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 Houston, Texas B.S. (Psychology)	1987-1991
Graduate School:	Neuroscience Graduate Program University of Texas Medical Branch Galveston, Texas Ph.D.	1991-1995
Dissertation Title:	Physiologic Properties and Serotonergic Modulatic Parapodial Neuromuscular Junction in Aplysia Bra Dr. James E. Blankenship, Ph.D Adviser	
Predoctoral:	Predoctoral Fellow NINDS Training Grant Neuroscience Graduate Program Marine Biomedical Institute University of Texas Medical Branch Galveston, Texas	1994-1995
Honors and Awards:	National Student Research Forum's Anatomy and Neuroscience Poster Award George Sealy Research Award in Neurology Galveston Chapter Poster Award Society of Neuroscience James E. Beall II Memorial Award in Anatomy and Neurosciences	1995 1995 1995 1996
Medical School:	University of Texas Medical Branch Galveston, Texas M.D.	1995-1999

	Lau	irienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 2
Honors and Awards:	Dean's List Honors Graduate Alpha Omega Alpha Phi Kappa Phi	1996, 1997, 1998, 1999 1999 1998 1998 1998
POSTDOCTORAL TRAININ	NG:	
Residency:	Department of Radiology Wake Forest University School of Medic Winston-Salem, North Carolina	1999 ine
Fellowship:	Postdoctoral Fellow National Institute of Health Training Gra Department of Neurobiology and Anator Wake Forest University School of Medic Winston-Salem, North Carolina Mentor: Dr. Barry Stein	ny
PROFESSIONAL LICENSU	IRE:	
	United States Medical License Passed USMLE Parts I, II	1997, 1999
ACADEMIC APPOINTMEN	TS:	
	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, P Marine Biomedical Institute University of Texas Medical Branch Galveston, Texas	h.D. 1997
	Research Associate Department of Radiology Wake Forest University School of Medic	2000-2002
	Assistant Professor Department of Radiology Wake Forest University School of Medic	2002-2006 ine
	Associate Department of Biomedical Engineering Division of Radiologic Sciences Wake Forest University School of Medic	2003-present
	Associate Professor Department of Radiology Wake Forest University School of Medic	2006-2011 ine
	Associate Professor Translational Science Institute Wake Forest University School of Medic	2010-2011 ine

		ll J, M.D., Ph.D. Curriculum Vitae
	Professor Department of Radiology Wake Forest University School of Medicine	Page 3 2011-present
	Professor Translational Science Institute Wake Forest University School of Medicine	2011-present
PROFESSIONAL APPOINT	MENTS AND ACTIVITIES:	
National. NSF Study Se	actions	
NOF Study Se	Study Section Member Major Instrumentation Grant Review	April 2013
NIH Study Se	ctions	
	Ad hoc Member Clinical/Translational Study Section	June 2011
	Ad hoc Member Psychosocial Risk and Disease Prevention (PRDP	Sept 2010) Study Section
	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
NIH Advisory	Committees	
	Member ACCORD – MIND Clinical Trial Planning Committe Bethesda, Maryland	2002 ee
	Ad hoc member NIH/NIDA Institutional Review Board	2005
Other Nationa	al Committees	
	Grant Reviewer University of Pittsburgh Claude Pepper Older Americans Independence Ce	2010 2011 enter
	Program Committee Complenet 2012	2012

		ul J, M.D., Ph.D. Curriculum Vitae Page 4
	3rd Workshop on Complex Networks Melbourne, Florida, USA	0
	Grant Reviewer National Science Foundation	2013
	Brain Behavior and Neurosciences Focus Group Carolinas Medical Center University of North Carolina Charlotte Charlotte, NC	2013
	Grant Reviewer Cal-BRAIN Seed Grant Program	2015
	Grant Reviewer UT-BRAIN Seed Grant Program	2015
International:		
	Grant Reviewer Ireland Health Research Board	2009
	Grant Reviewer Experimental and Translational Medicine Scottish Government	2010
	External Member Dissertation Committee Concordia University Department of Psychology Montreal, Canada	2010
	Fellow Leading Causes of Life Initiative Winston Salem, NC Cape Town, South Africa <u>http://www.leading-causes.com</u>	2013-present
	Grant Reviewer European Science Foundation	2014
Editorial work:		
Ad hoc review	wer	
	Brain Research Brain Tomography	

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 Neurophysiology

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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:

Faculty Appointments.		
	Kulynych Center for Memory and Cognition Research Wake Forest University School of Medicine	a 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/Chairman	ships:	
	Director Functional Magnetic Resonance Imaging Lecture S Wake Forest University School of Medicine	2001-2003 Series
	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

			I J, M.D., Ph.D. urriculum Vitae
	Director Medical Student Research Training (T35DK007400) Wake Forest University School of M	-	Page 6 2009-2012
	Chair Research Awards Day Committee Wake Forest University School of M		2012
	Director Laboratory for Complex Brain Netwo Wake Forest University School of M	· · ·	2009- present
	Director Research Core for Translational Sci Wake Forest University Reynolda C		2010-present
Dean Appointed Commi	ittee:		
	General Clinical Research Center Adv Wake Forest University School of M	•	e 2005-2011
	Institutional Review Board Wake Forest University School of M	edicine	2006-2007
	Graduate School of Biomedical Scie Wake Forest University School of M		2006-2011
	Wake Forest University Independen and Monitoring Board Wake Forest School of Medicine	t Data Safety	2008-2012
	Intramural Research Support Comm Wake Forest School of Medicine	nittee	2008-2010
	Wake Forest University Independen and Monitoring Board <i>ad hoc</i> Wake Forest School of Medicine	t Data Safety	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 M Winston-Salem, North Carolina		2001-2004
	Interviewer Medical School Admissions Wake Forest University School of M	edicine	2001-2005
	Member Neuroscience Graduate Program Fa Wake Forest University School of M	•	2001-present
	Member Kulynych Intramural Grant Review C Wake Forest University School of M		2002-2003

	Laurienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 7
Member Neuroscience Graduate Program Ad Wake Forest University School of Me	2002-2005 missions Committee
Member Graduate School Faculty Wake Forest University School of Me	2002-present
Advisory Board Member Kulynych Center for Memory and Co Wake Forest University School of Me	
Counselor Western North Carolina Society for N Wake Forest University School of Me	
Faculty Advisor MD/PhD Program Wake Forest University School of Me	2003-2005 edicine
Member Translational Science Institute Comm Novel and Clinical Translational Meth Wake Forest University School of Me	nodologies
Member Pepper OAIC Data Safety and Monit Wake Forest University School of Me	
Member J. Paul Sticht Center on Aging Wake Forest University School of Me	2007-present
Member Translational Science Institute Comm Research Education, Training and C Wake Forest University School of Me	areer Development
Member Center for Diabetes Research Wake Forest University School of Me	2009-present
Reviewer Internal Mini-Study Section Office of Research Wake Forest University School of Me	2009 edicine
Ad Hoc Member Committee on Admissions Wake Forest University School of Me	2010-2012 edicine
Graduate School Reorganization Tas Wake Forest University School of Me	
Member Neurosciences Graduate Executive	2010-present Committee
Member Center Integrative Medicine Wake Forest University School of Me	2012-present

Laurienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 8 Search Committee Member 2013-2014 McCreary Endowed Chair Department of Psychiatry and Behavioral Medicine Wake Forest University School of Medicine Winston-Salem, North Carolina Member 2014-present Pepper OAIC Advisory Committee Wake Forest University School of Medicine Institutional Development: Brain Training 101 02/2011 Half Century Club Founders' Day Program, Wake Forest University, Winston Salem, NC Is Brain Fitness the Fountain of Youth 02/2011 Dean's Forum, Bridger Field House, Wake Forest University, Winston Salem, NC Breaking Brains 10/2013 Planned Gift Advisory Council, Wake Forest Baptist Medical Center, Winston Salem, NC 12/2013 Aging Brain Translational Science Center's Speakers Bureau, Archdale Senior Center, Archdale, NC 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 Rethinking the Brain 09/2014 Homecoming and Reunion Weekend Wake Forest University, Winston Salem, NC 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

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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 American Medical Association	1993-2010 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 "Teams Sciences Award"	2014

SELECTED MEDIA COVERAGE:

Caffeine National Geographic Cover Story	01/2005
A Brain on Caffeine Current TV Segment <u>https://www.youtube.com/watch?v=2Q</u>	03/2006 kvclQrEBk
Caffeine's Effects on the Human Brain ABC News reported by Lisa Stark <u>http://abcnews.go.com/WNT/video/caffeines-effects-hu</u> <u>interacts-blood-flow-lisa-stark-health-16141081</u>	04/2012 <u>man-brain-</u>
Emergency Room Cases Involving Energy Drinks Increase ABC News reported by Lisa Stark http://abcnews.go.com/WNT/video/emergency-room-cases-involving- 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		
R01 DK092237 NIH/NIDDK	10/01/2011 - 09/30/2015 \$654,364 annual	12% effort
AHEAD)	in Magnetic Resonance Imaging Ancilla	ry Study (Look
Principal Investigator: Mark Espe	eland	
LCBN / Sticht Center Network Imaging Initiative Principal Investigator: Paul Laur		0% effort
R01 MH097751 NIDA Adolescent Cannabis Use, Com Principal Investigator: Beng-Cho Subcontract PI: Paul Laurienti	12/01/2012 - 11/30/2017 \$644,766 annual olex Brain Network Connectivity & Schiz on Ho	2% effort ophrenia Risk
R01 ES008739 NIEHS CBPR on Pesticide Exposure & Principal Investigator: Thomas A	03/01/2013 - 02/28/2016 \$392,141 annual Neurological Outcomes for Latinos: PAC rcury	20% effort E4
P30 AG21332 NIA Wake Forest School of Medicine Center Principal Investigator: Stephen K	07/15/2013 - 06/30/2018 \$1,315,705 annual Claude D. Pepper Older Americans Ind Kritchevsky	2% effort ependence

Curriculum Vitae Page 11 P01 AA021099 09/01/2013 - 08/31/2017 25% effort NIAAA \$542,689 annual Translational Studies On Early-Life Stress And Vulnerability To Alcohol Addiction Principal Investigator: Jeffrey Weiner Project Principal Investigator: **Paul Laurienti**

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

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 AG047422	12/01/2015-11/30/20	20% effort	
NIH/NIA	\$499,107 annual		
Resting Brain Networks and Mobility Function: B-NET			
This study will apply a new	paradigm to understand how aging b	orain networks affect	
mobility function to develop	novel approaches to prevent age-re	lated mobility decline in	

mobility function to develop novel approaches to prevent age-related mobility decline in older adults.

Co-Principal Investigators: Stephen Kritchevsky and Paul Laurienti

R01 BRAIN Initiative07/01/2016-06/30/1820% effortNIH/NIA\$382,522 annualBSMART(Brain Statistical Modeling Analytic Research Tool): Fusing informationtheoretic and multivariate statistical methods to understand brain networksThis study will develop new methods to deduce the underlying network coupling fromneural time series, and to perform statistical comparisons of whole-brain networks.Co-Principal Investigators:Paul Laurienti and Sean Simpson

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

Laurienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 12 06/01/2004 - 05/31/2006

R21 NS044149 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

04/10/2006 - 12/31/2009 R01 DA020074 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

Page 13 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

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

Curriculum Vitae

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 NS07091705/01/2010 - 01/31/2015NINDSConnecting Brain Networks Across Subjects and Across ModalitiesPrincipal Investigator: Satoru HayasakaTotal 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 ES01972009/09/2011-08/31/2015NIEHSPesticide Exposure And Age-Related Changes In Cognitive FunctionPrincipal Investigator: Thomas ArcuryTotal Grant Amount: \$185,000

Training Grant Mentor

F32 NS05447205/01/2007 - 06/30/2010NINDSAging and Unisensory Influence of Multisensory ProcessingPrincipal 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 DA02495003/05/2008 - 09/21/2009Ruth L. Kirschstein NRSA, NIAThe Effect of Caffeine and Caffeine Withdrawal on Mood, Cognition and fMRIPrincipal 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 AA02163907/01/2013 - 06/30/2015Ruth L. Kirschstein NRSA, NIAAAThe Effects of moderate Alcohol Use in Age Related Cognitive DeclineTrainee: Malaak Moussa

PATENTS:

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

BIBLIOGRAPHY:

Chapters in books:

- 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.
- 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.
- 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.
- 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.
- 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.

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 10/22/2015)

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)
- Laurienti PJ, Blankenship JE. Parapodial swim muscle in *Aplysia brasiliana*. I. Voltagegated membrane currents in isolated muscle fibers. J Neurophysiol 1996; 76: 1517-1530. (12)
- 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. (7)
- 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)
- Yu B, Gamkrelidze GN, Laurienti PJ, Blankenship JE. Serotonin directly increases a calcium current in swim motoneurons of Aplysia brasiliana. Am Zool 2001; 41: 1009-1025.
 (5)
- Laurienti PJ, Burdette JH, Wallace MT, Yen Y-F, Field AS, Stein BE. Deactivation of sensory-specific cortex by cross-modal stimuli. J Cogn Neuroscience 2002; 14: 420-429. (213)
- Maldjian JA, Driskill L, Laurienti PJ, Burdette JH. Multiple reproducibility indices for evaluation of cognitive functional MR imaging paradigms. AJNR Am J Neuroradiol 2002; 23: 1030-1037. (21)
- 10. Laurienti PJ, Field AS, Burdette JH, Maldjian JA, Yen Y-F, Moody DM. Dietary caffeine consumption modulates fMRI measures. NeuroImage 2002; 17: 751-757. (70)
- 11. Field AS, Laurienti PJ, Yen Y-F, Burdette JH, Moody DM. Dietary caffeine consumption and withdrawal: confounding variables in quantitative cerebral perfusion studies? Radiology 2003; 227: 129-135. (57)
- 12. Laurienti PJ, Wallace MT, Maldjian JA, Susi CA, Stein BE, Burdette JH. Cross-modal sensory processing in the anterior cingulate and medial prefrontal cortices. Human Brain Mapping 2003; 19: 213-223. (51)
- Koyama T, McHaffie JG, Laurienti PJ, Coghill RC. The single-epoch fMRI design: validation of a simplified paradigm for the collection of subjective ratings. NeuroImage 2003; 19: 976-987. (15)

- Maldjian JA, Laurienti PJ, Kraft RA, Burdette JH. An automated method for neuroanatomic and cytoarchitectonic atlas-based interrogation of fMRI data sets. NeuroImage 2003; 19: 1233-1239. (2256)
- 15. Laurienti PJ, Field AS, Burdette JH, Maldjian JA, Yen Y-F, Moody DM. Relationship between caffeine-induced changes in resting cerebral perfusion and blood oxygenation level-dependent signal. Am J Neuroradiology 2003; 24: 1607-1611. (41)
- Hairston WD, Laurienti PJ, Mishra G, Burdette JH, Wallace MT. Multisensory enhancement of localization under conditions of induced myopia. Exp Brain Res 2003; 152: 404-408. (34)
- 17. Laurienti PJ, Burdette JH, Maldjian JA. Separating neural processes using mixed eventrelated and epoch-based fMRI paradigms. J Neuroscience Methods 2003; 131: 41-50. (11)
- 18. Maldjian JA, Laurienti PJ, Burdette JH. Precentral gyrus discrepancy in digital versions of the Talairach Atlas. NeuroImage 2004; 21: 450-455. (377)
- Laurienti PJ, Kraft RA, Maldjian JA, Burdette JH, Wallace MT. Semantic congruence is a critical factor in multisensory behavioral performance. Exp Brain Res 2004; 158: 405-414. (100)
- Whitlow CT, Liguori A, Livengood LB, Hart SL, Mussat-Whitlow BJ, Lamborn CM, Laurienti PJ, Porrino LJ. Long-term heavy marijuana users make costly decisions on a gambling task. Drug Alcohol Depend 2004; 76: 107-111. (121)
- 21. Laurienti PJ. Deactivations, global signal, and the default mode of brain function. J Cogn Neuroscience 2004; 16: 1481-1483. (18)
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- 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 Withdawal 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
- Laurienti PJ, Hayasaka S. Network modularity maps reveal sub-components of the defaultmode 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 Heath, October 2009.
- 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
- 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
- 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
- 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 smallworld 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 smallworld 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.
- 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.
- 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 groupdelivered 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.

INVITED PRESENTATIONS:

Academic:

Intramural

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 Dietary Caffeine Consumption Modulates fMRI Measures 06/2002 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 Gerentology, 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 Angles, 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, UNCSA, 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 11 th 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 Psycholigical 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
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 S	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 Eng	agements:
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
12/2004	Kernersville YMCA, Kernersville, NC 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

PREVIOUS AND CURRENT TRAINEES ADVISED:

Current trainees:

Undergraduate Students

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

Masters Students

Jared HessMS Student2014-presentDr. Laurienti serves 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.

PhD Students

Rhiannon MayhughPhD Student2013-presentWFU Graduate Student in the Department of Neuroscience. Dr. Laurientiserves as a PhD advisor while she studies the changes in brain networkswith moderate alcohol use in human aging.

Fatemeh MokhtariPhD Student2015-presentSchool of Biomedical Engineering and Sciences Graduate Student atWake Forest University. Dr. Laurienti serves as her PhD advisor whileshe studies the changes in brain networks during a weight-lossintervention using machine learning methods.

Mohsen BahramiPhD Student2015-presentSchool of Biomedical Engineering and Sciences Graduate Student atWake Forest University. Dr. Laurienti serves as his PhD advisor as heuses mixed model analysis to study changes in brain networks.

Ioannis Gkigkitzsis PhD Student 2015-present WFU Graduate Student in the Department of Neuroscience. Dr. Laurienti serves as his PhD advisor as he studies brain pathology using network science. Faculty Mentoring

Sean SimpsonAssociate Professor2009-presentDepartment of Biostatistical SciencesCurrent Wake Forest University School of Medicine TSI ScholarDr. Laurienti serves as his primary mentor and his mentor on a K-Awardthrough the NIBIB that was recently awarded.Current Wake Forest University School of Medicine TSI ScholarCurrent Wake Forest University School of Medicine TSI Scholar

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. Einsteins' 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 ReddickWFU Student2002-2003Dr. Laurienti served as a mentor for Mr. Reddick's undergraduate Honor'sThesis Research.Dr. Reddick recently received his PhD from theGeorgia Institute of Technology where he is currently a Post-DoctoralFellow.

Kathryn DavisWFU Student2003Dr. 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 RzucidloWFU Student2011-2013Dr. Laurienti served as the mentor for Ms. Rzucidlo's research dedicatedto learning links between cognition and brain networks. This work wasbeing completed in collaboration with Dr. Dale Dagenbach.

Laurienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 41 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 MusciWFU Student2012Dr. Laurienti served as the co-mentor for Mr. Musci's senior honorsthesis. His project evaluated relationships between brain connectivity andphysical function in older adults. This work was being completed incollaboration with Dr. Anthony Marsh.

Matthew StanleyWFU Student2012-2014Dr. Laurienti serves as the mentor for Mr. Stanley's volunteer researchstudy. 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 PetrieWFU Student2014-2015Dr. Laurienti served as the co-mentor for Ms. Petrie's senior honorsthesis. Her project evaluated relationships between brain connectivity andobesity/weight loss in older adults. This work was being completed incollaboration with Dr. Jack Rejeski. After graduation from WFU, Mereditycontinued to work in the lab under the mentorship of Drs. Laurienti andRejeski.

Masters Students

Molly DuBrayMS Student2003-2004Ms. DuBray completed a master's degree in psychology in the spring of2004. Her thesis project investigated memory processing using functionalMRI.

Corey LambornMS Student2003-2004Ms. 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.

Laurienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 42 Valerie Weisser MS 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 MS Student 2010-2012 Department of Neurology Dr. Cartwright completed a Masters Degree in Clinical and Population Translational Science, Dr. Laurienti served as the Chair of his thesis committee. Crystal Vechlekar MS 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. Masters Student 2014-2015 Taylor Bolt 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. Medical Students Hesham Hussain Medical Student 2002-2007 Dr. Laurienti was an advisor for Mr. Hussain. Medical Student Harsha Setty 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 JoynerMedical StudentSummer 2005Dr. 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 BarrettMedical StudentSummer 2009Dr. Laurienti was the mentor for Mr. Barrett during his summer researchproject. His project was the evaluation of network metrics on variouscomponents 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 project. His work examined the cognitive effects of obesity in both younger and older adults.

Sean MillerMedical StudentSummer 2011Dr. Laurienti was a mentor for Mr. Miller during his summer researchproject. His work examined the physical effects of obesity in both youngerand older adults.

Daniel HamptonMedical StudentSummer 2012Dr. Laurienti was a mentor for Mr. Hampton during his summer researchproject. His work examines the effects of assaulting functional brainnetworks.

Michelle Grata Medical Student Summer 2012 Dr. Laurienti was a mentor for Ms. Grata during her summer research project. Her work examines the effects of moderate alcohol use and aging on functional brain networks.

Aaron WinklerMedical StudentSummer 2013Dr. Laurienti was a mentor for Mr. Winkler during his summer research
project. His work examines the effects of caffeine on functional brain
networks.

PhD Students

Christina Hugenschmidt PhD Student 2003 - 2008 Dr. Laurienti was the primary mentor for Ms. Hugenschmidt. She worked on a project that assesses the role of selective attention in sensory integration changes in the elderly. Christina is currently an assistant professor in Geriatric Medicine at Wake Forest School of Medicine.

Jennifer Mozolic PhD Student 2005 - 2009 Dr. Laurienti was the primary mentor for Ms. Mozolic. She was awarded an NRSA from NIA to work on a project to determine if attention training can improve sensory processing in the elderly. Jennifer completed her PhD training in June of 2009, and is currently a faculty member at Warren Wilson College.

Merideth AddicottPhD student2006 - 2009Dr. Laurienti was the primary mentor for Ms. Addicott. She was awardedan NRSA from NIDA to fund her graduate research investigating caffeinewithdrawal and cognitive function. She completed her PhD training in

August 2009 and is an assistant professor at Duke University Medical Center.

Karen Joyce PhD Student 2009-2012 Dr. Laurienti served as a PhD advisor and co-mentor for Ms. Joyce. She is has a patent pending, along with Dr. Laurienti and Satoru Hayasaka., for "Agent-Based Brain Model and Related Methods" developed during her dissertation work. She is currently Director of Insights and Analytics with Novant Health.

Qawi TelesfordPhD Student2009-2013Dr. Laurienti served as a PhD advisor and co-mentor for Mr. Telesford.His PhD was awarded in Biomedical Engineering.Dr. Laurienti served asa PhD advisor and also assisted with Qawi's Ruth L. Kirschstein NationalResearch Service Award (NRSA) submission and award. He currentlyhas a Postdoctoral Fellowship with the Complex Systems Group at theUniversity 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 WilkinsPhD Student2010-2015UNC Greensboro Graduate Student in the Department of Music.Dr.Laurienti served as a co-advisor.Ms. Wilkins was studying musicpreference 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 PaoliniMD/PhD Student2011-2015Dr. 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.

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, MDRadiology Resident2006 - 2007Dr. 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 HayasakaAssistant Professor2005-2011Department of Biostatistical SciencesFormer Wake Forest University School of Medicine TSI Scholar.Dr. Laurienti served as his primary mentor.

Colleen HanlonInstructor2008-2010Department of Physiology and PharmacologyShe received the K01 Mentored Research Scientist Development Awardfrom NIDA. Her research involves using functional magnetic resonanceimaging to examine neural networks affected in chronic cocaine users.Dr. Laurienti served as a member of her mentoring team.

Laurienti, Paul J, M.D., Ph.D. Curriculum Vitae Page 46 Assistant Professor 2008-2013

Michael Cartwright Ass 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. Publications of this collaboration are pending. 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 Reieski 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

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.

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COMMUNITY ACTIVITES 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