

Salvatore (Sam) Torrisi

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EDUCATION

- PhD **Neuroscience Interdepartmental Program** • Summer, 2013
University of California, Los Angeles • 695 Young Drive South, Los Angeles, CA 90095
Primary advisor: Dr. Lori Altshuler of the UCLA Mood Disorders Research Program.
Dissertation committee: L Altshuler, S Bookheimer, E London, M Monti, J van Horn
- MA **Applied Linguistics** • Spring, 2007
University of California, Los Angeles • 3300 Rolfe Hall, Los Angeles, CA 90095
Advisors: John Schumann, Charles Goodwin
- MFA **Music Composition/New Media** • December, 2003
California Institute of the Arts • 24700 McBean Pkwy, Valencia, CA 91355
Advisors: James Tenney, Sara Roberts, Mark Trayle, David Rosenboom
- BA **Interdisciplinary Arts and Performance (Media Studies)** • May, 2001
Arizona State University West • 4701 W. Thunderbird Rd, Phoenix, AZ 85069
Advisors: Richard Lerman, Daniel Lentz. *Graduated Summa Cum Laude*

RESEARCH EXPERIENCE

Section on the Neurobiology of Fear and Anxiety. PIs: Christian Grillon, Monique Ernst.

National Institute of Mental Health. 15K North Drive, Bethesda, MD 20892 • 2016 – current.
Research Fellow. 7 Tesla functional neuroimaging and connectivity analyses of the anxiety network.

Section on the Neurobiology of Fear and Anxiety. PIs: Christian Grillon, Monique Ernst.

National Institute of Mental Health. 15K North Drive, Bethesda, MD 20892 • 2013 – 2016
Postdoctoral Fellow. 3T and 7T functional neuroimaging and connectivity analyses of anxiety network.

Mood Disorders Research Program. PI: Lori Altshuler.

300 UCLA Medical Plaza, Suite 1544 • April 2009 – Summer 2013
Functional neuroimaging and connectivity analyses of the euthymic mood state of Bipolar Disorder.

Graduate Student Researcher. PI: Stephanie A. White.

White Lab, Department of Physiological Science, UCLA • Sept 2005–June 2007.
Technical assistance, hardware implementation and behavioral analysis for a songbird laboratory.

TOOLS

Mac, Linux, Windows

UNIX, MATLAB, Vim, R

AFNI, SPM, FREESURFER

some FSL, E-Prime, BIOPAC, Python

PUBLICATIONS (in prep)

04. AX Gorka, T Lago, N Balderston, C Gaillard, **S Torrissi**, B Fuchs, C Grillon, M Ernst. *Methylphenidate resting state functional connectivity* (in prep)
03. **S Torrissi**, R Sladky, J Liu, J Leshin, M Ernst, C Grillon. *Effective connectivity of improved cognitive performance by threat of shock at 7T* (in prep)
02. **S Torrissi**, F Pereira, S Marrett, AX Gorka, G Alvarez, B Fuchs, VL Boerwinkle, D Adelson, C Grillon, M Ernst. *Functional parcellation of the human hypothalamus at ultra-high field* (in prep)
01. AX Gorka, **S Torrissi**, M Ernst, C Grillon. *Dorsal Extended Amygdala Responses to Aversive Conditioned Stimuli at Ultra-High Field*. (in prep)

PUBLICATIONS

19. **S Torrissi**, G Alvarez, AX Gorka, B Fuchs, M Garaci, C Grillon, M Ernst. *Resting state connectivity of the BNST and CeA in clinical anxiety* (submitted)
18. **S Torrissi**, G Chen, D Glen, P Bandettini, C Baker, R Reynolds, J Liu, J Leshin, N Balderston, C Grillon, M Ernst. (2018) *Statistical power comparisons at 3T and 7T with a GO / NOGO task*. *NeuroImage*, 175, 100-110
17. VL Boerwinkle, S Foldes, **S Torrissi**, H Temkit, JF Kerrigan, VR Desai, JS Raskin, A Vedantam, S Lam, M Ranjan, JS Broderick, D Adelson, AA Wilfong, DJ Curry. *Sub-centimeter epileptogenic zone targets by resting state functional MRI improves epilepsy surgical outcomes* (under review)
16. **S Torrissi**, A Gorka, J Gonzales-Castillo, K O'Connell, N Balderston, C Grillon, M Ernst. (2018) *Extended amygdala connectivity changes during sustained shock anticipation*. *Translational Psychiatry*, 8:33, 1-12
15. RM Tillman, MD Stockbridge, BM Nacewicz, **S Torrissi**, AS Fox, JF Smith, AJ Shackman. (2017) *Intrinsic functional connectivity of the central extended amygdala*. *Human Brain Mapping*, 1-22
14. AX Gorka, **S Torrissi**, AJ Shackman, C Grillon, M Ernst. (2018) *Intrinsic functional connectivity of the central nucleus of the amygdala and bed nucleus of the stria terminalis*. *NeuroImage* 168, 392-402

13. N Balderston, E Hale, A Hsiung, **S Torrisi**, T Holroyd, FW Carver, R Coppola, M Ernst, C Grillon. (2017) *Threat of shock increases excitability and connectivity of the intraparietal sulcus*. eLife, 6, 1080-1127
12. **S Torrisi**, C Nord, N Balderston, J Roiser, C Grillon, M Ernst. (2017) *Resting state connectivity of the human habenula at ultra-high field*. NeuroImage, 147, 872-879
11. **S Torrisi**, K O'Connell, A Davis, R Reynolds, N Balderston, JL Fudge, C Grillon, M Ernst. (2015) *Resting State Connectivity of the Bed Nucleus of the Stria Terminalis at Ultra-high Field*. Human Brain Mapping, 36 4076–4088
10. **S Torrisi**, O Robinson, K O'Connell, A Davis, N Balderston, M Ernst, C Grillon. (2016) *The Neural Basis of Improved Cognitive Performance by Threat of Shock*. Social Cognitive and Affective Neuroscience 11:11, 1677-86
09. N Balderston, K Vytal, K O'Connell, **S Torrisi**, A Letkiewicz, M Ernst, C Grillon. (2016) *Anxiety patients show reduced working memory related dlPFC activation during safety and threat*. Depression and Anxiety, 1-12
08. M Ernst, **S Torrisi**, N Balderston, C Grillon, E Hale. *FMRI functional connectivity applied to neurodevelopment, a focus on adolescence*. Annual Rev Clinical Psychology. 2015. 11:6.1–6.17
07. K Cross, **S Torrisi**, ER Losin, M Iacoboni. (2013) *Controlling automatic imitative tendencies: Interactions between mirror neuron and cognitive control systems*. NeuroImage 83 493-504
06. **S Torrisi**, MD Lieberman, SY Bookheimer, LL Altshuler. (2013) *Advancing understanding of affect labeling with dynamic causal modeling*. NeuroImage 82, 481-488
05. **S Torrisi**, T Moody, M Thomason, N Vizueta, MM Monti, JD Townsend, J Fischer, SY Bookheimer, LL Altshuler. (2013) *Differences in resting corticolimbic functional connectivity in bipolar I euthymia*. Bipolar Disorders 15(2) 156-166.
04. JD Townsend, **S Torrisi**, MD Lieberman, CA Sugar, SY Bookheimer, LL Altshuler. (2013) *Frontal-Amygdala Connectivity Alterations During Emotion Downregulation in Bipolar I Disorder*. Biological Psychiatry, 73(2): 127-135.
03. N Vizueta, JD Rudie, JD Townsend, **S Torrisi**, TD Moody, SY Bookheimer, LL Altshuler. (2012) *Regional fMRI Hypoactivation and Altered Functional Connectivity During Emotion Processing in Nonmedicated Depressed Patients with Bipolar II Disorder*. Am J Psychiatry. 2012; 169(8):831-40.
02. LC Foland-Ross, S Bookheimer, MD Lieberman, J Townsend, J Fischer, **S Torrisi**, C Penfold, SK Madsen, PM Thompson, L Altshuler. (2011) *Normal amygdala activation but deficient ventrolateral prefrontal activation in adults with bipolar disorder during euthymia*. NeuroImage. 2012; 59(1):738-44. Epub 2011 Aug 10.

01. I Teramitsu, A Poopatanapong, **S Torrisi**, SA White. *Striatal FoxP2 Is Actively Regulated during Songbird Sensorimotor Learning*. PLoS One. January 2010; 5(1) e8548

PUBLISHED CHAPTERS

02. M Ernst, L Hale, N Balderston, **S Torrisi** (2015) Introduction to functional brain connectivity: potential contributions to understanding adolescent vulnerability to substance abuse. In S.F. Ewing, K Witkiewitz, F. Filbey (Eds.) *Neuroimaging and Psychosocial Addiction Treatment*. Palgrave Macmillan.
01. **S Torrisi**. (2010). Social Regulation in Frontotemporal Dementia: A Case Study. In A. Mates, L. Mikesell, & M. Smith (Eds.) *Language, Interaction and Frontotemporal Dementia: Reverse Engineering the Social Mind*. London: Equinox Publishing

CONFERENCE PRESENTATIONS

12. **S. Torrisi**, G Alvarez, B Fuchs, M Garaci, A Gorka, M Ernst, C Grillon. *Resting State Connectivity of the BNST and CeA in Patients with Generalized and Social Anxiety*. SfN. Nov 14, 2017, Washington, DC.
11. **S Torrisi**, G Chen, D Glen, P Bandettini, C Baker, J Liu, C Grillon, M Ernst. *Statistical power comparisons at 3T and 7T with a GO / NOGO task*. NIMH Training Day. Sept 11 2017, Leesburg, VA.
10. **S. Torrisi**, J Liu, J Leshin, M Ernst, C Grillon. *Neural Contributions to Improved Cognitive Performance by Threat of Shock at 7T*. 23rd annual OHBM. June 26, 2017, Vancouver, Canada.
09. **S. Torrisi**, G Alvarez, C Grillon, M Ernst. *Resting State Connectivity of the BNST in Patients with Anxiety Disorders*. Anxiety & Depression Association of America, April 7, 2017, San Francisco, CA.
08. **S. Torrisi**, K O'Connell, A Gorka, A Davis, N Balderston, M Ernst, C Grillon. *Voxel-wise Functional Connectivity of BNST and Central Amygdala Under Induced Anxiety*. Presented at Anxiety and Depression Association of America. April 1-2, 2016, Philadelphia, PA.
07. **S. Torrisi**, O. Robinson, K O'Connell, A Davis, N Balderston, M Ernst, C Grillon. *Neural Correlates of Response Inhibition Improved by Threat of Shock*. Presented at the 21st annual meeting of the Organization of Human Brain Mapping. June 16, 2015, Honolulu, HI.
06. **S. Torrisi**, R. Reynolds, K O'Connell, A Davis, N Balderston, C Grillon, M Ernst. *Resting connectivity of the Bed Nucleus of the Stria Terminalis*. Presented at the 4th biennial Resting State Brain Connectivity Conference. Sept 13, 2014, Cambridge, MA.
05. **S. Torrisi**, K. McRae, N. Vizueta, S. Bookheimer, L.L. Altshuler. *Hypoactivity in left vLPFC during reappraisal in bipolar disorder euthymia*. Presented at the 19th annual meeting of the Organization of Human Brain Mapping. June 16-20, 2013, Seattle, WA.
04. **S. Torrisi**, N. Vizueta, J. Townsend, E. Lau, S. Bookheimer, L.L. Altshuler. *Effective Connectivity Network Differences During Incidental Emotion Regulation in Euthymic Bipolar Disorder*. Presented at the 67th Society of Biological Psychiatry annual meeting. May 3-5, 2012, Philadelphia, PA.
03. **S. Torrisi**, N. Vizueta, E. Berkman, L. Foland-Ross, J.D. Townsend, T.D. Moody, J. Fischer, S.Y. Bookheimer, L.L. Altshuler. *Differences in Amygdala to VLPFC Resting State Functional Connectivity in Bipolar I*

Euthymia. Presented at the 17th Annual Organization for Human Brain Mapping meeting. June 26-30, 2011, Québec City, Canada.

02. **S. Torrisi**, J.D. Townsend, N. Vizueta, A. Aquino, J. Fischer, S.Y. Bookheimer, L.L. Altshuler *Dysfunction of Frontal and Subcortical Connectivity During a Task of Emotion Regulation in Bipolar II Disorder Depression* presented at New Horizons in Human Brain Imaging: A Focus on Brain Networks and Connectivity, December 1, 2010. Oahu, HI.
01. **S. Torrisi**, N. Vizueta, E. Berkman, L. Foland-Ross, J.D. Townsend, T.D. Moody, J. Fischer, S.Y. Bookheimer, L.L. Altshuler. *Fronto-limbic Functional Connectivity in Bipolar II Depression during Emotion Labeling*. Presented at the 4th Annual Meeting of the Social & Affective Neuroscience Society. September 18, 2010. Chicago, IL.

ACADEMIC PRESENTATIONS

‘Alterations In BNST Functional Connectivity During Induced Anxiety’ at SOBP 2016, Atlanta, GA.

‘Resting connectivity of the BNST at ultra-high field’ at fMRI/MRI seminar series, May 28, 2015, NIH.

Chair, mini-symposium ‘Human Subcortical Connectivity at Ultra High Field MRI’ at SfN 2014, DC.

Dissertation defense, July 9, 2013, UCLA.

Neuroscience Afterlab Research Forum, February 28, 2013, UCLA.

Presentation on FTD project to ‘Mind, Medicine and Culture’ group, Dec 3rd 2007, UCLA.

AD HOC REVIEWING

NeuroImage, NeuroImage: Clinical, Psychiatric Research Neuroimaging, Human Brain Mapping

TEACHING EXPERIENCE

‘Extended Amygdala (and Beyond) Under Threat of Shock’ Nov 07, 2017, Dept. of Psychology, CUA

‘Threat of Shock Effects on SART’ April 25, 2017, Dept. of Psychology, Catholic University of America

‘fMRI-based connectivity methods’ Aug 21, 2015, at CSL, Georgetown University Medical Center

Workshop on Dynamic Causal Modeling, UCLA, NITP Summer School. July 15, 2013

Teachers Assistant, UCLA, Dept. of Neuroscience; NS102 (Neuroanatomy). Fall, 2012

Private instructor/counselor: Williams Syndrome Music Camp, Grand Rapids, MI. Summers, 2005 - 2009

Private clarinet instruction. 1996 – 2005

Substitute (grades 1-12) & music teacher: Vacaville Unif School District, Vacaville, CA. Sept ‘04–June ‘05

Lecturer, activities director and counselor: Donner Mine Music Camp, Truckee, CA. Summers 2000-2002

INTERNSHIPS

Internship rotation on inpatient units of UCLA Neuropsychiatric Hospital under the directorship of

Dr. Laurie Casaus. August 1 – Sept 1, 2011.

Externship rotation at outpatient Mood Disorders Clinic at UCLA/Semel Institute under the directorship of

Dr. Michael Gitlin. August 1 – Sept. 1, 2011.

Cortical Thickness of Methamphetamine Addicts. PI: Edythe London.

Semel Institute, UCLA • Jan 2009–April 2009. Cortical thickness and the Balloon Analogue Risk Task.

Cross-Correlation of Observed Social Interactions. PI: Marco Iacoboni.

Ahmanson Lovelace Brain Mapping Center, UCLA • Sept 2007–March 2008. Intersubject cross-correlations of subjects observing social interactions and behavioral coding of video stimuli.

AWARDS

NIMH IRP Office of Fellowship Training, travel award, 2017

NIH Loan Repayment Program award 2016-2019

Fellowship to *Summer Institute in Cognitive Neuroscience* June 20-July 1, 2016, UCSB, CA

NIH Fellows Award for Research Excellence (FARE) 2016, travel award.

UCLA Neuroimaging Training Program Fellowship (NIH T90) Sept. 2011-Aug. 2012

New Horizons in Human Brain Imaging: Brain Networks and Connectivity Dec. 1-3, 2010 (Oahu, Hawaii)

Acceptance to NITP Advanced Neuroimaging Summer School, July 12-23, 2010. UCLA

UCLA QGE special course funding, spring & winter, 2010 (for two SPM courses in Boston)

UCLA QGE special course funding, spring, 2009 (for FSL/FreeSurfer course in San Francisco)

CalArts Scholarship, fall, 2003 (matched to L. May & R.V. Hagen)

Lulu May & Richard Von Hagen Scholarship, 2001 - 2002 (to top 5% incoming students)

PROFESSIONAL DEVELOPMENT

Probabilistic BNST masks made public in 2015: https://afni.nimh.nih.gov/Atlases_page

Co-Coordinator of UCLA Neuroimaging + Journal Club • Winter, 2013

Principal clarinetist, Los Angeles Doctors Symphony Orchestra • 2011 – 2012 season

Admissions committee, UCLA Neuroscience Interdepartmental Program • January – March. 2011

Admissions committee, CEAIT computer music festival • CalArts • Sept. 2002 – Jan. 2003

PRESS

Torrissi, et al. 2018 (Statistical Power Comparisons) profiled in *Brain Waves* (June, 2018) internal NIMH newsletter

Torrissi, et al. 2015 (BNST) referenced in *On Edge: A Journey Through Anxiety (2017)* by Andrea Petersen

http://dana.org/BrainWork/2013/When_Labeling_an_Emotion_Quiets_It/

<http://blogs.plos.org/neuroanthropology/2010/10/14/frontotemporal-dementia-neuroanthropology-and-reverse-engineering-the-mind/>

MUSIC PUBLICATIONS

S. Torrissi. *For Woody*, 2013 solo for clarinet and recording. Frog Peak Experimental Music Collective

S. Torrissi. *acute trio*, 2004 computer-aided clarinet duet. Frog Peak Experimental Music Collective

ANTHROPOLOGY

Ethnography of Frontotemporal Dementia (FTD). PI: Alan P. Fiske.

Departments of Applied Linguistics, Anthropology & Psychology, UCLA • May 2006–Nov 2007.
Interdisciplinary study of socio-moral dysfunction in FTD. Ethnographic fieldwork.

Burning Man Census. PIs: Megan Mullet & Kateri McRae.

Department of Anthropology, UCLA • Summer, 2007.

Implemented software/hardware for data acquisition from thousands of surveys at a large arts festival.

Vanishing Identities in Caribbean Performance Art. PI: Dale Byam.

Interdisciplinary Arts and Performance, Arizona State University West • February, 1999.

Digital sound recording for a scholarly documentary about underground stick fighting in Trinidad.