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## CURRICULUM VITAE

**DATE:** January 2015

**NAME:** Joshua I. Breier

**PRESENT TITLE:**

Professor  
Center for Clinical Neurosciences  
The University of Texas Medical School at Houston  
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**BIRTHDATE:** December 10, 1945

**CITIZENSHIP:** US

**UNDERGRADUATE EDUCATION:**

B. A. (1969 - 1973) Major: Musical Composition, Berklee College of Music, Boston, Massachusetts.

B. S. (1962 - 1966) Major: Biochemistry, Cornell University, Ithaca, New York.

**GRADUATE EDUCATION:**

APA approved Internship in Clinical Psychology (1992 - 1993), Neuropsychology Specialty Track, Department of Clinical and Health Psychology, University of Florida, Gainesville, Florida.

Ph.D. (1991 - 1993) Clinical Neuropsychology, Department of Psychology, University of Houston, Houston, Texas. Doctoral Dissertation: Spatial and temporal factors in the integration of multisensory information in localization and detection tasks.

M. A. (1989 - 1991) Clinical Neuropsychology, Department of Psychology, University of Houston, Houston, Texas. Masters Thesis: The effects of equiluminant colored backgrounds on simple reaction time to flashed luminance decrements and bistable stroboscopic motion percepts.

**POSTGRADUATE TRAINING:**

Post-Doctoral Research Fellow (1993 - 1994) Neuropsychology Laboratory, Department of Clinical and Health Psychology, University of Florida, Gainesville, Florida.

Research: Magnetic resonance imaging of white and gray matter and hippocampal

volumes in epilepsy, agnosia for hemiplegia during WADA testing, memory in epilepsy, psychophysiology of implicit memory.

Clinical: Neuropsychological assessment in neurological and psychiatric populations.

**ACADEMIC APPOINTMENTS:**

**Assistant Professor** (1994 - 1999) Department of Neurosurgery, The University of Texas Medical School/Houston.

**Associate Professor** (1999 - 2007) Department of Neurosurgery, The University of Texas Medical School/Houston.

**Professor** (2007 - present) Center for Clinical Neurosciences Departments of Pediatrics, Neurology, Neurosurgery, The University of Texas Medical School/Houston.

Clinical: (1996-present) Head of neuropsychology in the Department of Neurosurgery; Senior adult neuropsychologist at Hermann Hospital. Perform neuropsychological assessment of approximately 300 adult, adolescent, and pediatric patients per year, representing approximately 2000 hours of patient interaction. Approximately 60% of assessment is as the chief neuropsychologist with the Texas Comprehensive Epilepsy Program and includes neuropsychological testing for the purposes of lesion localization, Wada testing, and intra-operative and extra-operative functional mapping of receptive and expressive language cortex.

Research: Neuropsychological and functional brain mapping (positron emission tomography, magnetoencephalography, functional magnetic resonance imaging), and psychoacoustics in clinical populations.

Teaching: Lectures to Neurology Residents at the University of Texas Medical School at Houston and Graduate students in Psychology at the University of Houston. Serve on the Medical School Admissions Committee as a Faculty Interviewer. Supervise 3 to 4 Neuropsychology Practicum students from the Clinical Psychology Graduate Program, University of Houston and 3 to 4 Post-Doctoral Fellows each year.

**Adjunct Faculty** (1996-present) Department of Psychology, The University of Houston: Train and supervise graduate students in the Clinical Neuropsychology program; sit on Thesis and Dissertation committees, give lectures on neuropsychological assessment and functional imaging.

**HOSPITAL APPOINTMENTS**: Credentialed at Hermann Hospital, Houston, Texas

**LICENSURE**: Licensed Clinical Psychologist, State of Texas - License # 2-5247

**CERTIFICATION**: Certified Clinical Psychologist, State of Texas

**PROFESSIONAL ORGANIZATIONS**:

International Neuropsychological Society (1989 - present)  
Houston Neuropsychological Society (1994-present)  
American Psychological Association (1998 - present)  
American Epilepsy Association (1998-present)  
Society for Neuroscience (1999 – present)

### **EDITORIAL POSITIONS:**

Ad hoc reviewer for:  
Developmental Psychology.  
Epilepsia.  
Archives of Neurology  
Scientific Studies of Reading  
Neuropsychology  
Developmental Neuropsychology  
Journal of Experimental Child Psychology  
Brain Research  
Learning Disabilities: A Contemporary Journal  
Journal of Speech, Language and Hearing Research  
European Journal of Neurology

### **SERVICE ON MEDICAL SCHOOL COMMITTEES at THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON:**

Faculty Interviewer for prospective medical students (1996-2006)  
Peer Review Committee, Department of Neurosurgery (1997-2000)  
Played an integral role in organizing and writing the Department of Neurosurgery Self Study as part of the 6 year Departmental Review (1997-1998)  
Faculty Senator (1999 - 2002)

### **SERVICE TO THE COMMUNITY:**

Science Fair Judge – Poe Elementary School (1998; 1999)  
Coach children's athletic teams: Little League Baseball; YMCA Basketball and Soccer; Church League basketball  
Work with neighborhood Civic Association to reinstate deed restrictions.  
Board Member – Near Town Little League, Houston, Texas

### **CURRENT TEACHING RESPONSIBILITIES:**

Supervision of Neuropsychology graduate students from the University of Houston, Department of Psychology in Clinical Practicum.  
Supervision of 3 to 4 Post-Doctoral Fellows in Neuropsychology  
Lectures to residents in the Department of Neurology.  
Guest lecturer at the University of Houston.

Reader on comprehensive examinations for PhD candidates at the University of Houston, Department of Psychology.

Chair and member of thesis and dissertation committees for graduate students:

Member, Dissertation Committee: "The formulation and standardization of a battery of tests of visual-perceptual-motor function for the adult cerebro-vascular accident patient" Marjorie Eileen Concha, Wits University, Johannesburg, South America (1998).

Chair, Dissertation Committee: "Effects of atypical language laterality on memory performance during Wada testing". Kathleen Fuchs - University of Houston Department of Psychology, Neuropsychology Track (1999).

Member, Thesis Committee: "Effects of left temporal lobe epilepsy on the retrieval stage of memory". Lynne Cole, University of Houston Department of Psychology, Neuropsychology Track (2000).

Chair, Thesis Committee: "Differential effects of language reorganization in response to unilateral left temporal lobe epilepsy on semantic and episodic memory" Allison Clark, University of Houston Department of Psychology, Neuropsychology Track. (2001)

Member, Dissertation Committee: "Organization of language cortex in bilingual speakers using magnetoencephalography" Robert N. Davis, University of Houston Department of Psychology, Neuropsychology Track (2001).

## **CURRENT GRANT SUPPORT**

**Co-Investigator** (35% effort) – "Mission Connect Mild TBI Translational Research Consortium" (Andrew C. Papanicolaou, PI). Department of Defense, PT074693. (2008-2013).

## **PAST GRANT SUPPORT:**

**Principal Investigator** (40% effort) – "Functional brain reorganization in recovery from aphasia". Project 1 of the Program Project Grant entitled "Functional Brain Reorganization in Stroke Recovery" (Andrew C. Papanicolaou, PI). NINDS, NIH Grant PO1NS046588. (2004 – 2009).

**Co-Investigator** (5% effort) – "Early Development of Auditory Temporal Processing" Principal Investigator: Lincoln Gray, Ph.D.; NIH \$753,426 (2001-2005).

**Co-Investigator** (25% effort) – "Brain Activation Profiles in Dyslexia: A MEG Study" (Papanicolaou) 1 RO1 HD38346-01A1, National Institutes of Health. \$ 1,488,374 (2000 - 2005).

**Principal Investigator** (40% effort) "Auditory temporal processing in children with

dyslexia", 1 RO1 HD/DC35938-01A1, National Institute of Child Health and Human Development, \$701,335 (1998 - 2003).

**Co-Investigator** (20% effort) - "Contributions of MEG to the Surgical Management of Epilepsy" (Papanicolaou), 1 RO1 NS37941-01A1. National Institutes of Health, \$ 2,674,447 (1999-2004).

**Co-Investigator** (5% effort) – "Early Development of Auditory Temporal Processing" Principal Investigator: Lincoln Gray, Ph.D.; March of Dimes #12-FY-00-0166. \$178, 851 (2000-2003).

**Co-Investigator** (Instrumentation grant) "Acquisition of Magnetic Source Imaging System for Cognitive and Educational Neuroimaging." PI: Andrew C. Papanicolaou, National Science Foundation. BCS-0116150. \$2,000,000 (2001-2002).

**Principal Investigator** - "Auditory temporal processing in children with reading disabilities", 1 12-FY98-0214, March of Dimes Birth Defects Foundation. (1998 -1999).

**Co- Investigator** - "Effects of early auditory experience on binaural hearing". NIH grant 5 RO1 DC00018-06 (Gray) 9/1/94 - 9/1/98.

## **PUBLICATIONS:**

### **Abstracts and Presentations**

1. Breitmeyer, B.G., and **Breier, J. I.** Background color effects on visual reaction time and scanning rate. Paper presented at the annual meeting of the Psychonomic Society, Washington, D.C., Nov. 5 - 7. 1993.
2. **Breier, J. I.**, and Gray, L. Sound source localization in pre- and post-operative unilateral atresia patients. *Journal of Clinical and Experimental Neuropsychology* 15:39, 1993.
3. **Breier, J. I.**, Culhane, K. A., Rettig, G. M., and Rutecki, P. The relationship of indices of language and memory laterality formed from Wada test data to variables affecting interhemispheric reorganization of these functions. *Journal of Clinical and Experimental Neuropsychology* 15:39, 1993.
4. **Breier, J. I.**, Leonard, C. M., Bauer, R. M., Gilmore, R., and Roper, S. Interhemispheric asymmetries in an index of temporal lobe cortical volume in patients with temporal lobe epilepsy. *Epilepsia* 35:147, 1994.
5. Leonard, C. M., Lombardino, L. J., Mercado, L., Foundas, A. L., Browd, S., **Breier, J. I.**, Agee, O. F., and Heilman, K. M. Increased asymmetry of the planum temporale parallels improved phonological conceptual ability during childhood. *Society for Neuroscience Abstracts*, 1994.

6. **Breier, J. I.**, Gray, L., and Jahrsdoerfer, R. A. Accuracy and precision in horizontal localization after correction for congenital conductive hearing loss. Association for Research in Otolaryngology Abstracts 19:188, 1995.
7. **Breier, J. I.**, Plenger, P. M., Wheless, J. W., Thomas, A. B., Brookshire, B. L., Willmore, L. J., and Papanicolaou, A. C. Differential effects of early onset seizure activity on figural and spatial memory in patients with temporal lobe epilepsy. *Epilepsia* 36:132, 1995.
8. Plenger, P. M., **Breier, J. I.**, Wheless, J. W., Brookshire, B. L., Papanicolaou, A. C., Thomas, A. B., and Willmore, L. J. The utility of the MMPI in differentiating non-epileptic seizure disorder from frontal lobe epilepsy. Annual Meeting of the American Epilepsy Society, Baltimore, MD. *Epilepsia* 36:136, 1995.
9. **Breier, J. I.**, Plenger, P. M., Wheless, J. W., Thomas, A. B., Brookshire, B. L., Curtis, V. L., Papanicolaou, A. C., Willmore, L. J. Evidence of re-organization of spatial and figural memory following early seizure activity. American Epilepsy Society, 1995.
10. Bauer, R. M., Breier J. I., Crosson, B., Gilmore, R., Fennell, E. B., and Roper, S. Neuropsychological functioning before and after unilateral temporal lobectomy for intractable epilepsy. *Journal of the International Neuropsychological Society* 1:362, 1995.
11. Gray, L., **Breier, J. I.**, and Jahrsdoerfer, R. Localization of reverberant and anechoic virtual stimuli after correction for congenital conductive hearing losses. Association for Research in Otolaryngology Abstracts 19:188, 1995.
12. **Breier, J. I.**, Plenger, P. M., Fuchs, K., Castillo, E. M., Wheless, J. W., Thomas, A. B., Brookshire, B. L., Willmore, L. J., and Papanicolaou, A. C. Effects of temporal lobe epilepsy on spatial and figural aspects of memory for a complex geometric figure. 24<sup>th</sup> Annual Meeting of the International Neuropsychological Society, Chicago, IL, 1996; *Journal of the International Neuropsychological Society* 2:53, 1996.
13. Plenger, P. M., **Breier, J. I.**, Willmore, L. J., Wheless, J. W., Thomas, A. B., Brookshire, B. L., Papanicolaou, A. C. Relationship of neuropsychological tests of frontal functioning to frontal lobe seizures. Annual International Neuropsychological Society Meeting, Chicago, IL, 1996.
14. **Breier, J. I.**, Thomas, A. B., Mullani, N., Plenger, P. M., Wheless, J. W., Papanicolaou, A. C., and Willmore, L. J. Effects of age at onset and duration of chronic seizure disorder on asymmetries in temporal lobe metabolism and blood flow in complex partial epilepsy. *Epilepsia* 37(Suppl. 5), 1996.
15. Brookshire, B. L., **Breier, J. I.**, Fletcher, J. M., Plenger, P. M., Wheless, J. W., Thomas, A. B., Papanicolaou, A. C., and Willmore, L. J. Cognitive profiles of adults with temporal lobe epilepsy and academic deficits. Annual Meeting of the American

Epilepsy Society, December, 1996; *Epilepsia* 37 (Suppl. 5):128, 1996.

16. **Breier, J. I.**, Thomas, A.B., Mullani, N., Plenger, P.M., Wheless, J.W., Papanicolaou, A.C., and Willmore, L.J. Effects of age at onset and duration of chronic seizure disorder on asymmetries in temporal lobe metabolism and blood flow in complex partial epilepsy. Poster presented at the Annual Meeting of the American Epilepsy Society, December 1996.

17. Brookshire, B. L., **Breier, J. I.**, Fletcher, J. M.; Plenger, P. M.; Wheless, J. W., Thomas, A.B., Papanicolaou, A. C., and Willmore, L. J. Cognitive profiles of adults with temporal lobe epilepsy and academic deficits. Poster presented at the annual meeting of the American Epilepsy Society, December, 1996.

18. Plenger, P. M., **Breier, J. I.**, Brookshire, B. L., Wheless, J. W., Thomas, A. B., Papanicolaou, A. C., and Willmore, L. J. Enhancing the discrimination of left temporal lobe epilepsy during the intracarotid sodium amobarbital procedure. *Epilepsia* 37 (Suppl. 5):133, 1996.

19. **Breier, J. I.**, Brookshire, B. L., Fletcher, J. M., Plenger, P. M., Wheless, J. W., Thomas, A. B., Papanicolaou, A. C., and Willmore, L. J. Identification of side of seizure onset in temporal lobe epilepsy using memory tests in the context of academic achievement deficit. *Journal of the International Neuropsychological Society* 3:9, 1997.

20. Plenger, P. M., **Breier, J. I.**, Mullani, N., Wheless, J. W., Thomas, A. B., Papanicolaou, A., and Willmore, L. J. Asymmetries in frontal lobe glucose uptake and executive functions in temporal lobe epilepsy. *Journal of the International Neuropsychological Society* 3:73, 1997.

21. Fuchs, K., **Breier, J. I.**, Brookshire, B. L., Wheless, J. W., Thomas, A. B., Papanicolaou, A. C., and Willmore, L. J. The relationship between memory and language performance during the Intracarotid Amobarbital Procedure. Annual Meeting of the American Epilepsy Society; Boston, MA; December, 1997; *Epilepsia* 38 (Suppl. 8): 217-218, 1997.

22. Caudle, D., **Breier, J. I.**, Brookshire, B.L., Wheless, J.W., Thomas, A.B., Papanicolaou, A., and Willmore, L. J. MMPI profiles as a function of side of seizure operation in temporal lobe epilepsy. *Journal of the International Neuropsychological Society* 4(1):19, 1998.

23. Fuchs, K., **Breier, J. I.**, Brookshire, B. L., Wheless, J. W., Thomas, A. B., Papanicolaou, A. C., and Willmore, L. J. Language laterality affects Wada test performance. *Journal of the International Neuropsychological Society* 4(1):73, 1998.

24. Papanicolaou, A., Simos, P., **Breier, J. I.**, and Zouridakis, G. Language mapping with magnetoencephalography (MEG). *Journal of the International Neuropsychological*

Society 7:S211, 1998.

25. Papanicolaou, A. C., Simos, P., **Breier, J. I.**, and Zouridakis G. Language mapping with magnetoencephalography. Poster presented at the Annual International Meeting of the International Neuropsychological Society, July, 1998.

26. Zouridakis, G., Simos, P., **Breier, J. I.**, and Papanicolaou, A. C. Assessment of functional hemispheric asymmetries in a visual task using MEG. Paper presented at the 16th Annual Houston Conference on Biomedical Research. Houston, Texas, April 2 -3, 1998.

27. Kuldau, J. M., Leonard, C. M., **Breier, J. I.**, Zuffante, P., Gautier, E. R., Heron, D. C., Laverv, E. M., Packing, J., Williams, S. A., and DeBose, C. Cumulative effect of cerebral risk factors on the diagnosis of schizophrenia: An MRI study. Society of Neuroscience Abstracts, 1998.

28. **Breier, J. I.**, Simos, P.G., Zouridakis, G., Papanicolaou, A. C. Reliability of MEG lateralization and localization of receptive language areas. 52<sup>nd</sup> Annual Meeting of the American Epilepsy Society; December 1998; *Epilepsia* 39 (Suppl. 6):143, 1998.

29. Papanicolaou, A.C., **Breier, J. I.**, Gormley, W. B., Simos, P. G., Wheless, J. W., Constantinou, J. E. C., and Willmore, L. J. Comparison of language mapping using extra- and intraoperative electrocortical stimulation and magnetoencephalography. *Epilepsia* 39 (Suppl. 6):107-108, 1998.

30. Wilson, M. E., Shelley, K. S., McMullen, M., and **Breier, J. I.** People with epilepsy in the work place. *Epilepsia* 39 (Suppl. 6):238, 1998.

31. Willmore, L. J., Wheless, J. I., **Breier, J. I.**, Kataki, M., Smith, J. R., King, D. W., Meador, J. K., Park, Y. D., and Loring, D. W. A comparison of magnetoencephalography (MEG), MRI, and V-EEG in patients evaluated for epilepsy surgery. *Epilepsia* 39 (Suppl. 6):64, 1998.

32. Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. Identification of language-related brain activity using magnetoencephalography. 11th International Conference on Biomagnetism, Biomag 98, Sendai Japan, August 28-September 2, 1998.

33. Zouridakis, G., Simos, P. G., **Breier, J. I.**, and Papanicolaou, A. C. Cerebral dominance assessment using magnetoencephalography. 11th International Conference on Biomagnetism, Biomag98, Sendai Japan August 28-September 2, 1998.

34. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, and Zouridakis, G. Mapping of language specific cortex with MEG. 11th International Conference on Biomagnetism, Biomag98, Sendai, Japan August 28-September 2, 1998.



35. Zouridakis G., Simos P. G., **Breier J. I.**, and Papanicolaou A. C. Assessment of functional hemispheric asymmetries in a visual language task via MEG." *Biomag98*, P-IX-35, p230, 1998.
36. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, and Zouridakis, G. Language mapping with magnetoencephalography (MEG). *Neuroimage*, 7, S178, 1998.
- 37.
38. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, and Zouridakis, G. Language mapping with magnetoencephalography. Fourth International Conference on Functional Mapping of the Human Brain, June 1998.
39. Maggio W.W., Simos P.G., Breier J.I., Zouridakis G., Gormley W.B., Constantinou J.E.C., Wheless J.W., Papanicolaou A.C. Magnetic Source Imaging Speech Mapping: Comparison with Intraoperative Speech Mapping. Rocky Mountain Association Meeting, 1999.
40. Simos, P.G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A.C. MEG correlates of categorical perception of temporal cues for voicing in humans. *Journal of the International Neuropsychological Society*, 5: S135, 1999.
41. **Breier, J. I.**, Simos, P. G., Zouridakis, G., and Papanicolaou, A. C. Timing of neuronal activity in distinct areas of the brain during a verbal recognition memory task. *Journal of International Neuropsychology Society* 5:153, 1999.
42. Wright, M., **Breier, J. I.**, Wheless, J. W., Constantinou, J. E. C., and Willmore, L. J. Anxiety and conversion symptoms in adolescent pseudoseizures. *Journal of International Neuropsychology Society* 5:135, 1999.
43. Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. MEG correlates of categorical perception of temporal cues for voicing in humans. Paper presented at the February 1999 International Neuropsychological Society Meeting. *Journal of International Neuropsychology Society* 5:125-126, 1999.
44. **Breier, J. I.**, Zouridakis, G., Simos, P. G., and Papanicolaou, A. C. Timing of activity in distinct brain areas during a recognition memory task for words. Paper presented at the 17th Annual Houston Conference on Biomedical Engineering Research, February 10-13, Houston, Texas, 1999.
45. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, and Zouridakis, G. MEG-derived maps of language-specific cortex. 27<sup>th</sup> Annual Meeting of the International Neuropsychological Society; Boston, Massachusetts; February 10-13, 1999.
46. Zouridakis, G., Simos, P. G., **Breier, J. I.**, Gormley, W. B., Wheless, J. W., Constantinou, J. E. C. and Papanicolaou, A.C. Language mapping via magnetoencephalography. Paper presented at the 17th Annual Houston Conference on

Biomedical Engineering Research, Houston, Texas, February 10-13, 1999.

47. Papanicolaou, A. C., Zouridakis, G., Simos, P. G., **Breier, J. I.**, Maggio, W. W., Gormley, W. B., Constantinou, J. E. C., Wheless, J., Willmore, L. J., and Kramer, L. A. Comparison of MSI and invasive brain mapping procedures: normative and clinical studies of language. 5<sup>th</sup> International Conference on Functional Mapping of the Human Brain. Dusseldorf, Germany; June 22-26, 1999.

48. Papanicolaou, A. C., Simos, P. G., Zouridakis, G., **Breier, J. I.**, Gormley, W. B., Constantinou, J. E. C., Wheless, J. W., and Maggio, W. W. Applications of MEG to the mapping of the language cortex. 2<sup>nd</sup> Annual Symposium on Non-Invasive Functional Source Imaging. Dubrovnik, Croatia; September 3 -7, 1999.

49. Papanicolaou, A. C., Simos, P. G., Zouridakis, G., **Breier, J. I.**, Gormley, W. B., Constantinou, J. E., Wheless, J. W., and Maggio, W. W. Mapping the language cortex with MSI. 23<sup>rd</sup> Annual International Epilepsy Congress; September 12-17, 1999; Prague, Czech Republic.

50. Maggio, W. W. Simos, P. G., **Breier, J. I.**, Zouridakis, G., Gormley, W. B., Constantinou, J. E., Wheless, J. W., and Papanicolaou, A. C. Speech mapping with MSI: Comparison with intraoperative speech mapping. 23<sup>rd</sup> Annual International Epilepsy Congress; September 12-17, 1999; Prague, Czech Republic.

51. Papanicolaou, A. C., Simos, P. G., Zouridakis, G., **Breier, J. I.**, Gormley, W. B., Constantinou, J. E., Wheless, J. W., and Maggio, W. W. Mapping the receptive language cortex. 1999 Annual Meeting, Society for Neuroscience, October 23-28, 1999. Society for Neuroscience Abstracts, 25(2): 1635, 1999.

52. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., and Papanicolaou, A. C. Failure to engage brain areas involved in phonological decoding in dyslexic children: A magnetic source imaging study. Society for Neuroscience Abstracts, 25(2): 2170, 1999.

53. Papanicolaou, A.C., Simos, P. G., **Breier, J. I.**, Zouridakis, G., Constantinou, J. E., Wheless, J. W., and Maggio, W. W. Applications of MEG to the mapping of the language cortex. 53<sup>rd</sup> Annual Meeting of the American Epilepsy Society; Orlando, Florida; December 3-9, 1999.

54. Simos, P. G., Fletcher, J. M., Breier, J. L., Bergman, E., Zouridakis, G., and Papanicolaou, A.C. Failure to engage brain areas involved in phonological access in dyslexia: a magnetic source imaging study. Annual Meeting, Society for Neuroscience, October 23-28, 1999. Society of Neuroscience Abstracts, 25(2): 2170, 1999.

55. Papanicolaou, A.C., Simos, P.G., **Breier, J. I.**, Zouridakis, G., Constantinou, J. E., Wheless, J.W., and Maggio, W.W. Applications of MEG to the mapping of language specific cortex. Abstract presented at the 53<sup>rd</sup> Annual Meeting of the American Epilepsy Society, December 3-9, 1999. Epilepsia 40(7): 178, 1999.

56. **Breier, J. I.**, Clark, A., Cass, J. Wheless, J. W., Constantinou, J. E. C. Profiles of cognitive performance in TLE patients with and without learning disability. Abstract presented at the 53<sup>rd</sup> Annual Meeting of the American Epilepsy Society, December 3-9, 1999. *Epilepsia* 40(7): 47, 1999.
57. Maggio, W. W., Simos, P. G., **Breier, J. I.**, Zouridakis, G., Gormley, W. B., Constantinou, J. E. C., Wheless, J. W., and Papanicolaou, A. C. Speech mapping with magnetic source imaging: comparison with intraoperative speech mapping. *Epilepsia* 40 (Suppl. 2): 50, 1999.
58. Maggio, W. W., Simos, P. G., **Breier, J. I.**, Zouridakis, G., Gormley, W. B., Constantinou, J. E. C., Wheless, J. W., and Papanicolaou, A. C. Magnetic source imaging speech mapping: comparison with intraoperative speech mapping. Paper presented at the annual meeting of the Rocky Mountain Association, 1999.
59. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Bergman, E., and Papanicolaou, A. C. Consistent failure to engage brain areas involved in phonological decoding in dyslexia: A magnetic source imaging study of two consecutive series in children. *Journal of the International Neuropsychological Society*, 6:211, 2000.
60. **Breier, J. I.**, Clark, A., Cass, J., Fletcher, J. M., Brookshire, B., Wheless, J. W, and Constantinou, J. E. C. Specific reading disability in temporal lobe epilepsy and reorganization of language function. *Journal of the Neuropsychological Society*. 6 (Suppl. 2): 197, February, 2000.
61. Papanicolaou, A.C., Simos, P.G., **Breier, J. I.**, Zouridakis, G., Constantinou, J.E., Wheless, J.W., and Maggio, W.W. Applications of MEG to the mapping of the language-specific cortex. *Epilepsia*, 40 (suppl. 7):179, 2000.
62. Maggio, W. W., Simos, P. G., **Breier, J. I.**, Zouridakis, G., Gormley, W. B., Constantinou, J. E., Wheless, J. W., and Papanicolaou, A. C. Magnetic source imaging speech mapping: comparison with interoperative speech mapping. *Epilepsia*, 40 (Suppl. 7): 181, 2000.
63. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Bergman, E., and Papanicolaou, A. C. Consistent failure to engage brain areas involved in phonological coding in dyslexia: A magnetic source imaging study of two consecutive series of children. 28<sup>th</sup> Annual Meeting of the International Neuropsychological Society; Denver, Colorado; February 9-12, 2000.
64. Simos, P. G., **Breier, J. I.**, Wheless, J. W., Maggio, W. W., and Papanicolaou, A. C. Mechanisms for reading words and pseudowords: insights from functional imaging and electrocortical stimulation. 23<sup>rd</sup> Mid Year Annual Meeting of the International Neuropsychological Society; Brussels, Belgium; July 12-15, 2000.

65. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Mouzaki, A., and Papanicolaou, A. C. Age-related changes in regional brain activation during phonological decoding and printed word recognition. 23<sup>rd</sup> Mid Year Annual Meeting of the International Neuropsychological Society; Brussels, Belgium; July 12-15, 2000.
66. **Breier, J. I.**, Wheless, J. W., Simos, P. G., Constantinou, J. E. C., Baumgartner, J. E., Venkataraman, V., and Papanicolaou, A. C. Language dominance in children as determined by magnetic source imaging and the intracarotid amobarbital procedure: A comparison. Paper presented at the 29<sup>th</sup> Annual Meeting of the Child Neurology Society. St. Louis, MO, October 25 – 28, 2000.
67. Castillo, E. M., Simos, P. G., Fletcher, J. M., Francis, D. J., Maestu, F., **Breier, J. I.**, Maggio, W. W., and Papanicolaou, A. C. Mapping of receptive language in bilinguals using magnetic source imaging. Poster presented at the annual Session at the Neuroscience Research Center, University of Texas Health Science Center Medical School, Houston, Texas on December 2, 2000.
68. Wheless, J. W., **Breier, J. I.**, Simos, P. G., Constantinou, J. E. C., Baumgartner, J. E., Venkataraman, V., and Papanicolaou, A.C. A comparison of language dominance in children as determined by magnetic source imaging and the intracarotid amobarbital procedure. *Epilepsia*. 41(Suppl. 7): 81, 2000.
69. **Breier, J. I.**, Gray, L., Klaas, P., Fletcher, J. M., and Foorman, B. R. Dissociation of sensitivity and response bias in children with ADHD during central auditory masking. Paper presented at the annual meeting of the Association for Research in Otolaryngology. Orlando, FL. Feb 4–11, 2001.
70. Castillo, E. M., Davis, R. N., Simos, P. G., **Breier, J. I.**, and Papanicolaou, A. C. Is the left superior temporal gyrus specialized for speech processing? An investigation using magnetoencephalography. Nineteenth Annual Houston Conference on Biomedical Engineering Research, February 8-9, 2001.
71. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, Wheless, J. W., and Maggio, W. W. Mechanisms for reading words and pseudowords: Insights from functional imaging and electrocortical stimulation. *Journal of the International Neuropsychological Society* 6:213, 2001.
72. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., and Mouzaki, A. Age-related changes in regional brain activation during phonological decoding and printed word recognition. *Journal of the International Neuropsychological Society* 6:103, 2001.
73. Davis, R. N., Castillo, E. M., Simos, P. G., **Breier, J. I.**, and Papanicolaou, A. C. Mapping of receptive language cortex in English-Spanish bilinguals using magnetoencephalography. Nineteenth Annual Houston Conference on Biomedical Engineering Research, February 8-9, 2001.
74. Davis, R. N., Castillo, E. M., Simos, P. G., **Breier, J. I.**, and Papanicolaou, A. C. Language mapping using MSI: An overview poster presented at the Sixth Annual Public Forum for Brain Awareness Week, Houston, TX. March, 2001.

75. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, Castillo, E. M., Davis, R. N., Wheless, J. W., Venkataraman, V., Kim, H. L., and Maggio, W. W. MEG: A method comparable to the Wada procedure for language laterality assessment. *Epilepsia* 42 (Suppl. 7):75, 2001.
76. Gray, L., and **Breier, J. I.** Development of perceptual dimensions lags the ability to perceive details. *Journal of the Acoustical Society of America*, 109(5): p 2358, 2001
77. Ishibashi, H., Simos, P. G., Castillo, E. M., Maggio, W. W., Wheless, J. W., Kim, H. L., Venkataraman, V., Sanders, D. K., **Breier, J. I.**, Zhang, W., Davis, R. N., and Papanicolaou, A. C. Detection and significance of focal, interictal slow wave activity for localization of the primary epileptogenic region using magnetoencephalography. *Epilepsia* 42 (Suppl. 7): 272, 2001.
78. **Breier, J. I.**, Gray, L., Klaas, P., Fletcher, J. M., and Foorman, B. R. Auditory temporal processing in children with dyslexia with and without attention deficit/hyperactivity disorder. Paper presented at the annual meeting of the Association for Research in Otolaryngology. Orlando, FL. Feb 4 – 11, 2002.
79. Castillo, E. M., Davis, R. N., Simos, P. G., **Breier, J. I.**, Fitzgerald, M., Ishibashi, H., Zhang, W. and Papanicolaou, A.C. Two brain mechanisms mediating different levels of word processing and memory performance. *Journal of the International Neuropsychological Society* 8:163, 2002.
80. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, Castillo, E. M., and Davis, R. N. Language mapping with magnetoencephalography (MEG) yields results comparable to the Wada test. *Journal of the International Neuropsychological Society* 8: 216-217, 2002.
81. Castillo, E. M., Davis, R., Simos, P. G., **Breier, J. I.**, Fitzgerald, M., Ishibashi, H., Zhang, W. and Papanicolaou, A. C. Dynamics of activation in medial temporal lobe structures during encoding and recognition. *Journal of the International Neuropsychological Society* 8: 227, 2002.
82. Zhang, W., Simos, P. G., Ishibashi, H., Castillo E. M., **Breier J. I.**, Baumgartner, J. E., Wheless, J. W., and Papanicolaou A. C. Neuroimaging Features of Epidermal Nevus Syndrome, ASNR (American Society of Neuroradiology) 40th Annual Meeting, Vancouver, Canada, May 13-17, 2002.
82. Zhang W., Simos, P. G., Ishibashi, H., Wheless, J. W., Maggio, W. W., Castillo E. M., Baumgartner, J. E, **Breier J. I.**, and Papanicolaou A. C. MEG assists in finding subtle cortical dysplasia. *Epilepsia* 43: 78, 2002.
83. **Breier, J. I.**, Fletcher, J.M., Foorman, B., Gray, L. Perceptual maps of a voice onset time series in children at risk for dyslexia. Paper presented at the 34<sup>th</sup> annual meeting of the International Neuropsychological Society, Hawaii, USA. Dec 4 – 7, 2002.
84. Papanicolaou, A. C., Simos, P. G., Castillo, E. M., **Breier, J. I.**, Wheless, J. W., Maggio, V., Billingsley, R. L., Sarkari, S., Patariaia, E., Clear, T., and Maggio, W.W. MEG is comparable to the Wada procedure for language laterality assessment. *Epilepsia*, 44 (Suppl. 9): 251-252, 2003. Paper presented at the Annual meeting of the

American Epilepsy Society, Boston, MA, December 5–10.

85. Patariaia, E., Simos, P. G., Billingsley, R. L., Castillo, E. M., Sarkari, S., Maggio, V., Wheless, J. W., Fitzgerald, M., **Breier, J. I.**, and Papanicolaou, A. C. Contribution of magnetoencephalography to the presurgical determination of the epileptogenic zone in patients with frontal lobe epilepsy. *Epilepsia*, 44 (Suppl. 9): 252, 2003. Paper presented at the Annual meeting of the American Epilepsy Society, Boston, MA., Dec. 5 – 10.

86. Castillo, E. M., Simos, P. G., **Breier, J. I.**, Wheless, J. W., Butler, I. J., Billingsley, R. L., and Papanicolaou, A. C. Epileptic activity interfering with word processing in Landau-Kleffer syndrome: the role of the non-affected hemisphere in linguistic deficit manifestation. Presented at the Annual meeting of the American Epilepsy Society, Boston, MA, December 5–10.

87. Davis, R. N., Witgert, M. E., and **Breier, J. I.** Is basic memory structure invariant across epilepsy patient subgroups? Paper presented at the International Neuropsychological Society 37<sup>th</sup> Annual Meeting, Baltimore, MD, February 4-7, 2004.

88. Davis, R. N., Cole Davis, L., and **Breier, J. I.** Predicting side of epileptic focus using actuarial vs. clinical prediction: A preliminary comparison. Poster presented at the International Neuropsychological Society 37<sup>th</sup> Annual Meeting, Baltimore, MD, February 4-7, 2004.

89. Castillo, E. M., **Breier, J. I.**, Wheless, J. W., Patariaia, E., and Papanicolaou, A. C. Planning epilepsy surgery when language is compromised: comparisons of MEG-derived maps of activation with the Wada test and with direct electrical stimulation mapping. 6<sup>th</sup> European Congress on Epileptology, Vienna, Oral presentation platform. May 30<sup>th</sup> - June 3<sup>rd</sup>, 2004.

90. Castillo, E. M., Simos, P. G., Wheless, J. W., Baumgartner, J. E., **Breier, J. I.**, Sarkari, S., Fitzgerald, M. E., and Papanicolaou, A. C. Mapping sensorimotor function in patients with peri-rolandic lesions: a comprehensive MEG protocol. 14<sup>th</sup> International Conference on Biomagnetism, Boston, August 8-12, 2004.

91. Patariaia, E., Castillo, E. M., Simos, P. G., Billingsley-Marshall, R. L., Sarkari, S., **Breier, J. I.**, and Papanicolaou, A.C. Relative merits of MEG for identification of the epileptogenic zone as compared with invasive EEG. 14<sup>th</sup> International Conference on Biomagnetism, Boston, August 8-12, 2004.

92. Castillo, E. M., **Breier, J. I.**, Wheless, J. W., Baumgartner, J. E., Patariaia, E., and Papanicolaou, A. C. Is linguistic function still there after multiple subpial transections over Wernicke's area? American Epilepsy Society, 58<sup>th</sup> Annual Meeting, New Orleans, December 3-8, 2004.

93. Perkins, F. F., Clarke, D. F., **Breier, J. I.**, Chacon, M. M., Castillo, E. M., Weers, D., and Wheless, J.W. Benign Rolandic epilepsy: neuropsychological testing and magnetic source imaging analysis. American Epilepsy Society, 58<sup>th</sup> Annual Meeting, New Orleans, December 5-8, 2004.

94. **Breier, J. I.**, Simos, P. G., Castillo, E. M., Patariaia, E., Billingsley, R. L., Wheless, J. W., and Papanicolaou, A.C. Abnormal activation of language cortex in patients with chronic seizures and academic achievement deficit.

American Epilepsy Society, 58<sup>th</sup> Annual Meeting, New Orleans, December 5-8, 2004.

95. Patariaia, E., Billingsley-Marshall, R.L., Castillo, E.M., **Breier, J. I.**, Simos, P.G., Sarkari, S., Fitzgerald, M., Clear, T., and Papanicolaou, A.C. Organization of receptive language-specific cortex before and after left temporal lobectomy. American Epilepsy Society, 58<sup>th</sup> Annual Meeting, New Orleans, December 5-8, 2004.

96. Castillo, E.M., **Breier, J. I.**, Wheless, J.W., Slater, J.D., Tandon, N., Baumgartner, J.E., McManis, M.H., Papanicolaou, A.C. Contributions of direct cortical stimulation and MEG recordings to identify “essential” language cortex. American Epilepsy Society and American Clinical Neuropsychology Society Joint Annual Meeting, Washington, DC, December 20, 2005.

97. Patariaia, E., Simos, P.G., Billingsley-Marshall, R.L., Castillo, E.M., **Breier, J. I.**, Sarkari, S., Papanicolaou, A.C. Assessment of the localization accuracy of magnetoencephalography in temporal lobe epilepsy – comparison with invasive EEG. American Epilepsy Society and American Clinical Neurophysiology Society Joint Annual Meeting, Washington DC, December 2-6, 2005.

98. Slater, J.D., McManis, M.H., Clarke, D., Perkins, F.F., McGregor, A.L., Wheless, J.W., **Breier, J. I.**, Castillo, E.M., Papanicolaou, A.C. Magnetic source localization in patients with idiopathic generalized epilepsies. American Epilepsy Society and American Clinical Neurophysiology Society Joint Annual Meeting, Washington DC, December 2-6, 2005.

99. **Breier, J. I.**, Maher, L., Castillo, E. M., Novak, B., Papanicolaou, A. Neurophysiological changes in receptive language cortex with age using magnetoencephalography. *Journal of the International Neuropsychological Society* 12:188, 2006.

100. Slater, J. D., McManis, M. H., Clarke, D., Perkins, F. F., McGregor, A. L., Wheless, J. W., **Breier, J. I.**, Castillo, E. M., Papanicolaou, A. C. Magnetic source localization in patients with idiopathic generalized epilepsies. American Epilepsy Society and the American Clinical Neurophysiology Society Joint Annual Meeting, December 2-6, 2005, Washington, D.C.

101. Castillo, E.M., Men, D., **Breier, J. I.**, Pearman, M., Boake, C., Papanicolaou, A.C. Atypical patterns of somatosensory representation after stroke. *Biomag 2006-15th International Conference on Biomagnetism*. Vancouver, BC, Canada, August 20 - 26, 2006.

102. Castillo, E.M., Men, D., **Breier, J. I.**, Boake, C., McManis, M., Pearlman, M., Papanicolaou, A.C. Does slow oscillatory activity reflect cortical diaschisis in subcortical stroke? *Biomag 2006 - 15th International Conference on Biomagnetism*. Vancouver, BC, Canada. Aug 20 - 26, 2006.

103. Schmadeke, S., Maher, L.M., Papanicolaou, A.C., **Breier, J.I.** Spoken Language

Improvement Following Constraint Induced Language Therapy in Aphasia. Poster presented at the annual ASHA Convention, Chicago, November 20 – 22, 2008.

104. **Breier, J.I.**, Maher, L.M., Schmadeke, S., Men, D., and Papanicolaou, A.C. Changes in language-specific brain activation after therapy for aphasia using magnetoencephalography. *Journal of the International Neuropsychological Society* 15: S1, 2009.

### Refereed Original Articles in Journals

1. Breitmeyer, B. G., and Breier, J. I. Effects of background color on reaction time to stimuli varying in size and contrast: inferences about human M channels. *Vision Res.* 34:1039-1045, 1994.
2. **Breier, J. I.**, Adair, J., Fennell, E. B., Gold. M., Gilmore, R., and Heilman, K. M. Dissociation of anosognosia for hemiplegia and aphasia during left hemisphere anesthesia. *Neurology* 45:65-67, 1995.
3. **Breier, J. I.**, Plenger, P. M., Wheless, J. W., Thomas, A. B., Brookshire, B. L., Curtis, V. L., Willmore, L. J., Papanicolaou, A. C., and Clifton, G. L. Memory tests distinguish between patients with focal temporal and extra-temporal lobe epilepsy. *Epilepsia* 37:165-170, 1996.
4. **Breier, J. I.**, Leonard, C. M., Bauer, R. M., Roper, S., and Gilmore, R. Quantified volumes of temporal lobe structures in patients with epilepsy. *J. Neuroimaging* 6:108-114, 1996.
5. Plenger, P. M., **Breier, J. I.**, Wheless, J. W., Brookshire, B. L., Papanicolaou, A. C., Thomas, A. B., and Willmore, L. J. The nonverbal selective reminding test: Efficacy in the assessment of adults with temporal lobe epilepsy. *J. Epilepsy* 9:65-69, 1995.
6. Leonard, C. M., Lombardino, L. J., Mercado, L., Browd, S. R., **Breier, J. I.**, and Agee, O. F. Cerebral asymmetry and cognitive development in children: a magnetic resonance imaging study. *Psychol. Sci.* 7:89-95, 1996.
7. **Breier, J. I.**, Dede, D., Fiano, K., Fennell, E., Leach, L., Uthman, B., and Gilmore, R. Differential effects of right hemisphere injection during the Wada procedure on the primary and secondary languages in a bilingual speaker. *Neurocase* 2:341-345, 1996.
8. **Breier, J. I.**, Plenger, P. M., Fuchs, K., Castillo, R., Wheless, J. W., Thomas, A. B., Brookshire, B. L., Willmore, L. J., and Papanicolaou, A. C. Effects of temporal lobe epilepsy on spatial and figural memory for a complex geometric figure. *J. Int. Neuropsychol. Soc.* 2:535-540, 1996.
9. Plenger, P. M., **Breier, J. I.**, Wheless, J. W., Brookshire, B. L., Papanicolaou, A. C., and Willmore, L. J. Lateralization of memory for music: Evidence from the intracarotid sodium amobarbital procedure. *Neuropsychologia* 34:1015-1018, 1996.



10. **Breier, J. I.**, Brookshire, B. L., Fletcher, J. M., Plenger, P. M., Wheless, J. W., Thomas, A.B., Papanicolaou, A. C., and Willmore, L. J. Identification of side of seizure onset in temporal lobe epilepsy using memory tests in the context of academic achievement deficit. *J. Clin. Exp. Neuropsychol.* 19:161-171, 1997.
11. **Breier, J. I.**, Mullani, N., Thomas, A. B., Plenger, P. M., Wheless, J. W., Papanicolaou, A.C., and Willmore, L. J. Effects of duration of epilepsy on the uncoupling of metabolism and blood flow in complex partial seizures. *Neurology* 48:1047-1053, 1997.
12. **Breier, J. I.**, Thomas, A. B., Plenger, P. M., Wheless, J. W., Brookshire, B. L., Papanicolaou, A. C., and Willmore, L. J. Asymmetries in the effect of side of seizure onset on recognition memory following intracarotid amobarbital injection. *Epilepsia* 38:1209-1215, 1997.
13. **Breier, J. I.**, Gray, L., Hiscock, M., and Jahrsdoerfer, R. Ear advantage in dichotic listening after correction of congenital hearing loss. *Neuropsychologia* 36:209-216, 1998.
14. Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. Magnetic fields elicited by a tone onset time continuum in humans. *Cognitive Brain Research* 6:285-294, 1998.
15. **Breier, J. I.**, Fuchs, K. L., Brookshire, B. L., Thomas, A. B., Wheless, J. W., Constantinou, J., and Willmore, L. J. Quality of life perception in patients with intractable epilepsy or pseudoseizures. *Arch. of Neurol.* 55:660-665, 1998.
16. Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. Assessment of functional cerebral laterality for language using magnetoencephalography. *J. Clin. Neurophys.* 15: 364-372, 1998.
17. Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. MEG correlates of categorical-like temporal cue perception in humans. *Neuroreport* 9:2475-2479, 1998.
18. Zouridakis, G., Simos, P. G., **Breier, J. I.**, and Papanicolaou, A. C. Functional hemispheric asymmetry assessment in a visual language task. *Brain Topography* 11: 57-65, 1998.
19. Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. Identification of language-related brain activity using magnetoencephalography. *J. Clin. Exp. Neuropsychol.* 20:706-722, 1998.
20. **Breier, J. I.**, Simos, P. G., Zouridakis, G., and Papanicolaou, A. C. Relative timing of neuronal activity in distinct temporal lobe areas during a recognition memory task for words. *J. Clin. Exp. Neuropsychol.* 20(6): 782-790, 1998.

21. Simos, P. G., Diehl, R., **Breier, J. I.**, Molis, M., Zouridakis, G., and Papanicolaou, A. C. MEG correlates of categorical perception of a voice onset continuum in humans. *Brain Research, Cognitive Brain Research* 7:215-219, 1998.
22. Wheless, J. W., Willmore, L. J., **Breier, J. I.**, Kataki, M., Smith, J. R., King, D. W., Meador, K. J., Clifton, G. L., Baumgartner, J., Thomas, A. B., Constantinou, J., and Papanicolaou, A.C. A comparison of magnetoencephalography, MRI, and V-EEG in patients evaluated for epilepsy surgery. *Epilepsia* 40:931-941, 1999.
23. **Breier, J. I.**, Simos, P. G., Zouridakis, G., Wheless, J. W., Willmore, L. J., Constantinou, J. E. C., and Papanicolaou, A. C. A magnetoencephalography study of cortical plasticity. *Neurocase* 5: 277-284, 1999.
24. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, Zouridakis, G., Willmore, L.J., Wheless, J. W., Constantinou, J. E. C., Gormley, W., and Maggio, W. W. Magnetoencephalographic mapping of the language specific cortex. *J. Neurosurg.* 90:85-93, 1999.
25. Simos, P. G., **Breier, J. I.**, Maggio, W. W., Gormley, W. B., Zouridakis, G., Willmore, L. J., Wheless, J. W., Constantinou, J. E. C., and Papanicolaou, A. C. Atypical language representation: MEG and intraoperative stimulation mapping correlations. *Neuroreport* 10:139-142, 1999.
26. Leonard, C. M., Kuldau, J. M., **Breier, J. I.**, Zuffante, P., Gautier, E. R., Heron, D., Lavery, E. M., Packing, J., Williams, S. A., and DeBose, C. A. Cumulative effect of anatomical risk factors for schizophrenia: an MRI study. *Biol. Psychiatry* 46:374-382, 1999.
27. **Breier, J. I.**, Simos, P. G., Zouridakis, G., Wheless, J. W., Willmore, L. J., Maggio, W. W., and Papanicolaou, A. C. Language dominance determined by magnetic source imaging: A comparison with the Wada test. *Neurology* 53:938-945, 1999.
28. Simos, P. G., Papanicolaou, A.C., **Breier, J. I.**, Willmore, L. J., Wheless, J. W., Constantinou, J. C., Gormley, W., and Maggio, W. W. Localization of language-specific cortex using MEG and intraoperative stimulation mapping, *J. Neurosurg.* 91:787-796, 1999.
29. **Breier, J. I.**, Simos, P. G., Zouridakis, G., Wheless, J. W., Willmore, L. J., Maggio, W. W., and Papanicolaou, A. C. Temporal course of regional brain activation associated with phonological decoding. *J. Clin. Exp. Neuropsychol.* 21:465-476, 1999.
30. Zouridakis G., Simos P.G., Papanicolaou A.C., and Breier J.I. Magnetic Source Imaging: Introduction and application examples. *J. Clin. Engineering*, 24:51-61, 1999.
31. **Breier, J. I.**, Simos, P. G., Zouridakis, G., and Papanicolaou, A. C. Lateralization of

cerebral activation in auditory verbal and non-verbal memory tasks using Magnetoencephalography. *Brain Topography* 12:89–97, 1999.

32. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Bergman, E., Fishbeck, K., and Papanicolaou, A.C. Brain activation profiles in dyslexic children during non-word reading: A Magnetic Source Imaging study. *Neurosci. Lett.* 290:61-65, 2000.

33. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Bergman, E., and Papanicolaou, A. C. Cerebral mechanisms involved in word reading in dyslexic children: A magnetic source imaging approach. *Cerebral Cortex* 10:809-816, 2000.

34. Simos, P. G., Papanicolaou, A.C., **Breier, J. I.**, Fletcher, J.M., Wheless, J.W., Maggio, W.W., Gormley, W., Constantinou, J.C. Insights into brain function and neural plasticity using Magnetic Source Imaging. *J. Clinical Neurophys.* 17:143-162, 2000.

35. **Breier, J. I.**, Simos, P.G., Zouridakis, G., and Papanicolaou, A. C. Lateralization of activity associated with language function using magnetoencephalography: A reliability study. *J. Clin. Neurophys.* 17:503 – 510, 2000.

36. **Breier, J. I.**, Fletcher, J.M., Wheless, J.W., Clark, A., Cass, J., and Constantinou, J.E.C. Profiles of cognitive performance associated with reading disability in temporal lobe epilepsy. *J. Clin. Exp. Neuropsychol.* 22:804-816, 2000.

37. Simos, P.G., **Breier, J. I.**, Wheless, J.W., Maggio, W.W., Fletcher, J.M., Castillo, E.M., and Papanicolaou, A.C. Brain mechanisms for reading: the role of the superior temporal gyrus in word and pseudoword naming. *Neuroreport.* 11:2443-2447, 2000.

38. Simos, P.G., Papanicolaou, A.C., **Breier, J. I.**, Fletcher, J.M., Foorman, B.R., Bergman, E., Fishbeck, K., and Papanicolaou, A.C. Brain activation profiles in dyslexic children during non-word reading: A magnetic source imaging study. *Neurosci. Lett.* 290:61-65, 2000.

39. Papanicolaou, A.C., Simos, P.G., **Breier, J. I.**, Wheless, J.W., Mancias, P., Baumgartner, J.E., Maggio, W.W., Gormley, W., Constantinou, J.E.C., and Butler, I.I. Brain plasticity for sensory and linguistic functions: A Functional Imaging study using MEG with children and young adults. *J. Child Neurol.*, 16:241-252, 2001.

40. **Breier, J. I.**, Simos, P. G., Wheless, J. W., Constantinou, J. E. C., and Papanicolaou, A. C. Language dominance in children as determined by magnetic source imaging and the intracarotid amobarbital procedure: A comparison. *J. Child Neurol.* 16:124-130, 2001.

41. Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Mouzaki, A., and Papanicolaou, A. C. Age-related changes in regional brain activation during phonological decoding and printed word recognition. *Dev. Neuropsychol.* 19:191-210, 2001.

42. Simos, P. G., Castillo, E. M., Fletcher, J. M., Francis, D. J., Maestu, F., **Breier, J. I.**, Maggio, W. W., and Papanicolaou, A. C. Mapping of receptive language cortex in bilinguals using magnetic source imaging. *J. Neurosurg.* 95:76-81, 2001.
43. Papanicolaou, A. C., Simos, P. G., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Francis, D. J., Castillo, E. M., and Davis, R. N. Brain mechanisms for reading in children with and without dyslexia: A review of studies of normal development and plasticity. *Dev. Neuropsychol.* 24:593-612, 2003.
44. **Breier, J. I.**, Gray, L., Fletcher, J. M., Diehl, R. L., Klaas, P., Foorman, B. R., Molis, M. R. Perception of voice and tone onset time continua in children with dyslexia with and without attention deficit/hyperactivity disorder. *J. Exp. Child Psychol.*, 80; 245-270, 2001.
45. Castillo, E. M., Simos, P. G., Davis, R. N., **Breier, J. I.**, Fitzgerald, S., Papanicolaou, A. C. Levels of word processing and incidental memory: dissociable mechanisms in the temporal lobe. *Neuroreport* 12: 3561-3566, 2001.
46. Simos, P. G., Papanicolaou, A. C., **Breier, J. I.**, Fletcher, J. M., Wheless, J. W., Maggio, W. W. and Constantinou, J. C. Insights into brain function through Magnetic Source Imaging: Research and clinical applications. *Revista de Neurología* 34:871-876, 2002.
47. Foorman, B. R., and **Breier, J. I.** Interventions aimed at improving reading success: An evidence-based approach. *Scientific Studies of Reading* 24:613-639, 2003.
48. **Breier, J. I.**, Gray, L., Klaas, P., Fletcher, J. M., and Foorman, B. R. Dissociation of sensitivity and response bias in children with ADHD during central auditory masking. *Neuropsychology* 16:28-34, 2002.
49. Castillo, E. M., Simos, P. G., Venkataraman, M. D., **Breier, J. I.**, Wheless, J. W., and Papanicolaou, A. C. Mapping of expressive language cortex using magnetic source imaging. *Neurocase* 7:419-422, 2001.
50. **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Klaas, P., and Gray, L. C. Perception of speech and non-speech stimuli by children with and without reading disability and attention deficit hyperactivity disorder. *J. Exp. Child Psychol.* 82:226-250, 2002.
51. Leon-Carion, J., Simos, P. G., **Breier, J. I.**, Zouridakis, G., and Papanicolaou, A. C. Imágenes de activación funcional cerebral a través de medidas de fuentes magnéticas: Aplicaciones de la magnetoencefalografía a la Neuropsicología (Functional brain imaging through magnetic fields: Applications of Magnetoencephalography in neuropsychology) *Revista de Psicología General y Aplicada (Spain)* 55:105-112, 2002.

52. Simos, P. G., Papanicolaou, A. C., **Breier, J. I.**, Fletcher, J. M., Wheless, J. W., Maggio, W. W. and Constantinou, J. C. Aproximacion a la funcion cerebral a traves de la imagen de fuente magnetica: aplicaciones clinical y experimentales (Insights into Brain Function though Magnetic Source Imaging: A Review of Research and Clinical Aplications). *Revista de Neurología* 34: 871-876, 2002.
53. Simos, P. G., Fletcher, J. M., Bergman, E., **Breier, J. I.**, Foorman, B. R., Castillo, E. M., Davis, R. N., Fitzgerald, M., and Papanicolaou, A. C. Dyslexia-specific activation profile becomes normal following successful remedial training. *Neurology* 58:1203-1213, 2002.
54. Simos, P. G., Bergman, E., **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Castillo, E. M., and Papanicolaou, A. C. Brain mechanisms for reading words and pseudowords: an integrated approach. *Cerebral Cortex* 12:297-305, 2002.
55. Zhang W., Simos P. G., Ishibashi H., Wheless J. W., Castillo, E. M., Maggio W. W., Baumgartner, J. E., **Breier, J. I.**, Sarkari, S., and Papanicolaou, A. C. Multimodality neuroimaging evaluation improves the detection of subtle cortical dysplasia associated epilepsy. *Neurological Res.* 25:53-57, 2003.
56. Ishibashi, H., Simos, P. G., Castillo, E. M., Maggio, W. W., Wheless, J. W., Kim, H. L., Venkataraman, V., Sanders, D.K., **Breier, J. I.**, Zhang, W., Davis, R.N., Papanicolaou, A.C. Detection and significance of focal, interictal slow wave activity for localization of the primary epileptogenic region using Magnetoencephalography. *J. Neurosurg.* 96:724-730, 2002.
57. Gray, L., **Breier, J. I.**, Foorman, B. R., Fletcher, J. M. Continuum of impulsiveness caused by auditory masking. *International J. Ped. Otolaryngol.* 66:265-272, 2003.
58. Papanicolaou, A. C., Simos, P. G., Castillo, E. M., **Breier, J. I.**, Katz, J. S., and Wright, A. A. The hippocampus and memory of verbal and pictorial material. *Learning and Memory* 9:99-104, 2002.
59. Sarkari, S., Simos, P.G., Fletcher, J. M., Castillo, E. M., **Breier, J. I.**, and Papanicolaou, A. C. Contributions of magnetic source imaging to the understanding of dyslexia. *Semin. Pediatr Neurol.* 9:229-238, 2002.
60. Zhang, W., Simos, P. G., Ishibashi, H., Wheless, J. W., Castillo, E. M., **Breier, J. I.**, Baumgartner, J. Fitzgerald, M. E., and Papanicolaou, A. C. The neuroimaging features of epidermal nevus syndrome. *Am. J. Neuroradiol.*, 24:1468-1470, 2003.
61. Papanicolaou, A. C., Simos, P. G., Castillo, E. M., **Breier, J. I.**, Davis, R. N., Diehl, R. L. Differential brain activation patterns during perception of voice and tone onset time series: a MEG study. *NeuroImage* 18:448-459, 2003.

62. **Breier, J. I.**, Fletcher, J. M., Foorman, B. R., Klaas, P., and Gray, L. C. Auditory temporal processing in children with and without attention deficit/hyperactivity disorder. *J. Speech Lang. Hear. Res.* 46:31-42, 2003.
63. Billingsley, R. L., Simos, P. G., Castillo, E. M., Maestú, F., Sarkari, S., **Breier, J. I.**, and Papanicolaou, A.C. Functional brain imaging of language: Criteria for scientific merit and supporting data from magnetic source imaging. *J. Neurolinguistics* 16:255-275, 2003.
64. Castillo, E. M., Simos, P. G., Davis, R. N., **Breier, J. I.**, Fitzgerald, M. E., and Papanicolaou, A. C. Temporal dynamics of medial temporal lobe activation during encoding and recognition. *Spanish Review of Neuropsychology* 5:99-120, 2003.
65. **Breier, J. I.**, Simos, P. G., Fletcher, J. M., Castillo, E. M., Zhang, W., and Papanicolaou, A. C. Abnormal activation of temporoparietal language areas during phonetic analysis in children with dyslexia, *Neuropsychology* 17:610-621, 2003.
66. Castillo, E. M., Simos, P. G., Wheless, J. W., Baumgartner, J. E., **Breier, J. I.**, Billingsley, R. L., Sarkari, S., Fitzgerald, M. E., Papanicolaou, A. C. Integrating sensory and motor mapping in a comprehensive MEG protocol. Clinical validity and replicability. *Neuroimage* 21:973-983, 2004.
67. Wheless, J. W., Castillo, E. M., Maggio, V., Kim, H., **Breier, J. I.**, Simos, P. G., Papanicolaou, A. C. Magnetoencephalography (MEG) and Magnetic Source Imaging (MSI). *The Neurologist* 10:1-16, 2004.
68. Billingsley, R. L., Simos, P. G., Castillo, E. M., Sarkari, S., **Breier, J. I.**, Patariaia, E., and Papanicolaou, A. C. Spatio-temporal cortical dynamics of phonemic and semantic fluency. *J. Clin. Exp. Neuropsychol.* 26:1031-1043, 2004.
69. Papanicolaou, A. C., Simos, P.G., Castillo, E.M., **Breier, J. I.**, Sarkari, S., Patariaia, E., Billingsley, R. L., Buchanan, S., Wheless, J., Maggio, V., Maggio, W.W. Magnetoencephalography: A non-invasive alternative to the Wada procedure. *J. Neurosurg.* 100:867-876, 2004.
70. **Breier, J. I.**, Fletcher, J. M., Denton, C., Gray, L. C. Categorical perception of speech stimuli in children at-risk for reading difficulty. *J. Exp. Child Psychol.* 88:152-170, 2004.
71. **Breier, J. I.**, Castillo, E. M., Boake, C., Billingsley, R. L., Maher, L. M., Francisco, G. E., and Papanicolaou, A. C. Spatiotemporal patterns of language-specific brain activity in patients with chronic aphasia after stroke using magnetoencephalography. *Neuroimage*, 23:1308-1316, 2004.
72. Patariaia, E., Simos, P. G., Castillo, E. M., Billingsley-Marshall, R. L., McGregor, A.

L., **Breier, J. I.**, Sarkari, S., and Papanicolaou, A. C. Reorganization of language-specific cortex in patients with lesions or mesial temporal epilepsy. *Neurology*, 63:1825-1832, 2004.

73. Witgert, M. M., Wheless, J. W., **Breier, J. I.** Frequency of panic symptoms in psychogenic non-epileptic seizures. *Epilepsy and Behavior*, 6:174-178, 2005.

74. **Breier, J. I.**, Castillo, E. M., Simos, P. G., Billingsley-Marshall, R. L., Patariaia, E., Sarkari, S., Wheless, J. W., and Papanicolaou, A.C. Atypical language representation in patients with chronic seizure disorder and achievement deficits with magnetoencephalography. *Epilepsia*, 46:540-548, 2005.

75. Papanicolaou, A. C., Patariaia, E., Billingsley-Marshall, R., Castillo, E.M., Wheless, J. W., Swank, P., **Breier, J. I.**, Sarkari, S., and Simos, P. G. Toward the substitution of invasive electroencephalography in epilepsy surgery. *J. Clin. Neurophys.* 22(4):231-237, 2005.

76. Patariaia, E., Billingsley-Marshall, R. L., Simos, P. G., **Breier, J. I.**, Sarkari, S., Castillo, E. M., Fitzgerald, M., Clear, T., and Papanicolaou, A.C. Organization of receptive language-specific cortex before and after left temporal lobectomy. *Neurology*, 64:481-487, 2005.

77. Davis, R. N., Andresen, E. N., Witgert, M. E., and **Breier, J. I.** Is basic memory structure invariant across epilepsy patient subgroups? *J Clin. Exp. Neuropsychol.*, 28, 987-997, 2006.

78. **Breier, J. I.**, Billingsley-Marshall, R. L., Patariaia, E., Castillo, E. M., and Papanicolaou, A. C. Magnetoencephalographic studies of language reorganization after cerebral insult. *Archives of Physical Medicine and Rehabilitation*, 87(12 Suppl 2):S77-83, 2006.

79. **Papanicolaou AC**, Pazo-Alvarez P, Castillo EM, Billingsley-Marshall RL, Breier JI, Swank PR, Buchanan S, McManis M, Clear T, Passaro AD. Functional neuroimaging with MEG: Normative language profiles. *NeuroImage*, 33:326-342, 2006.

80. **Breier, J.I.**, Maher, L.M., Novak, B., and Papanicolaou, A.C. Functional imaging before and after constraint language therapy for aphasia using magnetoencephalography. *Neurocase*, 12:322-331, 2006.

81. **Breier, J.I.**, Maher, L.M., Schmadeke, S., Khader, H., and Papanicolaou, A.C. Changes in language-specific brain activation after therapy for aphasia using magnetoencephalography: a case study. *Neurocase*, 13: 169-177, 2007.

82. Papanicolaou, A.C., Castillo, E., **Breier, J.L.**, Juranek, J., Sakari, S., (2007). "Benign rolandic epilepsy: A benign disorder may have long-term consequences for learning and future success. *Physicians Practice*, Vol. 17:A2-A7 (May 2007).

82. **Breier, J.I.**, Hasan, K.M., Men, D., Papanicolaou, A.C. Language dysfunction after stroke and damage to white matter tracks using diffusion tensor imaging. *American Journal of Neuroradiology*, 29: 483-487, 2008.
83. **Breier, J.I.**, Papanicolaou, A.C. Spatiotemporal patterns of brain activation during an action naming task using magnetoencephalography. *Journal of Clinical Neurophysiology*, 25:7-12, 2008.
84. Castillo, E.M., Boake, C., **Breier, J.I.**, Men, Disheng, Garza, H.M., Passaro, A., Papanicolaou, A.C. Aberrant cortical functionality and somatosensory deficits after stroke. *Journal of Clinical Neurophysiology*, 25: 132-138, 2008.
85. Juranek, J., Fletcher, J.M. PhD, Hasan, K.M.; **Breier, J.I.**; Cirino, P.T., Pazo-Alvarez, P.; Diaz, J.J., Ewing-Cobbs, L.; Dennis, M., Papanicolaou, A.C., Neocortical reorganization in spina bifida. *Neuroimage*, 40: 1516 – 1522, 2008.
86. Perkins, F.F., **Breier, J.I.**, McManis, M.H., Castillo, E., Wheless, J., McGregor, A., Chacon, M., Clark, D. Benign Rolandic Epilepsy Perhaps Not So Benign: Use of Magnetic Source Imaging as a Predictor of Outcome, *Journal of Child Neurology*, 23, 389-393, 2008.
87. **Breier J.I.**, Randle S, Maher LM, Papanicolaou AC. Changes in maps of language activation following MIT using magnetoencephalography: two case studies. *Journal of Clinical an Experimental Neuropsychology*, 32:309-314, 2009.
88. Kent, T.A., Rutherford, D.G., **Breier J.I.**, Papanicolaou, A.C. What is the evidence for use dependent learning after stroke? *Stroke*, 40: S139 – S140, 2009.
89. **Breier J.I.**, Juranek, J., Schmadeke, S., Maher LM, Papanicolaou A.C. Behavioral and neurophysiological response to therapy for chronic aphasia. *Archives of Physical Medicine and Rehabilitation*, 90(12):2026 – 2033, 2009.
90. Ellmore, T.M., Beauchamp, M., **Breier, J.I.**, Slater, J.P., Kalamangalam, G.P., O'Neil, T.J., Disano, M.A., Tandon, N.. Temporal Lobe White Matter Asymmetry and Language Laterality in Epilepsy Patients. *Neuroimage*, 39, 2033 – 2044, 2009.
91. **Breier, JI**, Juranek, J., & Papanicolaou, A.C. Changes in maps of language function and the integrity of the arcuate fasciculus after therapy for chronic aphasia. *Neurocase*, 17, 506-517, 2011.
92. Moser, D.C., Papanicolaou, A.C., Swank, P., **Breier, J.I.** Evidence for the solidarity of the expressive and receptive language systems: a retrospective study. *Journal of the International Neuropsychological Society*, 17, 62 – 68, 2011.

## **Book Chapters**



1. **Breier, J. I.**, and Fletcher, J. M. Diseases of the nervous system and sense organs In S. B. Johnson, N. Perry, and R. Rozensky (Eds.). Handbook of Clinical and Health Psychology, Vol 1: Behavioral applications to medical disorders. Washington: APA. 2002, 173 - 202.

2. Wheless, J. W., Venkataraman, V., **Breier, J. I.**, Simos, P. G., Zouridakis, G., and Papanicolaou, A. C. Functional Brain Mapping with Magnetoencephalography (MEG). In Kayama T (ed) Advanced Technology (Brain Tumor Surgery: Clinical application of advanced technologies), Japanese Brain Tumor Congress, Japan, 2001, 100-115.

3. Wheless, J. W., Venkataraman, V., Kim, H., **Breier, J. I.**, Simos, P. G., Zouridakis, G., and Papanicolaou, A. C. Assessing Normal Brain Function with Magnetoencephalography (MEG). In Hirata K, Koga Y, Nagata K, Yamazaki K (ed.) *Recent Advances in Human Brain Mapping* (International Congress Series 1232), Elsevier, NYC, NY, 2002, 519-534.

## **Other Professional Communications**

### **Invited Lectures:**

1. Neuropsychological evaluation of patients with intractable temporal lobe epilepsy in the context of academic achievement deficit. Lecture presented at the monthly meeting of the Houston Neuropsychological Society, January, 1997.

2. Functional brain mapping with magnetoencephalography. Lecture presented at the monthly meeting of the Houston Neuropsychological Society, January 1998.

3. The concept of central auditory processing disorder and its relationship to dyslexia. Lecture presented at the Region IV school district conference entitled "Dyslexia: putting the pieces together", September 1999.

4. A case of crossed aphasia in a patient with bilateral language representation confirmed by MEG. Lecture presented at the monthly meeting of the Houston Neuropsychological Society, December 1999.

5. Language mapping with magnetoencephalography: An update. Lecture presented at the monthly meeting of the Houston Neuropsychological Society, May 2000.

6. Functional imaging in dyslexia. Lecture presented at the Region IV school district conference entitled "Dyslexia: into the new millennium", September 2000.

7. The Injured Brain: Stroke and Trauma: Delivered at the 8<sup>th</sup> annual public forum for Brain Awareness Week, The University of Texas Medical School at Houston, Houston, Texas, March 15, 2003.

8. Functional imaging in chronic aphasia after stroke. Lecture presented at the Stroke Update 2004: Neuro-Recovery conference, March 5- 6, 2004, sponsored by The University of Texas Health Science Center at Houston, Department of Neurology and the Office of Continuing Medical Education.
9. Maps of Receptive Language Function in Patients with Chronic Aphasia after Stroke using Magnetoencephalography. Lecture presented to the Houston Neuropsychological Association, Presidents Induction, March 5, 2004.
10. Imaging Language Function in Patients with Chronic Aphasia after Stroke using Magnetoencephalography. Lecture presented at the Texas Institute for Rehabilitation and Research REDS meeting, October 12, 2004.
  
11. Neuroimaging: Application to Adult and Child Language Disorders. Lecture presented at the Symposium on Language and Motor Speech Disorders in Children and Adults: Advances in Research and Intervention, The University of Houston, October 5, 2005.
  
12. The Aging Brain: Delivered at the 10<sup>th</sup> annual public forum for Brain Awareness Week, The University of Texas Medical School at Houston, Houston, Texas, March, 2005.
  
13. Memory: Delivered at the 11<sup>th</sup> annual public forum for Brain Awareness Week, The University of Texas Medical School at Houston, Houston, Texas, March 15, 2006.
  
14. Mild Cognitive Impairment: Talk given to the Houston Chapter of the Alzheimer's Association, May 8<sup>th</sup> 2006.
  
15. Changes in Language-Specific Brain Activation and Response to Aphasia Therapy Using Magnetoencephalography. Paper presented at the 37<sup>th</sup> annual meeting of the International Neuropsychological Society, Atlanta, GA, Feb. 10 – 14, 2009.
  
16. Plasticity in language cortex using magnetoencephalography. Lecture given at the Annual Meeting of the American Speech-Language-Hearing Association, New Orleans, LA, Nov. 19 - 21, 2009

#### **Magazines:**

1. Papanicolaou, A.C., Castillo, E., **Breier**, J.L., Juranek, J., Sakari, S. (2007). "Benign rolandic epilepsy: A benign disorder may have long-term consequences for learning and future success. Physicians Practice, Vol. 17:A2-A7.