa Stark http://abcnews.go.com/WNT/video/emergency-room-cases-involving-energy-drinks-increase-18233110	01/ 2013
Untangling the Human Connectome Genetic Engineering & Biotechnology News Interview for Special Report http://gen.epubxp.com/i/400822-nov1-2014/49	11/2014

PROFESSIONAL INTERESTS:

Dr. Laurienti is the Director of the Laboratory for Complex Brain Networks (LCBN). In 2006, Drs. Paul Laurienti, Jonathan Burdette and Satoru Hayasaka began to discuss how chaos theory might help explain emergence and complexity in the human brain. Through their discussions, they began looking for ways and methods that could capture these non-linear processes. Where traditional neuroscience could use functional magnetic resonance imaging (fMRI) to take snapshots of the brain, it was not sufficient for capturing and studying the brain's dynamic complexity. However, an emerging area of research called Network Science was offering methods and means to quantify and analyze dynamic systems. Believing that no single cognitive process could be isolated without affecting the rest of the brain's system, they moved forward in 2009 to create the Laboratory for Complex Brain Networks. Utilizing state-of-the-art technology, the LCBN collaborates with other national and international scientists to envision and develop new and innovative methods for studying and analyzing emergence in brain networks as well as other complex systems. Ongoing studies use whole-brain connectivity to identify critical network nodes, network neighborhoods, and dynamic changes that occur under various cognitive states. Network science is proving to be a powerful tool for assessing brain structure and function and the LCBN is currently evaluating how dynamic changes in network connectivity may be critical for age-related cognitive decline. Furthermore, through multiple collaborations we are evaluating how obesity and physical function are related to cognitive deficits and altered network connectivity in older adults.

GRANTS - CURRENT:

PI or Primary Co-Investigator

LCBN / Sticht Center	07/01/2012 - 6/30/2017	0% effort
Network Imaging Initiative	\$200,000 total	
Principal Investigator: Paul Laurienti		

R01 MH097751 12/01/2012 - 11/30/2017 2% effort
 NIDA \$629,578 annual
 Adolescent Cannabis Use, Complex Brain Network Connectivity & Schizophrenia Risk

Principal Investigator: Beng-Choon Ho
 Subcontract PI: **Paul Laurienti**

R01 ES008739 03/01/2013 - 02/28/2018 20% effort
 NIEHS \$489,907 annual
 CBPR on Pesticide Exposure & Neurological Outcomes for Latinos: PACE4
 Co-Principal Investigator: Thomas Arcury and **Paul Laurienti**

P30 AG21332 07/15/2013 - 06/30/2018 2% effort
 NIA \$842,619 annual
 Wake Forest School of Medicine Claude D. Pepper Older Americans Independence Center
 Principal Investigator: Stephen Kritchevsky

P01 AA021099 09/01/2013 - 08/31/2017 35% effort
 NIAAA \$566,610 annual
 Translational Studies On Early-Life Stress And Vulnerability To Alcohol Addiction
 Principal Investigator: Jeffrey Weiner
 Project Principal Investigator: **Paul Laurienti**

Enabling Technology FY13 01/01/2014 - 09/30/2017 8% effort
 DOD – Secretary of Defense \$184,878
 Mitigation of Symptoms for PTSD (post traumatic stress disorder) with or without mild TBI (traumatic brain injury)
 Principal Investigator: Charles Tegeler

WFU TSC 07/01/2015 - 06/30/2018 0% effort
 Pilot Grant
 Physical Function, Physical Activity and the Aging Brain
 This project will conduct a secondary analysis of CLIP II data to look at the effects of physical function and community structure in the brain.
 Principal Investigators: Jack Rejeski / **Paul Laurienti**

WFUBMC Pepper Center 07/01/2016 - 06/30/2018 0% effort
 Pilot Grant
 Using baseline brain imaging to predict success in weight loss interventions in older adults
 This pilot will use machine learning to predict successful weight loss using MRI data.
 Principal Investigator: **Paul Laurienti**

R01 04/01/2017 - 03/31/2020 8.3% effort
 NCCIH Year 3
 A Randomized Trial Of Dance On Mood, Balance And Brain In Alzheimer's Disease
 Principal Investigator: Christina Hugenschmidt

Training Grant Mentor

K25 EB012236 07/01/2012 - 06/30/2017 0% effort
 NIDDK \$159,066 annual
 Statistical Methods for Whole-Brain Connectivity Networks
 Principal Investigator: Sean Simpson

GRANTS - PENDING:

PI or Primary Co-Investigator

R01 ES008739 07/01/2017 - 06/30/2022 25% effort
NIEHS \$489,907
The Effect of Pesticide Exposure on cognitive and Brain Development in Latino Children: PACE5
This proposal is an extension of the work that we have performed over the past 20 years (R01ES008739-19) and will evaluate the effects of pesticide exposure on neurobehavioral and brain development in children in Latino farmworker families.
Co-Principal Investigators: **Paul Laurienti** and Thomas Arcury

R01 04/01/2018 - 03/31/2023 5.0% effort
NIAAA \$361,609
Tracking Ethanol's Effects on Functional Brain Activity
The primary goal of this project is to better understand how ethanol changes the functional activity in the non-human primate brain.
Principal Investigator: James Daunais

P50 12/01/2017 - 11/30/2022 22% effort
NIAAA \$231,424
How Mindfulness Modulates Craving And Brain Networks In Moderate-To-Heavy Drinkers
This project has the potential to guide the development of future clinical trials to better target clinical outcomes by understanding corresponding mechanisms supporting meditation-related reductions in alcohol craving.
Principal Investigator: Jeffrey Weiner
Project PI: **Paul Laurienti**

R01 AG047422 04/01/2018 - 03/31/23 20% effort
NIH/NIA \$499,889 annual
Resting Brain Networks and Mobility Function: B-NET
This study will apply a new paradigm to understand how aging brain networks affect mobility function to develop novel approaches to prevent age-related mobility decline in older adults.
Co-Principal Investigators: Stephen Kritchevsky and **Paul Laurienti**

PAST GRANT HISTORY:

PI or Primary Co-investigator

T35 DK007400 05/01/1980 - 04/30/2015
NIDDK
Short Term Research Training of Medical Student
Principal Investigator: **Paul Laurienti** (2009-2012)
Total Grant Amount: \$1,246,714 since 2000
Dana Foundation 11/01/2002 - 05/31/2006
Evaluating sensory dysfunction in aging using combined fMRI and MRS image analyses
Principal Investigator: **Paul Laurienti**
Total Grant Amount: \$100,000

K08 NS42568 04/01/2003 - 03/31/2009
NINDS
The Effect of Aging on Cross-Modal Sensory Processing

Principal Investigator: **Paul Laurienti**
Total Grant Amount: \$654,293

R21 NS044149 06/01/2004 - 05/31/2006
NINDS
Alteration of cross-modal sensory processing in dyslexia
Principal Investigator: Jonathan Burdette
Total Grant Amount: \$403,535

WFUBMC GCRC 10/01/2004 - 03/31/2008
The Effect of Aging on Cross-Modal Sensory Processing
This was a supplement awarded to cover expenses for MRI costs for the grant K08
NS42568
Principal Investigator: **Paul Laurienti**

R01 EB03880 04/18/2005 - 01/31/2010
NIBIB
Effect of Caffeine on functional and Perfusion MRI
Principal Investigator: **Paul Laurienti**
Total Grant Amount: \$1,250,000

WFUBMC GCRC 04/18/2005 - 01/31/2010
Effect of Caffeine on functional and Perfusion MRI
This was a supplement awarded to assist with participant screening and testing for R01
EB03880.
Principal Investigator: **Paul Laurienti**

R01 DA020074 04/10/2006 - 12/31/2009
NIDI
Decision Making in Marijuana Users
Principal Investigator: Linda Porrino
Total Grant Amount: \$1,504,017

R21 AG026353 04/15/2006 - 03/31/2009
NIA
Training Multisensory Processing in Older Adults (B-FIT)
Principal Investigator: **Paul Laurienti**
Total Grant Amount: \$431,351

WFUBMC GCRC 04/15/2006 - 03/31/2008
Training Multisensory Processing in Older Adults (B-FIT)
This was a supplement awarded to assist with participant screening and testing for grant
AG02635.
Principal Investigator: **Paul Laurienti**

R21 NS056272 07/01/2007 - 06/30/2010
NINDS
MR Imaging and Genotype/Phenotype Association in a South African Dyslexia Cohort
Principal Investigator: Jonathan Burdette
Total Grant Amount: \$353,356

Subcontract 08/01/2007 - 07/31/2010
NIH/U54RR021813 Toga (PI)
Identifying Age Related Atrophy Using Levelset Registration of Embedded Maps

Subcontract PI: **Paul Laurienti**
Total Grant Amount: \$218,921

R01 NS058700 04/01/2008 - 03/31/2013
NINDS
Genetic Epidemiology of Cerebrovascular Disease and Cognition in Diabetes
Principal Investigator: Donald Bowden
Total Grant Amount: \$3,038,706

R21 NS059793 09/20/2008 - 08/31/2010
NINDS
Development of a Power Calculation Tool for Neuroimaging Studies
Principal Investigator: Satoru Hayasaka
Total Grant Amount: \$269,360

HHSN 268200900040C 09/14/2009 - 10/31/2012
NHLBI
Systolic Blood Pressure Intervention Trial (SPRINT)
Principal Investigator: David Reboussin
Total Grant Amount: \$13,711,469

R01 NS039426 09/30/2009 - 09/29/2011
NINDS
Supraspinal Processing of Sensory Aspects of Pain
Principal Investigator: Robert Coghill
Total Grant Amount: \$168,986

R01 NS070917 05/01/2010 - 01/31/2015
NINDS
Connecting Brain Networks Across Subjects and Across Modalities
Principal Investigator: Satoru Hayasaka
Total Grant Amount: \$1,265,855

Translational Science Award 07/01/2010 - 06/30/2011
WFU Translational Science Institute
Examining the Collaboration Network at Wake Forest University School of Medicine
Principal Investigator: **Paul Laurienti**
Total Grant Amount: \$68,000

Intramural Research 07/01/2011 - 06/30/2013
Support Committee Award
Wake Forest School of Medicine
The Effects of Moderate Alcohol Use on Age Related Cognitive Decline

Principal Investigators: **Paul Laurienti** and Linda Porrino
Total Grant Amount: \$19,826

TSC Beetroot Juice Project 04/01/2013 - 06/30/2014
WFU Translational Science Center
Beetroot Juice as a Supplement to Exercise Training in Older Individuals with Hypertension
Principal Investigator: **Paul Laurienti**
Total Grant Amount: \$97,604

Industry Contract 09/01/2013 – 08/31/2014
The Hershey Company
Effects of a Cocoa Shot on the Human Brain
Co-Principal Investigators: **Paul Laurienti** / Jonathan Burdette
Total Grant Amount: \$132,121

Industry Contract 03/01/2014 – 02/28/2015
The Hershey Company
Effects of a Cocoa Shot on the Human Brain II
Co-Principal Investigators: **Paul Laurienti** / Jonathan Burdette
Total Grant Amount: \$455,995

R21 ES019720 09/09/2011-08/31/2015
NIEHS
Pesticide Exposure And Age-Related Changes In Cognitive Function
Principal Investigator: Thomas Arcury
Total Grant Amount: \$185,000

R01 AG044474 08/15/2014 - 05/31/2017
NIA
Ultra-High-Field Neuroimaging In Elderly After A Two-Year Exercise Intervention
Principal Investigator: Caterina Rosano
Subcontract PI: **Paul Laurienti**
Total Grant Amount: \$930,992

Training Grant Mentor

F32 NS054472 05/01/2007 - 06/30/2010
NINDS
Aging and Unisensory Influence of Multisensory Processing
Principal Investigator: Ann Peiffer

Translational Scholar Award 09/01/2007 - 08/31/2009
WFU Translational Science Institute
Integrating Genomics and Brain Imaging: Mapping Genetic Links Associated with
Normal and Abnormal Brain Structure and Function
Principal Investigator: Satoru Hayasaka

F31 AG030838 03/01/2008 - 06/23/2009
Ruth L. Kirschstein NRSA, NIA

Evaluating the Neural Effects of an Attention Training Program in Older Adults
Principal Investigator: Jennifer Mozolic

F31 DA024950 03/05/2008 - 09/21/2009
Ruth L. Kirschstein NRSA, NIA
The Effect of Caffeine and Caffeine Withdrawal on Mood, Cognition and fMRI
Principal Investigator: Merideth Addicott

Translational Scholar Award 07/01/2010 - 06/30/2012
WFU Translational Science Institute
Age-Related Whole-Brain Analyses via Exponential Random Graph Modeling Methods
Principal Investigator: Sean Simpson

F31 AA019893 04/01/2011 - 12/31/2013
Ruth L. Kirschstein NRSA, NIAAA
Network Theory Analysis of Ethanol Self-Administered Non-Human Primates
Trainee: Qawi Telesford

T32 AA007565 09/01/2011 - 08/31/2013
Institutional NRSA, NIAAA
Multidisciplinary training in the biology of addiction.
PI: Dr. Brian McCool, Trainee: Malaak Moussa

K23 NS062892 06/01/2009 - 05/31/2014
NINDS
Diagnostic Ultrasound for Focal Neuropathies
Principal Investigator: Michael Cartwright

F31 AA021639 07/01/2013 - 06/30/2015
Ruth L. Kirschstein NRSA, NIAAA
The Effects of moderate Alcohol Use in Age Related Cognitive Decline
Trainee: Malaak Moussa

R01 DK092237 09/15/2011 - 08/31/2016 21% effort
NIH/NIDDK \$654,364 annual
Action for Health in Diabetes Brain Magnetic Resonance Imaging Ancillary Study (Look
AHEAD)
Principal Investigator: Mark Espeland

PATENTS:

US Patent #US12/41647 - Pending – Joyce KE, **Laurienti PJ**, Hayasaka S. 2012
Agent-Based Brain Model and Related Methods

BIBLIOGRAPHY:

Chapters in books:

1. Stein BE, **Laurienti PJ**, Wallace MT, Stanford TR. Multisensory Integration. In: V.S. Ramachandran (ed.), *Encyclopedia of the Human Brain*. Vol. 3. Academic Press; 2002:227-241.
2. Stein BE, Rowland B, **Laurienti PJ.**, Stanford TR. Multisensory Convergence and Integration. In: R. Krauzlis (ed.), *Encyclopedia of Neuroscience*. Vol.5. Elsevier; 2009:1119-1124.
3. Mozolic JL, Hugenschmidt CE, Peiffer AM, **Laurienti PJ**. Multisensory Integration and Aging. In: M.T. Wallace and M.M. Murray (eds.), *The Neural Bases of Multisensory Processes*. London: Taylor & Francis; 2011:381-392.
4. **Laurienti PJ**. Functional Studies in Humans: Physiological Bases. In: B.E.Stein (ed), *The New Handbook of Multisensory Processes*. Boston: MIT Press. 2012.
5. Hugenschmidt CE, **Laurienti PJ**, Burdette JH. Physical exercise and the resting brain. In: H. Boecker, C. Hillman, L. Scheef, H.K. Strüder (eds.), *Functional Neuroimaging in Exercise Sciences*. New York: Springer 2012.

6. **Laurienti PJ**, Hugenschmidt CE. Multisensory processes in old-age. In: D. Lewkowicz, C. Spence, and A. Bremner (eds.), *Multisensory Development*. London: Oxford Univ. Press. 2012: 251-272.
7. **Laurienti PJ**. Overcoming obstacles to creativity in geographically fragmented environments: Lessons from small-world networks. In: L. Book, D. Phillips (ed.), *Creativity and Entrepreneurship: Changing Currents in Education and Public Life*. Northampton: Edward Elgar Publishing. 2013:127-140.
8. Bolt TS, Hampton RS, Furr RM, Fleeson WW, **Laurienti PJ**, Dagenbach D. Integrating Personality/Character Neuroscience with Network Analysis. In: J.R. Absher and J. Cloutier (eds), *Neuroimaging Personality, Social Cognition, and Character*. Elsevier Science: Academic Press. 2016: 51-69.

Editorial work:

1. Section editor and Commentary: From Neuron to Brain: Relating neurophysiological principles of multisensory integration to the human brain. In B.E.Stein (ed), *The New Handbook of Multisensory Processes*. Boston: MIT Press. 2012.

Journal Articles:

(Bold number in brackets at the end of reference is the number of times the paper has been cited as of 3/14/2017)

Peer Reviewed

1. Gamkrelidze GN, **Laurienti PJ**, Blankenship JE. Identification and characterization of cerebral-ganglion neurons that induce swimming and modulate swim-related pedal-ganglion neurons in *Aplysia brasiliana*. J Neurophysiol 1995; 74: 1444-1462. **(22)**
2. **Laurienti PJ**, Blankenship JE. Parapodial swim muscle in *Aplysia brasiliana*. I. Voltage-gated membrane currents in isolated muscle fibers. J Neurophysiol 1996; 76: 1517-1530. **(12)**
3. **Laurienti PJ**, Blankenship JE. Parapodial swim muscle in *Aplysia brasiliana*. II. Ca²⁺-dependent K⁺ currents in isolated muscle fibers and their blockade by chloride substitutes. J Neurophysiol 1996; 76: 1531-1539. **(12)**
4. **Laurienti PJ**, Blankenship JE. Serotonergic modulation of a voltage-gated calcium current in parapodial swim muscle from *Aplysia brasiliana*. J Neurophysiol 1997; 77: 1496-1502. **(5)**
5. **Laurienti PJ**, Blankenship JE. Properties of cholinergic responses in isolated parapodial muscle fibers of *Aplysia*. J Neurophysiol 1999; 82: 778-786. **(7)**
6. Blankenship, JE, Yu, B, Gamkrelidze, GN, **Laurienti, PJ**. Serotonin increases calcium current in swim motoneurons of *Aplysia*. Am Zool 1999; 39(5): 109A-109A. **(0)**
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Commentaries:

1. **Laurienti PJ**. Neural murmurations: Comment on "Understanding brain networks and brain organization" by Luiz Pessoa. *Phys Life Rev* 2014 Sep;11(3):452-4. doi: 10.1016/j.plrev.2014.05.001. **(1)**

Abstracts/Scientific Exhibits/Presentations at National Meetings

1. Blankenship JE, **Laurienti PJ**, Gamkrelidze GN. Candidate command neurons for *Aplysia* swimming are tentatively identified in the cerebral ganglion. *Soc Neurosci Abstr* 1993; 19:1599.
2. **Laurienti PJ**, Blankenship JE. Electrophysiological properties of dissociated parapodial muscle fibers from *Aplysia brasiliana*. *Soc Neurosci Abstr* 1994; 20:1759.
3. Blankenship JE, **Laurienti PJ**. Serotonin facilitates neuromuscular transmission in parapodia of *Aplysia brasiliana* by broadening motor neurons action potentials. *Soc Neurosci Abstr* 1994; 20:1597.
4. **Laurienti PJ**, Gamkrelidze GN, Blankenship JE. Ionic currents in dissociated *Aplysia brasiliana* parapodial muscle fibers. *Soc Neurosci Abstr* 1995; 21:1458.
5. Gamkrelidze GN, **Laurienti PJ**, Blankenship JE. Serotonin enhances calcium current in isolated somata of *Aplysia* parapodial motor neurons. *Soc Neurosci Abstr* 1995; 21:1458.
6. Blankenship JE, Yu B, Gamkrelidze GN, **Laurienti PJ**. Serotonin increases calcium current in swim motoneurons of *Aplysia*. *Am Zool* 1999; 39(5)109A-109A Sp. Iss. SI.
7. **Laurienti PJ**, Burdette JH, Yen Y-F, Wallace MT, Stein BE. fMRI measures of multisensory processing in human cortex. *Soc Neurosci Abstr* 2000; 30.
8. Stein B E, **Laurienti PJ**, Stanford T R, Wallace MT. Neural mechanisms for integrating information from multiple senses. In: *Proceedings of the 2000 IEEE International Conference on Multimedia and Exposition*, New York, NY, 2000; pp. 567-570.
9. **Laurienti PJ**, Burdette JH, Wallace MT, Yen Y-F, Field AS, Stein BE. Deactivation of sensory-specific cortices: evidence for cross-modal inhibition. *Neuroimage* 2001; 13:S904.
10. Roberson G, Hairston W, Wallace M, Stein B, **Laurienti PJ**, Schirillo J. Unifying multisensory signals across time and space. *Soc Neuroscience Abstract* 2001; 27:1342.

11. Field AS, **Laurienti PJ**, Yen Y-F, Burdette JH, Moody DM. Common caffeine consumption and withdrawal: implications for quantitative cerebral perfusion and functional MR imaging studies. Exhibited at the 87th Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, Illinois, November 25-30, 2001. Abstract: Radiology 2001; 221(P):482.
12. Koyama T, McHaffie JG, **Laurienti PJ**, Coghill RC. A new technique for fMRI studies: single-epoch designs. The Journal of Pain 2002; 3(2, Supp 1):34. Poster No. 734
13. Koyama T, McHaffie JG, **Laurienti PJ**, Coghill RC. A new technique for fMRI studies: single-epoch designs. Exhibited at the 8th International Conference on Functional Mapping of the Human Brain, Sendai, Japan, June 2-6, 2002. Abstract: Available on CD-Rom, Neuroimage, Vol. 16, No. 2.
14. Whitlow CT, Livengood LB, Hart SL, Lamborn CM, Liguori A, Frasca Ta, **Laurienti PJ**, Porrino LJ. Long-term cannabis users employ different decision-making strategies than controls in a risk-taking task. Abstract: Program No. 900.12.2002 Abstract Viewer/Itinerary Planner (Online only).
15. Bradbury M, Burdette JH, **Laurienti PJ**, Flowers DL, Wood FB, Maldjian JA. Neuroanatomic changes in language network processing in dyslexia: a voxel-based morphometric study. American Society of Neuroradiology, Washington, DC, 2003.
16. Maldjian JA, Burdette JH, Kraft RA, Flowers DL, Wood FB, **Laurienti PJ**. Identifying the relationship between fMRI and structural brain changes in dyslexia: A Biologic Parametric Mapping study. American Society of Neuroradiology, Washington, DC, 2003.
17. **Laurienti PJ**, Brown C, Kraft RA, Maldjian JA, Burdette JH. Cross-modality deactivations are modulated by sensory acuity. Neuroimage 2003; 19(2), Supplement 1, S63.
18. Lamborn CM, Whitlow CT, **Laurienti PJ**, Liguori A, Livengood LB, Hart SL, Porrino LJ. Decision-making in heavy marijuana users: an fMRI study. 2003 Abstract: College on Problems of Drug Dependence, Miami Beach, Florida.
19. **Laurienti PJ**, Kraft RA, Maldjian JA, Burdette JH, Wallace MT. Behavioral enhancement associated with contextually congruent stimulus pairs is specific to cross-modal stimulation. Program No. 267.10, 2003 Abstract Viewer/Itinerary Planner. Washington, DC, Society for Neuroscience.
20. Hairston WD, **Laurienti PJ**, Burdette JH, Brown CL, Redick TS, Mishra G, Wallace MT. Multisensory localization performance under conditions of degraded visual acuity. Program No 267.11, 2003 Abstract Viewer/Itinerary Planner. Washington, DC, Society for Neuroscience.
21. Oparowski EG, Dagenbach D, **Laurienti PJ**. Neural correlates of attentional control in the counting Stroop task with numerical stimuli. 2003 Abstract presented at the Annual Meeting of the Psychonomic Society, Vancouver, BC, Canada.
22. Dubray MB, Jennings JM, **Laurienti PJ**. Neural correlates of memory retrieval during an opposition task as measured by event-related fMRI. 2003 Abstract presented at the Annual Meeting of the Psychonomic Society, Vancouver, BC, Canada.

23. Burdette JH, **Laurienti PJ**, Flowers L, Kraft RA, Maldjian JA, Wood FB. Altered auditory-visual interactions in dyslexia: an fMRI study. Abstract: RSNA 2003:462, Chicago, IL
24. **Laurienti PJ**. Differential reactions to multisensory stimuli in “primary” and “non-primary” regions of human cortex. 2004 Abstract: IMRF, Barcelona.
25. Hugenschmidt CE, Hairston WD, Kraft RA, Maldjian JA, Wallace MT, **Laurienti PJ**. Cross-modal deactivations in sensory cortex are modulated by attention. *NeuroImage* 2004; 22 (Suppl 1):S37.
26. Hairston WD, Hugenschmidt CE, Wallace MT, Kraft RA, Maldjian JA, **Laurienti PJ**. Attention- Modulated Gating of Cross-Modal Cortical Deactivation. Program No.177.14 2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. Online
27. Peiffer AM, Hugenschmidt CE, Maldjian JA, Casanova R, Ryali S, Burdette RA, Kraft RA, **Laurienti PJ**. Aging and the Interaction of Sensory Cortices. Program No. 617.18. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuro. Online.
28. Hugenschmidt CE, Peiffer AM, Bennett EA, **Laurienti PJ**. Modality-Specific Selective Attention: Costs and Benefits in Unisensory and Multisensory Tasks. Program No. 388.4. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuro. Online.
29. **Laurienti PJ**, Hugenschmidt CE, Peiffer AM. Revisiting the Race Model for Evaluating Multisensory Integration. Program No. 617.20. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. Online.
30. Burdette JH, **Laurienti PJ**, Maldjian JA, Flowers DL, Kraft RA, Wood FB. Voxel-Based Morphometric Differences Between Typical and Dyslexic Readers. Program No. 643.1. 2005 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience. Online.
31. Casanova R, Ryali S, Baer A, Pearson K, **Laurienti PJ**, Maldjian JA. The Biologic Parametric Mapping Toolbox. 2005 Abstract, Society for Neuroscience, Washington, DC.
32. Ryali S, Casanova R, **Laurienti PJ**, Peiffer AM, Maldjian JA. Statistical Inference for Wavelet-Denoised Statistical Parametric Maps. *Proc. Intl. Soc. Mag. Reson. Med.* 14, 2006.
33. Casanova R, Ryali S, Bare A, **Laurienti PJ**, Peiffer AM, Hayasaka S, Burdette JH, Wood F, Maldjian JA. Biological Parametric Mapping. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy, 2006.
34. Hugenschmidt CE, Peiffer AM, Maldjian JA, Casanova R, Ryali S, Burdette JH, Kraft RA, **Laurienti PJ**. Relationships Between Age-Related Changes in White Matter Concentration and Fractional Anisotropy. Prog. No. 489T. 2006 Abstract, HBM Conference, Florence, Italy.
35. Peiffer AM, Maldjian JA, **Laurienti PJ**. Evaluating Age Related Changes in Brain Function Using a Novel Meta-Analysis of fMRI Data. Program No. 133M. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy.
36. Burnett LR, Kraft RA, Maldjian JA, Burdette JH, Chen MY, Yang L, **Laurienti PJ**. Caffeine Induces Bold Signal Decreases in Subjects Without Pre-Scan Withdrawal. 2006 Abstract, Human Brain Mapping Conference, Florence, Italy.

37. Casanova R, Ryali S, Baer A, **Laurienti PJ**, Peiffer AM, Hayasaka S, Burdette JH, Maldjian JA. Biological Parametric Mapping. Program No. 2797. 2006 Abstract, ISMRM. Scientific Conference, Seattle, Washington.
38. Ryali S, Casanova R, **Laurienti PJ**, Peiffer AM, Maldjian LA. Estimation of False Discovery Rates for Wavelet-Denoised Statistical Parametric Maps. 2006 Abstract, ISMRM Scientific Conference, Seattle, Washington.
39. Casanova R, **Laurienti PJ**, Maldjian JA, Peiffer AM, Ryali S. Statistical inference for Wavelet-Denoised Statistical Parametric Maps. Program No. 2858. 2006 Abstract, ISMRM Scientific Conference, Seattle, Washington.
40. Casanova R, Hayasaka S, **Laurienti PJ**, Maldjian JA. A Non-Parametric Approach to SPM Analyses with Voxel-Wise Covariates. 2007 Abstract, Human Brain Mapping Conference, Chicago.
41. Addicott MA, Peiffer AM, Yang LL, Kraft RA, Maldjian JA, Burdette JH, Burnett LR, Chen MY, **Laurienti PJ**. The Effects of Caffeine on Cerebral Perfusion in Withdrawal and Native States. 2007 Abstract, Human Brain Mapping Conference, Chicago.
42. Yang LL, Peiffer AM, Addicott MA, Kraft RA, Maldjian JA, Burdette JH, Burnett LR, Chen MY, **Laurienti PJ**. BOLD Signal Decreases Following Caffeine Challenge in Individuals Who Intake High Daily Doses of Caffeine. 2007 Abstract, Human Brain Mapping Conference, Chicago.
43. Peiffer AM, Burdette JH, **Laurienti PJ**, Flowers L, Maldjian JA, Milner L, Wood F. Evaluating Dyslexia Across Multiple Speech Conditions Using a Novel fMRI Meta-Analysis Technique. 2007 Abstract, Human Brain Mapping Conference, Chicago.
44. Mozolic J, Rawley-Payne M, Long A, **Laurienti PJ**. Brain Fitness: A Randomization Controlled Trial of the Effects of Attention Training in Older Adults. 2007 Abstract, Human Brain Mapping Conference, Chicago.
45. Hugenschmidt CE, Peiffer AM, Casanova R, Maldjian JA, Burdette JH, **Laurienti PJ**. Preservation of Default Mode Functioning in Healthy Aging Adults. 2007 Abstract, Human Brain Mapping Conference, Chicago.
46. Addicott MA, Yang LL, Casanova RL, Peiffer AM, Maldjian JM, Burdette JH, Burnett LR, **Laurienti PJ**. The effects of chronic caffeine use on the temporal dynamics of the BOLD signal. 2008 Abstract, Human Brain Mapping Conference, Melbourne Australia.
47. Mozolic JL, Morgan AR, **Laurienti PJ**. Cognitive training impacts brain function and structure of healthy older adults in a randomized controlled trial. 2008 Abstract No. 1315, The Gerontological Society of America Annual Meeting, Washington, D.C.
48. Mozolic JL, Morgan AR, **Laurienti PJ**. Cognitive training impacts functional brain activity and cerebral blood flow of healthy older adults in a randomized controlled trial. 2008 Abstract, Human Brain Mapping Conference, Melbourne Australia.
49. Yang LL, Addicott MA, Peiffer AM, Kraft RA, Maldjian JA, Burdette JH, Burnett LR, Chen MY, **Laurienti PJ**. Caffeine is not a universal BOLD contrast booster. 2008 Abstract, Human Brain Mapping Conference, Melbourne Australia.

50. Hayasaka S, **Laurienti PJ**. Mesoscopic Structure of the Resting-State Small-World Brain Network. 2009 Abstract, Organization for Human Brain Mapping Conference, San Francisco
51. **Laurienti PJ**, Hayasaka S. Network modularity maps reveal sub-components of the default-mode network. 2009 Abstract, Organization for Human Brain Mapping Conference, San Francisco
52. Peiffer AM, Rosano C, **Laurienti PJ**. Does the default mode network influence executive functioning? 2009 Abstract, Human Brain Mapping Conference, San Francisco, California.
53. Peiffer AM, Hugenschmidt CE, Mozolic JL, **Laurienti PJ**. Do structural MRI analyses show evidence for cognitive reserve in the healthy aging brain? 2009 Abstract, The Gerontological Society of America Annual Meeting, Atlanta, Georgia.
54. **Laurienti PJ**, Hugenschmidt CE, Maldjian JA, Wagner B, Hayasaka S. Network Analyses of Multisensory Processing, Int. Multisensory Research Forum, New York City, NY, June 2009.
55. **Laurienti PJ**, Hugenschmidt CE, Mozolic JM, Hayasaka S. Physiological Brain Imaging in the Elderly. Graylyn Conference on Women's Cognitive Health, October 2009.
56. **Laurienti PJ**, Mozolic J, Hugenschmidt CE. Increased Cross-Modal Distractibility in Older Adults. Aging and Speech Communications: Third International Research Conference, October 2009.
57. Hayasaka S, Hugenschmidt CE, **Laurienti PJ**. A Network of Genetic Diseases and Brain Areas. International Imaging Genetics Conference, Irvine, CA, USA. January 2010
58. Simpson SL, Hayasaka S, **Laurienti PJ**. Exponential Random Graph Modeling for Complex Brain Networks. Organization for Human Brain Mapping Conference, Barcelona, Spain. June 2010
59. Joyce K, **Laurienti PJ**, Burdette JH, Hayasaka S. A New Measure of Centrality for Brain Networks. Organization for Human Brain Mapping Conference, Barcelona, Spain. June 2010
60. Telesford Q, Morgan AR, Hayasaka S, Simpson SL, Barret W, Kraft RA, **Laurienti PJ**. Network Reproducibility in the At-Rest fMRI Network. Organization for Human Brain Mapping Conference, Barcelona, Spain. June 2010
61. Morgan A, **Laurienti PJ**, Espeland M, Rejeski W, Jennings J, Katula J, Telesford Q, Vechlekar C, Burdette JH. Exercise-induced increased network connectivity in the elderly: walking improves brain efficiency. Organization for Human Brain Mapping Conference, Barcelona, Spain. June 2010
62. Telesford QT, Joyce KE, Hayasaka S, Burdette JH, **Laurienti PJ**. It's not a small-world after all: Reassessing the ubiquity of small-world networks. Biomedical Engineering Society Annual Meeting, Austin, TX, USA. October 2010
63. Presley T, Morgan A, Bechtold A, Clodfelter W, Dove RW, Jennings JM, Kraft RA, King SB, **Laurienti PJ**, Rejeski JW, Burdette JH, Kim-Shapiro DB, Miller GD. Acute Effect of a High Nitrate Diet on Brain Perfusion in Older Adults. 17th Annual Meeting for Society for Free

Radical Biology and Medicine, Caribe Royal Hotel and Conference Center, Orlando, Florida. November 2010

64. Telesford QT, Joyce KE, Hayasaka S, Burdette JH, **Laurienti PJ**. Reassessing the ubiquity of small-world networks. Society for Neuroscience, San Diego, CA, USA. November 2010
65. Hayasaka S, Joyce KE, Telesford QK, Burdette JH, **Laurienti PJ**. Universal power law scaling of self-organized networks. The International School and Conference on Network Science, Budapest, Hungary. June 2011
66. Joyce KE, **Laurienti PJ**, Hayasaka S. Complexity in an agent-based brain model. The International School and Conference on Network Science, Budapest, Hungary. June 2011 (Joyce – Presentation)
67. Telesford DK, Joyce KE, Hayasaka S, Burdette JH, **Laurienti PJ**. The ubiquity of small-world networks: Is it really a small-world? The International School and Conference on Network Science, Budapest, Hungary. June 2011
68. Wilkins RW, Steen M, **Laurienti PJ**, Burdette JB, Hodges DA. The Effects of Music on the Brain: Investigating Music Preference Using Network Science Methods. The International School and Conference on Network Science, Budapest, Hungary. June 2011
69. Joyce KE, **Laurienti PJ**, Hayasaka S. Evolving an agent based model of the brain using genetic algorithms. Organization for Human Brain Mapping, Quebec City, Quebec. June 2011.
70. Telesford QK, Joyce KE, Hayasaka S, Burdette JH, **Laurienti PJ**. The ubiquity of small-world networks. Organization for Human Brain Mapping, Quebec City, Canada. June 2011.
71. Steen M, Hayasaka S, Lobanov O, **Laurienti PJ**, Coghill R. Individual Differences in Brain Networks During Pain Processing: A Method for Assessing Modularity. Organization for Human Brain Mapping, Quebec City, Canada. June 2011.
72. Telesford QK, Wyatt CL, Kraft RA, **Laurienti PJ**, Daunais JB. The effects of acute and chronic ethanol exposure in non-human primate brain networks. Research Society on Alcoholism. Atlanta, Georgia. June 2011.
73. Smith M, Marsh A, Dagenbach D, Pauca P, Jennings J, Burdette JH, **Laurienti PJ**, Rejeski WJ. Brain Boot Camp: Multi-Sensory Training to Enhance Brain Health and Functional Abilities in Aging. URECA Center Fourth Annual Undergraduate Research Day. September 2011.
74. Burdette JB, **Laurienti PJ**, Morgan AR, Williamson D, Rejeski WJ. The Power of Food Scale Moderates Brain Network Connections During Food Restraint. Obesity Society 2011 Annual Scientific Meeting, Orlando, FL, USA. October 2011.
75. Telesford QK, Murnane KS, Kraft RA, Howell LL, **Laurienti PJ**, Daunais JB. Network differences between the awake and anesthetized rhesus macaque. Society for Neuroscience. Washington, DC, USA. November 2011.

76. Joyce KE, Hayasaka S, **Laurienti PJ**. A Genetic Algorithm for Controlling an Agent Based Model of the Functional Human Brain. Rocky Mountain Bioengineering Symposium. Blacksburg, VA, USA. March 2012. (Joyce – Presentation)
77. Moussa MN, Porrino L, Hayasaka S, Burdette JH, **Laurienti PJ**. Rigid Network Structure Underlies Cognitive Inflexibility in Mature Adults. CompleNet 2012, Melbourne, FL. March 2012.
78. Blair CV, **Laurienti PJ**, Burdette JH. Cognitive-related alterations in network topology and brain function. Aging Cognition Conference, Atlanta, GA, USA. April 2012.
79. Joyce KE, **Laurienti PJ**, Hayasaka S. The human brain functional network is resilient to targeted attack. The 11th Annual School of Biomedical Engineering and Sciences Symposium, Winston-Salem, NC, USA. May 2012.
80. Telesford QK, Steen M, Moussa MN, **Laurienti PJ**, Hayasaka S. Average group analysis fails to capture complexity in brain networks. Organization for Human Brain Mapping. Beijing, China. June 2012.
81. Joyce KE, Hayasaka S, Small M, **Laurienti PJ**. Functional brain networks are highly resilient to targeted attack. The International School and Conference on Network Science, Chicago, IL, USA. June 2012.
82. Wilkins R, **Laurienti PJ**, Hodges DA, Burdette JH. From Beethoven to Eminem: Music and Network Science. NetSci. Chicago, IL, USA. June 2012.
83. Hayasaka S, Steen M, Moussa MN, **Laurienti PJ**. Consistency of network modules in resting-state fMRI connectome data. NetSci. Chicago, IL, USA. June 2012.
84. Telesford QT, Burdette JH, **Laurienti PJ**. Understanding dynamics in time-dependent networks: Graph analysis in the adult interactome. NetSci. Chicago, IL, USA. June 2012.
85. Telesford QT, Davenport AT, Kraft RA, **Laurienti PJ**, JB Daunais. Dynamic changes in the brain due acute ethanol exposure in non-human primate brain networks. Research Society on Alcoholism, San Francisco, CA, USA. June 2012.
86. Moussa MN, Steen MR, **Laurienti PJ**, Hayasaka S. Functional community similarity and an integrative approach to neuromarketing. 11th Annual Charlotte Life Sciences Conference, Charlotte, NC, USA. October 2012.
87. Voss MW, Wong C, Szabo AN, Baniqued P, Burdette JH, McAuley E, **Laurienti PJ**, Kramer AF. The relationship of aerobic fitness to brain network architecture in healthy older adults. Annual Meeting of the Gerontological Society of America, San Diego, CA, USA. November 2012.
88. Paolini B, **Laurienti PJ**, Rejeski WJ. Mindfulness Moderates Brain Networks Following Short-Term Eating Restraint in Older Adults. Neuroscience Research Day, Wake Forest School of Medicine, Winston Salem, NC, USA. December 2012.
89. Wilkins RW, **Laurienti PJ**, Steen M, Burdette JH, Hodges DA. Network Science: A New Method for Investigating the Complexity of Musical Experiences in the Brain. The Improvising Brain, Georgia State University, Atlanta, GA, USA. April 2013.

90. Wilkins RW, Hodges DA, **Laurienti PJ**, Steen M, Burdette JH. The Effects of Music on the Brain: Investigating Music Preference Using Network Science Methods. The Improvising Brain, Georgia State University, Atlanta, GA, USA. April 2013.
91. Wilkins RW, Hodges DA, **Laurienti PJ**, Burdette JH. Network Science, Music and the Brain: Community Structure Shows Potential for Music to Affect Learning and Memory. NetSciEd2: Satellite Symposium on Network Science in Education, Copenhagen, Denmark. June 2013.
92. Telesford QK, **Laurienti PJ**. Understanding dynamics of the sand pile model in complex networks. NetSci. Copenhagen, Denmark. June 2013.
93. Paolini B, **Laurienti PJ**, Rejeski WJ. Mindfulness Moderates Brain Networks Following Short-Term Eating Restraint in Older Adults. Mind and Life Summer Research Institute, Garrison Institute, NY, USA. June 2013.
94. Soriano C, Batson G, **Laurienti PJ**, Burdette JH, Migliarese S, Hristov N. Effects of group-delivered improvisational dance on balance in adults with middle stage Parkinson disease: a two-phase pilot with fMRI case study. 3rd World Parkinson Congress, Montréal, Canada. October 2013.
95. Kus N, Rejeski WJ, **Laurienti PJ**. Does beet root juice enhance the benefits of exercise on brain health in aging hypertensives? 7th Annual Undergraduate Research Day Wake Forest University, Winston Salem, NC, USA. October 2013.
96. Klebous C, Marsh A, **Laurienti PJ**, Kim-Shapiro D, Rejeski WJ, Robertson TP, Redman H. Daily Beet Root Juice Supplement and Exercise Training in Older Hypertensive Adults. 7th Annual Undergraduate Research Day Wake Forest University, Winston Salem, NC, USA. October 2013.
97. Winkler A, Paolini B, **Laurienti PJ**, Burdette JH. Your Brain on Caffeine. 29th Annual Medical Student Research Day Wake Forest School of Medicine, Winston Salem, NC, USA. October 2013.
98. Rzucidlo JK, Roseman PL, **Laurienti PJ**, & Dagenbach D. Stability of whole brain and regional network topology within and between resting and cognitive states. Presented at Annual Meeting of the Psychonomic Society, Toronto, Canada. November, 2013.
99. Stanley ML, Dagenbach D, Lyday RG, Burdette JH, **Laurienti PJ**. Global and Regional Shifts in Module Properties with Increasing Working Memory Load. 22nd Annual Cognitive Neuroscience Annual Conference. San Francisco, CA, USA March 2015
100. Winkler A, Paolini B, **Laurienti PJ**, Burdette JH. Your Brain on Caffeine. 168th Annual Meeting of the American Psychiatric Association. Toronto, Canada. May 2015.
101. Mayhugh RE, Petrie MR, Rejeski WJ, Lyday RG, Burdette JH, **Laurienti PJ**. Stress and Alcohol Abstinence In Daily Social Drinkers: Effects On Default Mode Network Community Structure. Organization for Human Brain Mapping. Honolulu, HI, USA. June 2015.
102. Mokhtari F, Paolini BM, Burdette JH, Marsh AP, Rejeski WJ, **Laurienti PJ**. Baseline Gray- and White Matter Volume Predict Successful Weight Loss in the Elderly. Obesity Week. New Orleans, LA, USA November 2016.

103. Mayhugh, R.E., Moussa, M.E., Lyday, R.G., Burdette, J.H., **Laurienti, P.J.** Moderate Alcohol Consumption Lifestyle in Older Adults is Associated with Altered Central Executive Network Community Structure. Research Society on Alcoholism (RSA), New Orleans, LA, USA. June 2016.
104. Mokhtari F, Burdette JH, Marsh AP, Rejeski WJ, **Laurienti PJ.** Functional Brain Networks Prospectively Predict Intentional Weight Loss in Older Adults. NC Cognition Conference. Greensboro, NC, USA March 2017.
105. Bahrami M, **Laurienti PJ,** Arcury TA, Simpson SL. The Impacts of Pesticide and Nicotine on Functional Brain Networks in Latino Farmworkers. NC Cognition Conference. Greensboro, NC, USA March 2017.
106. Mokhtari F, Burdette JH, Marsh AP, Rejeski WJ, **Laurienti PJ.** Using fMRI Dynamic Networks in a Hypergraph Learning Model for Predicting the Success of Lifestyle Weight Loss Interventions in Obese Older Adults, SBES Symposium, Blacksburg, VA, USA, May 2017.
107. Mayhugh, R.E., Burdette, J.H., Lyday, R.G, **Laurienti, P.J.** The Effect of Alcohol Abstinence on Functional Connectivity in Moderate-Heavy Alcohol Consumers. 2017 Organization for Human Brain Mapping, Vancouver, Canada. June 2017.
108. Mokhtari F, Burdette JH, Marsh AP, Rejeski WJ, **Laurienti PJ.** Using Higher Order Singular Value Decomposition to Reduce the Dimensionality of fMRI Dynamic Connectivity Tensors. Workshop on Brain Dynamics and Neurocontrol Engineering, Washington University, St. Louis, MO, USA. June 2017.

INVITED PRESENTATIONS:

Academic:

Intramural

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| 09/2001 | The Ultimate Emulsion: Mixing Event-Related and Epoch-Base fMRI
ANSIR Seminar Series, Wake Forest University Baptist Medical
Center, Winston Salem, NC |
| 02/2002 | Evaluating Age-Related Changes in Sensory Processing With fMRI
Grand Rounds, Wake Forest University Baptist Medical Center,
Winston Salem, NC |
| 06/2002 | Dietary Caffeine Consumption Modulates fMRI Measures
ANSIR Seminar Series, Wake Forest University Baptist Medical
Center, Winston Salem, NC |
| 10/2002 | fMRI and Behavioral Measure of Auditory/Visual Sensory Integration
Department of Psychology Colloquia Series, Wake Forest
University Baptist Medical Center, Winston Salem, NC |
| 06/2003 | Physiology of the BOLD Signal/ Grand Rounds, Wake Forest Baptist
Medical Center |
| 06/2003 | Physiology of the BOLD Signal
ANSIR Seminar Series, Wake Forest University Baptist Medical
Center, Winston Salem, NC |

- 11/2003 Starbucks or Redbull: Effect of Caffeine on fMRI
Radiology Grand Rounds, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 10/2004 Sensory Processing in Older Adults
Kulynych Center for Memory and Cognition Research, Winston Salem, NC
- 03/2005 The Aging Brain
Geriatric Grand Rounds, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 06/2005 The Aging Brain
IEEE Lecture Series, SBES, Winston Salem, NC
- 09/2005 Sensory Processing in the Aging Brain
Young Investigator Award Presentation, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 09/2005 Peering Into the Aging Brain: Advanced Physiological MRI
Wake Forest University Vascular Dementia Workshop, Winston Salem, NC
- 03/2006 This is Your Brain on Caffeine
General Clinical Research Center Lecture Series, Winston Salem, NC
- 04/2006 Exploring the Final Frontier with Big Magnets: MRI of the Human Brain
Wake Forest Institute of Regenerative Medicine, Winston Salem, NC
- 08/2006 This is Your Brain on Caffeine
Wake Forest Sleep Disorder Center Grand Rounds, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 11/2006 This is Your Brain on Caffeine
Neurology Grand Rounds, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 03/2007 Functional Brain Imaging of Caffeine Withdrawal
Psychiatry Grand Rounds, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 07/2007 Brain Fitness
Geriatric Grand Rounds, Wake Forest University Baptist Medical Center, Winston Salem, NC
- 09/2007 Evaluating Age Related Cognitive Decline and Cognitive Interventions with Physiological Brain Imaging
Graylyn Conference on Women's Cognitive Health, Winston Salem, NC

- 09/2008 Sensory Attention and The Aging Brain
 2nd Annual William Hazard Symposium, Department of
 Gerontology, Wake Forest University Baptist Medical Center,
 Winston Salem, NC
- 10/2008 Default Mode and the Aging Brain
 Women's Health Initiative Annual Conference, Winston Salem, NC
- 02/2009 Applications of Network Theory to Studies of the Human Brain
 Wake Forest University High Performance Computing
 Conference, Winston Salem, NC
- 03/2009 Overcoming Creative Obstacles/Lessons from Small World Networks
 Worlds in the Making: Creativity National Symposium, Wake
 Forest University, Winston Salem, NC
- 04/2009 Network Science in Biomedical Research
 Computer Science Colloquium, Wake Forest University Baptist
 Medical Center, Winston Salem, NC
- 04/2009 Imaging Complex Brain Networks
 Radiology Grand Rounds, Wake Forest University Baptist Medical
 Center, Winston Salem, NC
- 10/2009 Imaging in the Elderly
 Graylyn Conference on Women's Cognitive Health, Graylyn
 International Conference Center of Wake Forest University,
 Winston-Salem, NC
- 03/2010 Network Science and Its Application to Collaborative Research
 Translational Science Institute Seminar Series, Wake Forest
 University Baptist Medical Center, Winston Salem, NC
- 04/2010 Network Science and Its Application to Collaborative Research
 Nursing Research Council, Wake Forest University Baptist
 Medical Center, Winston Salem, NC
- 06/2010 Team Science
 Nursing Strategic Planning Meeting, Wake Forest University
 Baptist Medical Center, Winston Salem, NC
- 05/2011 Complexity Theory and Biomedical Science
 Mid-Career Investigator Award Presentation, Wake Forest
 University Baptist Medical Center, Winston Salem, NC
- 09/2011 Brain-Body Interactions in Older Adults
 Neuroscience Seminar Series, Wake Forest Baptist Medical
 Center, Winston Salem, NC
- 09/2011 Interactions and Interdependence: Applying New Theories to the Aging
 Brain Geriatric Grand Rounds, Wake Forest University Baptist
 Medical Center, Winston Salem, NC

- 11/2011 Brain Networks and Obesity in Older Adults
Radiology Grand Rounds, Wake Forest Baptist Medical Center,
Winston Salem, NC
- 03/2012 Networks and Complex Systems
Computer Science Undergraduate Lecture, Wake Forest
University, Winston Salem, NC
- 11/2012 Network Science Applied to Brain Research
Computer Science Undergraduate Lecture, Wake Forest
University, Winston Salem, NC
- 12/2012 Interaction and Independence: Applying New Theories to the Aging Brain
Sticht Center Conference on Aging, Wake Forest School of
Medicine, Winston Salem, NC
- 02/2013 Complexity and the Brain
Health and Exercise Science Undergraduate Student Lecture,
Wake Forest University, Winston Salem, NC
- 04/2013 Career Choices in Science and Medicine
Department of Councelling Undergraduate Lecture, Wake Forest
University, Winston Salem, NC
- 11/2013 Eating, Behavior, and Brain Networks
Nutrition Grand Rounds, Wake Forest School of Medicine,
Winston Salem, NC
- 12/2013 Intro to Complexity
FaithHealthNC, Department of Ministries, Wake Forest School of
Medicine, Winston Salem, NC
- Extramural
- 11/2001 Imaging Multisensory Processing in the Human Brain with fMRI
Grand Rounds, Virginia Polytechnic Institute and State University,
Blacksburg, VA
- 08/2002 An Introduction to Functional Magnetic Resonance Imaging
Grand Rounds, Virginia Polytechnic Institute and State University,
Blacksburg, VA
- 09/2002 Integration of Visual and Auditory Stimuli in the Human Brain
Grand Rounds, Baylor University, Waco, TX
- 09/2002 Imaging Multisensory Processing in the Human Brain With fMRI
Grand Rounds, University of Texas Medical Branch, Galveston TX
- 06/2004 Differential Reactions to Multisensory Stimuli in “Primary” and “Non-
primary” Regions of Human Cortex International Multisensory
Research Forum, Barcelona, Spain
- 10/2005 Multisensory Integration in the Human Brain
International Dyslexia Association Annual Conference, Denver,
CO

- 06/2006 This is Your Brain on Caffeine
Salisbury VA Hospital Research Week, Salisbury, NC
- 10/2007 Modality Specific Selective Attention and Multisensory Integration in
Older Adults Aging and Speech Communication Conference,
Indiana University, IN
- 03/2008 Multisensory Integration in the Human Brain: Applications to Dyslexia
Annual Conference of Dyslexia, New York City, NY
- 06/2008 Modality Specific Selective Attention and Multisensory Integration
Theoretical and Experimental Psychology Conference, University
of Waterloo, Waterloo, Ontario, Canada
- 10/2008 Sensory Attention in the Aging Brain
Department of Psychology Grand Rounds, Indiana University,
IN
- 01/2009 Six Degrees of Cognition: Small World Networks in the Human Brain
University of Texas Health Science Center, San Antonio, TX
- 04/2009 Distractions in Older Adults
Pepper Center Conference, University of Pittsburgh, Pittsburgh,
PA.
- 06/2009 Network Analyses of Multisensory Processing
International Multisensory Research Forum, New York City, NY
- 10/2009 Increased Cross-Modal Distractibility in Older Adults
Aging and Speech Communication: Third International and
Interdisciplinary Research, Indiana Memorial Union Hotel,
Bloomington, IN
- 01/2010 Network Analyses Applied to Multisensory Integration
43rd Annual Winter Conference on Brain Research, Breckenridge,
CO
- 11/2010 Complexity Theory
Bioinspiration and Biomimetics Course, Wake Forest University,
Winston-Salem, NC
- 05/2011 Networks
Translational Science Center at Wake Forest Reynolda Campus
Seminar Series, Wake Forest University, Winston-Salem, NC
- 07/2011 New Methods of Connectivity Analysis
The UCLA Advanced Neuroimaging Summer program, UCLA, Los
Angeles, CA
- 09/2011 Complexity in Biology
Translational Science Freshman Seminar, Wake Forest
University, Winston-Salem, NC

- 11/2011 Not Hypothesis Testing and Complexity in Biology
Sensational Brain Course, UNCSEA, Winston-Salem, NC
- 02/2012 Special Interest Group: Cerebral Networks in Epilepsy: Merging Structure, Function and Clinical Care. Presentation - Evaluating Complex Networks
American Clinical Neurophysiology Society Annual Meeting, San Antonio, TX
- 02/2012 The New Scientific Revolution
TEDx Wake Forest U, Winston-Salem, NC
- 03/2012 Keynote Lecture: Network Science and Complex Systems
Rocky Mountain Bioengineering Symposium, Blacksburg, VA
- 09/2012 Wiring in the Aging Brain
Renaissance Weekend, Aspen Institute, Aspen, CO
- 09/2012 A Synthetic Brain Model for Clinical Application and Artificial Intelligence
11th Annual Techology Briefing, Benton Convention Center, Winston Salem, NC
- 11/2012 The Sensational Brain
UNC School of the Arts, Winston Salem, NC
- 01/2013 Brains and Other Complex Systems
University of Illinois at Urbana-Champaign, Urbana, IL
- 05/2013 Network Science, Complexity, and the Future of Brain Research
Association for Psychological Science Annual Meeting, Washington DC
- 05/2013 Neurocomplexity
The University of North Carolina Charlotte Complexity Institute Seminar Series, Charlotte, NC
- 07/2013 Brain Networks
Camp Snowball, Systems Thinking and Schools, Winston Salem, NC
- 11/2013 Brain Networks and Molbility Disability
Gerentologic Society of America Annual Meeting, NIH Sponsored Workshop - Aging, the CNS, and Mobility, New Orleans, LA
- 02/2014 Complexity and Networks
Frameworks Series, Wake Forest Schools of Business, Winston Salem, NC
- 03/2014 It Takes the Whole Brain
Academy of Orton-Gillingham Practitioners and Educators Annual Conference, Winston Salem, NC
- 04/2014 Network Science, Complexity, and Brain Research
Winston Salem Forsyth County Schools, Hanes Middle School STEM Retreat, Winston Salem, NC

- 06/2014 Keynote Lecture: The Connected Brain
Small Boarding School Association Annual Conference, Winston
Salem, NC
- 06/2014 The Connected Brain
Utah National Association of Therapeutic Schools and Programs,
Utah Regional Conference, Provo, UT
- 07/2014 Complexity and the Human Brain
World Future Society, Orlando, FL
- 07/2014 Complexity
Chawumba, Stakeholder Health Annual Meeting, Winston Salem,
NC
- 10/2014 Health as a Complex Adaptive System
United States Government Accountability Office, Washington DC
- 08/2015 Complexity, Brain Networks, and Dyslexia
The Swift School, Roswell, GA
- 02/2016 The Brain as a Complex Network
NC Cognition Conference, Winston Salem, NC
- 02/2016 Complexity, Networks, and the Human Brain
Ashby Dialogues at UNC-G, Greensboro, NC
- 03/2016 Complexity Theory and Brain Networks
Triangle Imaging Symposium, UNC BRIC, Chapel Hill, NC
- 04/2016 Interdependence and Brain Networks
samsi CCNS Conference, Research Triangle Park, NC
- 02/2017 Occupational Exposure and Brain Health in Latino Farmworkers
Oregon State University, Corvallis, Oregon
- 03/2017 Networks, Interdependence, and the Complex Brain
Franklin Foundation Fellows at University of Georgia, Athens, GA
- 04/2017 Current Farmworker Research: Youth Farmworker Health and Safety;
and Effects of Pesticide Exposure on Child Neurocognitive Development
NC Farmworker Institute, Chapel Hill, NC
- 06/2017 Lifestyle Interventions and Brain Health
American Diabetes Association's Meeting 2017, San Diego, CA
- Industrial:
- 04/2004 Sensory Processing in the Aging Brain
Targacept, Inc, Winston Salem, NC
- 08/2007 Brain Fitness
Posit Science, San Francisco, CA

- 09/2008 Caffeine and the Brain
Unilever, New York City, NY
- 01/2014 Cocoa and the Brain
The Hershey Company, Hershey, PA

Workshops and Symposia:

- 03/2009 Godwin GW, Wiggins W, Hayasaka S, **Laurienti PJ**, Stapleton J.
Overcoming Creative Obstacles in Geographically Fragmented
Environments: Lessons from Small World Networks. Wake Forest
University Creativity Symposium, Winston-Salem, NC.
- 06/2009 Hayasaka S, **Laurienti PJ**. Overview of Small-World Networks and
Application in Neuroimaging In The Brain as a Small-World Network:
From Micro to Macro Scale. Symposium at Human Brain Mapping
Conference, San Francisco, CA.

Community Engagements:

- 02/2004 The Aging Brain
Best Health, Winston Salem, NC
- 07/2004 The Aging Brain
Best Health, Winston Salem, NC
- 10/2004 The Aging Brain
Kernersville YMCA, Kernersville, NC
- 12/2004 The Aging Brain
Best Health, Winston Salem, NC
- 01/2005 The Aging Brain
Best Health, Winston Salem, NC
- 05/2005 The Aging Brain
Kiwanis Club, Winston Salem, NC
- 09/2006 Brain Fitness
Best Health Senior Center Grand Opening, Winston Salem, NC
- 04/2007 Preparing For a Visit to Your Doctor
Kiwanis Club, Winston Salem, NC
- 09/2007 Brain Fitness
Winston Salem Men's Group, Winston Salem, NC
- 04/2009 Brain Fitness, The Cliffs, Travelers Rest, SC
- 08/2009 Brain Fitness, The Cliffs, Travelers Rest, SC
- 12/2010 21st Century Science: Studies of the Complex Human Being
UNC School of the Arts ARTStem Program

- 02/2011 Brain Training 101
Half Century Club Founders' Day Program, Wake Forest University,
Winston Salem, NC
- 02/2011 Is Brain Fitness the Fountain of Youth
Dean's Forum, Bridger Field House, Wake Forest University, Winston
Salem, NC
- 02/2011 21st Century Science: Studies of the Complex Human Being,
Innovation and Creativity Lecturer Series, Winston Salem, NC
- 04/2012 Staying Sharp: Ask the experts about keeping your brain young,
Panel discussion hosted by the WFU Graduate School of Arts and
Sciences in collaboration with the Dana Alliance for Brain Initiative,
Winston Salem, NC
- 09/2012 A Synthetic Brain Model for Clinical Application and Artificial Intelligence
Winston-Salem Tech Briefing
Winston-Salem Chamber of Commerce, Winston Salem, NC
- 11/2012 Welcome to Brain Rules
Inspiring Learning Series, Winston Salem, NC
- 01/2013 Brain Rules and Other Complex Things
Winston Salem Rotary Club, Winston Salem, NC
- 02/2013 Welcome to Brain Rules
Greensboro Montessori School, Greensboro, NC
- 03/2013 Synthetic Brains, Facebook and the New Revolution
SXSW Interactive Programming for 2013, Austin, TX
- 10/2013 Breaking Brains
Planned Gift Advisory Council, Wake Forest Baptist Medical Center,
Winston Salem, NC
- 10/2013 Music and the Brain
The Music Academy, Greensboro, NC
- 12/2013 Aging Brain
Translational Science Center's Speakers Bureau, Archdale Senior
Center, Archdale, NC
- 03/2014 Memory: It's About Your Brain and Your Body
Dean's Forum, Bridger Field House, Wake Forest University, Winston
Salem, NC
- 05/2014 Memory: It's About Your Brain and Your Body
Lexington Medical Center Foundation, Lexington Medical Center,
Lexington, NC
- 09/2014 Rethinking the Brain
Alumni Weekend Stay Connected Speaker Series
Winston Salem, NC

12/2015 Friends of Friends of Your Facebook Friends
Winston Salem Rotary Club
Winston Salem, NC

PREVIOUS AND CURRENT TRAINEES ADVISED:

Current trainees:

PhD Students

Rhiannon Mayhugh PhD Student 2013-present
WFU Graduate Student in the Department of Neuroscience. Dr. Laurienti serves as a PhD advisor while she studies the changes in brain networks with moderate alcohol use in human aging.

Fatemeh Mokhtari PhD Student 2015-present
School of Biomedical Engineering and Sciences Graduate Student at Wake Forest University. Dr. Laurienti serves as her PhD advisor while she studies the changes in brain networks during a weight-loss intervention using machine learning methods.

Mohsen Bahrami PhD Student 2015-present
School of Biomedical Engineering and Sciences Graduate Student at Wake Forest University. Dr. Laurienti serves as his PhD advisor as he uses mixed model analysis to study changes in brain networks.

Undergraduate Students

Rebecca Omonde Salem College Student Summer 2017
Dr. Laurienti served as Ms. Omonde's primary mentor while she worked in the lab as a Wake Forest University Translational Science Center Scholar. She was studying voxel based morphometry (VBM) analysis.

Faculty Mentoring

Sean Simpson Associate Professor 2009-present
Department of Biostatistical Sciences
Current Wake Forest University School of Medicine TSI Scholar
Dr. Laurienti serves as his primary mentor and his mentor on a K-Award through the NIBIB that was recently awarded.

Previous trainees:

High School Students

Scott Snelgrove Loomis Chaffee HS Student Summer 2011
Dr. Laurienti served as a co-mentor for Mr. Snelgroves' summer internship with the LCBN. Scott modeled dynamic activity flow on networks.

Manisha Mishra S. Iredell HS Student Summer 2012
Dr. Laurienti served as a co-mentor for Ms. Mishra's summer internship with the LCBN. Manisha used agent based models to simulate neural activity in the brain.

Jacob Einstein NCSSM Student Summer 2014
Dr. Laurienti served as a co-mentor for Mr. Einstein's summer internship

with the LCBN. Jacob worked with a human subject alcohol research study and was conducting preliminary investigations using negative networks in MRI imaging.

Undergraduate Students

Thomas Reddick WFU Student 2002-2003
 Dr. Laurienti served as a mentor for Mr. Reddick's undergraduate Honor's Thesis Research. Dr. Reddick recently received his PhD from the Georgia Institute of Technology where he is currently a Post-Doctoral Fellow.

Kathryn Davis WFU Student 2003
 Dr. Laurienti served as a mentor for Ms. Davis's undergraduate Honor's Thesis Research. Dr. Davis received her MD from the University of Florida College of Medicine is practicing Obstetrics and Gynecology.

Jessica Bullins Salem College Student 2011-2012
 Dr. Laurienti served as Ms. Bullins' primary mentor while she worked in the lab as a Wake Forest University Translational Science Center Scholar. She subsequently became a volunteer intern beginning in the lab her junior year of college and she returned as a Wake Forest University Intern Summer 2012, assigned to Dr. Jack Rejeski, on Sabbatical in the LCBN. She is currently a PhD candidate at UNC.

Justyna Rzucidlo WFU Student 2011-2013
 Dr. Laurienti served as the mentor for Ms. Rzucidlo's research dedicated to learning links between cognition and brain networks. This work was being completed in collaboration with Dr. Dale Dagenbach.

Arial "Logan" Rost Salem College Student Summer 2012
 Dr. Laurienti served as Ms. Rost's primary mentor while she worked in the lab as a Wake Forest University Translational Science Center Scholar. She was studying the effect of obesity on brain networks.

Robert Musci WFU Student 2012
 Dr. Laurienti served as the co-mentor for Mr. Musci's senior honors thesis. His project evaluated relationships between brain connectivity and physical function in older adults. This work was being completed in collaboration with Dr. Anthony Marsh.

Matthew Stanley WFU Student 2012-2014
 Dr. Laurienti serves as the mentor for Mr. Stanley's volunteer research study. His project is evaluating cascades in brain using human fMRI data.

Cassandra Klebous WFU Student Summer 2013
 Dr. Laurienti served as Ms. Klebous' primary mentor while she worked in the lab as a Wake Forest University Translational Science Center Scholar. She subsequently became a laboratory employee as a study coordinator upon graduation. She is currently attending PA school at Nova Southeastern University in Florida.

Nicole Kus WFU Student Summer 2013
 Dr. Laurienti served as Ms. Kus' primary mentor while she worked in the

lab as a Wake Forest University Translational Science Center Scholar. She was studying the effect of beetroot juice and exercise on brain networks in older adults.

Eric Schmid WFU Student Summer 2013
Dr. Laurienti served as Mr. Schmid's primary mentor while he worked in the lab as a Wake Forest University Translational Science Center Scholar. He was studying the effect of beetroot juice and exercise on brain networks in older adults.

Meredith Petrie WFU Student 2014-2015
Dr. Laurienti served as the co-mentor for Ms. Petrie's senior honors thesis. Her project evaluated relationships between brain connectivity and obesity/weight loss in older adults. This work was completed in collaboration with Dr. Jack Rejeski. After graduation, Meredith continued to work in the lab under the mentorship of Drs. Laurienti and Rejeski.

John Passarelli WFU Student 2015-2016
Dr. Laurienti served as a mentor for Mr. Passarelli's undergraduate research project working on genetic algorithms to generate functional brain networks.

Masters Students

Molly DuBray Masters Student 2003-2004
Ms. DuBray completed a master's degree in psychology in the spring of 2004. Her thesis project investigated memory processing using functional MRI.

Corey Lamborn Masters Student 2003-2004
Ms. Lamborn completed a master's degree in pharmacology in the summer of 2004. Her thesis project was an extension of the work completed by Dr. Whitlow, investigating decision making in chronic marijuana users.

Valerie Weisser Masters Student 2004-2006
Ms. Weisser completed a master's degree in psychology and was accepted to a clinical neuropsychology PhD program. Her thesis project was an extension of the work currently ongoing in Dr. Laurienti's laboratory that evaluated the effects of cognitive training in older adults.

Dr. Michael Cartwright Masters Student 2010-2012
Department of Neurology
Dr. Cartwright completed a Master's Degree in Clinical and Population Translational Science. Dr. Laurienti served as the Chair of his thesis committee.

Crystal Vechlekar Masters Student 2010-2012
Dr. Laurienti was the primary mentor for Ms. Vechlekar. Her research focused on age-related changes in complex brain networks. Dr. Laurienti served as the Chair of her thesis committee.

Paige Roseman Masters Student 2011-2013
 WFU Graduate Student in the Department of Psychology. Dr. Laurienti served as a co-mentor as Paige used network science methodologies to evaluate changes in the brains of US veterans who have experienced traumatic brain injury (TBI).

Ryan Hampton Masters Student 2012-2014
 WFU Graduate Student in the Department of Psychology. Dr. Laurienti served as an imaging advisor and committee member. Ryan used network science methodologies to analyze the Human Connectome Data Set.

Taylor Bolt Masters Student 2014-2015
 WFU Graduate Student in the Department of Psychology. Dr. Laurienti served an imaging advisor and committee member. Taylor studied repeated measures of the Iowa Gambling Task (IGT), N-back, and resting fMRI.

Jared Hess Masters Student 2014-2016
 Dr. Laurienti served as an imaging advisor and committee member for Mr. Hess' master thesis study. His thesis project investigates the changes in brain networks in patients with Parkinson's Disease using fMRI data.

Medical Students

Hesham Hussain Medical Student 2002-2007
 Dr. Laurienti was an advisor for Mr. Hussain.

Harsha Setty Medical Student 2003-2007
 Dr. Laurienti was an advisor for Ms. Setty.

Carter Brown MD/PhD Student 2002-2005
 Dr. Laurienti was the mentor for Dr. Brown's research endeavors throughout medical school. Carter worked on several fMRI and behavioral studies. He is currently a practicing diagnostic radiologist at Tidelands Georgetown Memorial Hospital in South Carolina.

David Joyner Medical Student Summer 2005
 Dr. Laurienti was the mentor for Mr. Joyner during his summer research project. His work was an extension of the ongoing behavioral and imaging research on multisensory integration and aging.

William Barrett Medical Student Summer 2009
 Dr. Laurienti was the mentor for Mr. Barrett during his summer research project. His project was the evaluation of network metrics on various components of an aging invention study.

Kevin Hiatt Medical Student Summer 2011
 Dr. Laurienti was the mentor for Mr. Hiatt during his summer research project. His work used novel network methods evaluation of an existing data set of MRI brain images from a dyslexia cohort.

John Tobben Medical Student Summer 2011
 Dr. Laurienti was a mentor for Mr. Tobben during his summer research

a PhD advisor and also assisted with Qawi's Ruth L. Kirschstein National Research Service Award (NRSA) submission and award. He currently has a Postdoctoral Fellowship with the Complex Systems Group at the University of Pennsylvania.

Malaak Moussa PhD Student 2010-2015
Dr. Laurienti was the primary mentor for Ms. Moussa. Her PhD work was performed in collaboration with Dr. Linda Porrino. The studies evaluated changes in brain networks following chronic alcohol use. She is currently a CNS Medical Science Liaison with Otsuka Pharmaceutical Company.

Robin Wilkins PhD Student 2010-2015
UNC Greensboro Graduate Student in the Department of Music. Dr. Laurienti served as a co-advisor. Ms. Wilkins was studying music preference and emotion and the association with brain network topology.

MD/PhD Students

Christopher Whitlow MD/PhD Student 2002-2003
Dr. Laurienti served as the fMRI advisor/co-mentor and dissertation committee chairman for Dr. Whitlow in collaboration with Dr. Linda Porrino. Dr. Whitlow's dissertation focused on the effects of chronic marijuana use on brain function. Dr. Whitlow is currently a faculty member with the Division of Radiologic Sciences at Wake Forest University School of Medicine.

Dino Massoglia MD/PhD Student Summer 2005
Dr. Laurienti served a mentor for Mr. Massoglia for a research elective during his fourth year in medical school.

Oleg Lobanov MD/PhD Student Summer 2008
Dr. Laurienti served as Mr. Lobanov's mentor during his summer research rotation in the MD/PhD Program at Wake Forest University Bowman Gray School of Medicine. He is currently a Pediatric Resident at Washington University School of Medicine in St. Louis.

Brielle Paolini MD/PhD Student 2011-2015
Dr. Laurienti was the co-mentor along with Dr. Jack Rejeski for Ms. Paolini's dissertation. She completed her dissertation on studies of eating behavior, brain and body health in older adults, and returned to complete medical school Spring 2015. She is currently a resident in Radiology at Medical University of SC in Charleston

Medical Residents

John Kaufman, MD Radiology Resident 2006 - 2007
Dr. Laurienti was the co-mentor for Dr. Kaufman in collaboration with Dr. Maldjian. Dr. Kaufman used quantitative perfusion and diffusion tensor MR imaging techniques to study cerebrovascular disease in diabetics. After completing a fellowship at the University of California,

San Francisco Dr. Kaufman joined the Kaiser Permanente Medical Group in Hayward, CA.

Andrew Deibler, MD Radiology Resident 2006 - 2007
Dr. Laurienti was a co-mentor for Dr. Deibler. He worked on a project to

assess blood flow and functional activity in older adults. Dr. Deibler is currently a radiologist with Forsyth Medical Imaging Center in Winston Salem, NC.

Post-Doctoral Fellows

Ann Peiffer, PhD Post Doctoral Fellow 2004 - 2010
Dr. Laurienti was the primary mentor for Dr. Peiffer. She had prior training in animal behavior and joined Dr. Laurienti's laboratory to gain experience with human functional imaging. She was funded for three years through an NRSA from NINDS. Ann is currently an assistant professor at Mars Hill University in North Carolina.

Luke Burnett, PhD Post Doctoral Fellow 2005 - 2006
Dr. Laurienti served as Dr. Burnett's mentor during his post-doctoral fellowship. Dr. Burnett has a PhD in neurobiology and came to Dr. Laurienti's laboratory to learn human imaging methods. He served as a fellow in the laboratory for 1 year before he was sent to serve in Iraq. Dr. Burnett is currently an Adjunct Instructor at Wake Forest University Health Sciences as well as a Chief Science Officer at KeraNetics, LLC.

Lucie Yang, MD, PhD Post Doctoral Fellow 2007 - 2009
Dr. Laurienti served as Dr. Yang's mentor during her post-doctoral fellowship. She came from clinical Neuroradiology to a full time research position. Dr. Yang investigated the effects of caffeine on multiple aspects of human brain imaging. She is currently a medical officer with the Division of Drug Information at the FDA.

Junior Faculty

Satoru Hayasaka Assistant Professor 2005-2011
Department of Biostatistical Sciences

Former Wake Forest University School of Medicine TSI Scholar.
Dr. Laurienti served as his primary mentor.

Colleen Hanlon Instructor 2008-2010
Department of Physiology and Pharmacology
She received the K01 Mentored Research Scientist Development Award from NIDA. Her research involves using functional magnetic resonance imaging to examine neural networks affected in chronic cocaine users. Dr. Laurienti served as a member of her mentoring team.

Michael Cartwright Assistant Professor 2008-2013
Department of Neurology
NIH K23 Award Recipient
Presented the President's Research Initiative Award by the American Association of Neuromuscular and Electrodiagnostic Medicine (AANEM) in 2009. Dr. Laurienti served as a member of his mentoring team.

HOSTED AND VISITING FACULTY

Walter S. Pritchard Visiting Scientist 2009-2010
Instructor of Psychology Adjunct Faculty 2012-present
Surry Community College, Dobson, NC

Dr. Pritchard authored many of the seminal papers in Chaos Theory, Non-linear Dynamics, and Fractal scaling in the human brain in the 1980s and 1990s. His initial mentoring and continued collaboration is a vital component of the LCBN. In 2012 Dr. Pritchard became Adjunct Faculty of the Department of Radiology at Wake Forest School of Medicine.

Kourtland R. Koch Visiting Scientist 2009-2010
Associate Professor of Special Education
Ball State University, Muncie, IN
Dr. Koch traveled several times to Wake Forest School of Medicine to collaborate with Dr. Laurienti and learn about functional brain Imaging. Publications of this collaboration are pending.

Janine Jennings Sabbatical Spring 2009
Associate Professor of Psychology
Wake Forest University, Winston Salem, NC
Dr. Jennings spent her Sabbatical in the Spring of 2009 working with the faculty of the LCBN. Collaborations and publications are ongoing.

Dale Dagenbach Sabbatical Fall 2011
Professor & Chair Psychology Visiting Scientist 2012-present
Wake Forest University, Winston Salem, NC
Dr. Dagenbach spent the Fall semester of 2011 on Sabbatical in the LCBN looking at the differences in brain networks between resting and task induced states. He continues to spend 2-3 days a week working with faculty, staff, and students in the lab. Drs. Dagenbach and Laurienti serve as mentors for Paige Roseman and Justyna Rzucidlo. Collaborations and publications are ongoing.

W. Jack Rejeski Sabbatical 2012- 2013
Thurman D. Kitchin Professor
Director of the Behavioral Physiology Laboratory
Wake Forest University, Winston Salem, NC
Dr. Rejeski is spending his extended Sabbatical in the LCBN study the effects of Mindfulness and Food Craving on networks in the brain. He is also co-mentoring Brielle Paolini, an MD/PhD student in the LCBN. Collaborations and publications are ongoing.

COMMUNITY ACTIVITIES AND SERVICES

Patronage:

Friend of Reynolda Gardens, Winston Salem, NC
St. Paul's Episcopal Church, Winston Salem, NC
Summit School, Winston Salem, NC

Volunteer Services:

Bringing Complexity to the Classroom K-9
Summit School, Winston Salem, NC
Systems Thinking in Schools Task Force K-12
Winston Salem/Forsyth County Schools, Winston Salem, NC
Summit School Professional Learning Community (Neuroscience)

Summit School, Winston Salem, NC
Winston Salem National Little League, Winston Salem, NC