

## BIOGRAPHICAL

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## EDUCATION

### *Undergraduate*

1969	Queens College Flushing, NY	B.A., Psychology
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### *Graduate*

1969-1971	Queens College	Psychology
1982	City University of New York New York, NY	Ph.D., Psychology (Program in Neuropsychology)

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## APPOINTMENTS AND POSITIONS

### *Academic*

1968-1977	Dept. of Psychology Queens College Flushing, NY	Adjunct Lecturer (1976-1977) Part-Time Lecturer (1970-1972) Research Assistant (1968-1972)
1974-1975	Dept. of Social Sciences Richmond College Staten Island, NY	Part-Time Lecturer

## Stuart R. Steinhauer -2-

1976	Dept. of Psychology C.W. Post Center Long Island University Greenvale, NY	Adjunct Lecturer
1977-2013	Dept. of Psychiatry Western Psychiatric Institute and Clinic University of Pittsburgh School of Medicine Pittsburgh, PA	Research Associate Professor (1998) Research Assistant Professor (1977) Co-Director, Alcoholism and Cognitive Processing Laboratory
2013-	University of Pittsburgh	Adjunct Research Associate Professor of Psychiatry

### *Non-Academic*

1972-1977	Dept. of Psychophysiology New York State Psychiatric Institute	Assistant Research Scientist (1976-1977) Research Assistant (1972-1975)
1977-present	Biometrics Research Highland Drive VA Medical Center Pittsburgh, PA	Research Health Scientist Director, Biometrics Research Program Acting Deputy Associate Chief of Staff for R&D (2012-2014)

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### LICENSURE

1984	Licensed Psychologist, State of Pennsylvania
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### MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

1972	New York Academy of Sciences
1982	Society for Psychophysiological Research
1983	International Neuropsychological Society
1986	Society for Research in Psychopathology
1991	American Psychopathological Association
1992	International Organization of Psychophysiology

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### HONORS

1965-1969	New York State Regents Scholarship
1971-1974	Graduate Fellowship, City University of New York
1975	Society of Sigma Xi
1992	Fellow, International Organization of Psychophysiology
2000	Fellow, American Psychopathological Association

2013 Excellence in Research Career Award 2013, VA Pittsburgh  
2013 Legacy Award, Dept. of Psychiatry, University of Pittsburgh

Recent Extra-Mural Review (past details under Other Activities)

2017-2021 VA Merit Review Board Mental Health and Behavioral Sciences - B  
2015-2017 NIH ZRG1 BDCN-N55 Fogarty International Research Program Review Panel

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## RESEARCH INTERESTS and SPECIALIZATIONS

Information Processing and Cognition, Neuropsychology, Experimental Approaches to Psychopathology

Psychophysiology:

Event-Related Brain Potentials	Pupillography
Cardiac Activity	Eye Movements

Neuropsychiatric Populations:

Schizophrenia	Schizophrenia Spectrum Personality Disorder
Alcoholism	Organic Brain Damage/Solvent Exposure

High-Risk Populations:

Schizophrenia	Alcoholism
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## PUBLICATIONS

### Articles

Zubin, J., and Steinhauer, S. (1981). How to break the logjam in schizophrenia: A look beyond genetics. *The Journal of Nervous and Mental Disease*, 169: 477-492.

Zubin, J., Magaziner, J., and Steinhauer, S. (1983). The metamorphosis of schizophrenia: From chronicity to vulnerability. *Psychological Medicine*, 13: 551-571.

Zubin, J., Steinhauer, S.R., Day, R., and van Kammen, D.P. (1985). Schizophrenia at the crossroads: A blueprint for the 80's. *Comprehensive Psychiatry*, 26: 217-240.

Steinhauer, S.R., Hill, S.Y., and Zubin, J. (1987). Event-related potentials in alcoholics and their first-degree relatives. *Alcohol*, 4: 307-314.

Hill, S.Y., Armstrong, J., Steinhauer, S.R., Baughman, T., and Zubin, J. (1987). Static ataxia as a psychobiological marker for alcoholism. *Alcoholism: Clinical and Experimental Research*, 11: 345-348.

- Hill, S.Y., Steinhauer, S.R., Zubin, J., and Baughman, T. (1988). Event-related potentials as markers for alcoholism risk in high density families. *Alcoholism: Clinical and Experimental Research*, 12: 545-554.
- Hill, S.Y., Steinhauer, S.R., Park, J., and Zubin, J. (1990). Event-related potential characteristics in children of alcoholics from high density families. *Alcoholism: Clinical and Experimental Research*, 14: 6-16. (reprinted in: *Annual Review of Addictions Research and Treatment*, pp. 177-192, 1992.)
- Hill, S.Y., Zubin, J., and Steinhauer, S.R. (1990). Personality resemblance in relatives of male alcoholics: A comparison of male control cases using the Multidimensional Personality Questionnaire. *Biological Psychiatry*, 27: 1305-1322.
- Dougherty, G.G., Jr., Steinhauer, S.R., Zubin, J., and van Kammen, D.P. (1991). How does the physiology change with symptom exacerbation and remission in schizophrenia? Commentary on J.A. Gray, J. Feldon, J.N.P. Rawlins, D.R. Hemsley, and A.D. Smith, "The neuropsychology of schizophrenia." *Behavioral and Brain Sciences*, 14: 25-26.
- Hill, S.Y., Steinhauer, S.R., Smith, T.R., and Locke, J. (1991). Risk markers for alcoholism in high density families. *Journal of Substance Abuse*, 3: 351-369.
- Condray, R., and Steinhauer, S.R. (1992). Schizotypal personality disorder in individuals with and without schizophrenic relatives: Similarities and contrasts in neurocognitive and clinical functioning. *Schizophrenia Research*, 7: 33-41.
- Condray, R., Steinhauer, S.R., and Goldstein, G. (1992). Language comprehension in schizophrenics and their brothers. *Biological Psychiatry*, 32: 790-802.
- Condray, R., Steinhauer, S.R., van Kammen, D.P., and Zubin, J. (1992). Dissociation of neurocognitive deficits in a monozygotic twin pair concordant for schizophrenia. *The Journal of Neuropsychiatry and Clinical Neuroscience*, 4: 449-453.
- Hill, S.Y., Steinhauer, S.R., and Zubin, J. (1992). Cardiac responsivity in individuals at high risk for alcoholism. *Journal of Studies on Alcohol*, 53: 378-388.
- Morrow, L.A., Steinhauer, S.R., and Hodgson, M.J. (1992). Delay in P300 latency in patients with organic solvent exposure. *Archives of Neurology*, 49: 315-319.
- Steinhauer, S.R., Jennings, J.R., van Kammen, D.P., and Zubin, J. (1992). Beat-by-beat cardiac responses in normals and schizophrenics to events varying in conditional probability. *Psychophysiology*, 29: 223-231.
- Steinhauer, S.R., van Kammen, D.P., Colbert, K., Peters, J.L., and Zubin, J. (1992). Pupillary constriction during haloperidol treatment as a predictor of relapse following drug withdrawal in schizophrenics. *Psychiatry Research*, 43: 287-298.
- Zubin, J., Steinhauer, S.R., and Condray, R. (1992). Vulnerability to relapse in schizophrenia. *British Journal of Psychiatry*, 161(Suppl.): 13-18.
- Hill, S.Y., and Steinhauer, S.R. (1993). Postural sway in children from pedigrees exhibiting a high density of alcoholism. *Biological Psychiatry*, 33: 313-325.

- Hill, S.Y., and Steinhauer, S.R. (1993). Assessment of prepubertal and postpubertal boys and girls at risk for developing alcoholism with P300 from a visual discrimination task. *Journal of Studies on Alcohol*, 54: 350-358.
- Steinhauer, S.R., and Hill, S.Y. (1993). Auditory event-related potentials in children at high risk for alcoholism. *Journal of Studies on Alcohol*, 54: 408-421.
- Hill, S.Y., and Steinhauer, S.R. (1993). Event-related potentials in women at risk for alcoholism. *Alcohol*, 10: 349-354.
- Morrow, L.A., Steinhauer, S.R., and Ryan C.M. (1994). The utility of psychophysiological measures in assessing the correlates and consequences of organic solvent exposure. *Toxicology and Industrial Health*, 10: 537-544.
- Condray, R., van Kammen, D.P., Steinhauer, S.R., Kasperek, A., and Yao, J.K. (1995). Language comprehension in schizophrenia: Trait vs. state indicator? *Biological Psychiatry*, 38: 287-296.
- Hill, S.Y., Muka, D., Steinhauer, S.R., and Locke, J. (1995). P300 amplitude decrements in children from families of alcoholic female probands. *Biological Psychiatry*, 38: 622-632.
- Hill, S.Y., Steinhauer, S.R., and Locke, J. (1995). Event-related potentials in alcoholic men, their high-risk male relatives and low risk male controls. *Alcoholism: Clinical and Experimental Research*, 19: 567-576.
- Hill, S.Y., Steinhauer, S.R., Lowers, L., and Locke, J. (1995). Eight year longitudinal follow-up of P300 and clinical outcome in children from high-risk for alcoholism families. *Biological Psychiatry*, 37: 823-827.
- Morrow, L.A., and Steinhauer, S.R. (1995). Alterations in heart rate and pupillary response in persons with organic solvent exposure. *Biological Psychiatry*, 37: 721-730.
- Morrow, L.A., Condray, R., and Steinhauer, S.R. (1995). Neuropsychiatric sequelae following chemical exposure. *Archives of Environmental Health*, 50: 390-391.
- Barch, D.M., Cohen, J.D., Servan-Schreiber, D., Steingard, S., Steinhauer, S.S (sic), and van Kammen, D.P. (1996). Semantic priming in schizophrenia: An examination of spreading activation using word pronunciation and multiple SOAs. *Journal of Abnormal Psychology*, 105: 592-601.
- Condray, R., van Kammen, D.P., Steinhauer, S.R., and Kasperek, A. (1996). Working memory capacity predicts language comprehension in schizophrenic patients. *Schizophrenia Research*, 20: 1-13.
- Goldstein, G., Beers, S.R, Morrow, L.A., Shemansky, W.J., and Steinhauer, S.R. (1996). A preliminary neuropsychological study of Persian Gulf veterans. *Journal of the International Neuropsychological Society*, 2: 368-371.
- Morrow, L.A., Steinhauer, S.R., and Condray, R. (1996). Differential associations of P300 amplitude and latency cognitive and psychiatric function in solvent exposed adults. *The Journal of Neuropsychiatry and Clinical Neurosciences*, 8: 446-449.

- Morrow, L.A., Steinhauer, S.R., Condray, R., and Hodgson, M. (1997). Neuropsychological performance in painters under acute solvent exposure and exposure free conditions. *Journal of the International Neuropsychological Society*, 3: 1-7.
- Steinhauer, S.R., Locke, J., and Hill, S.Y. (1997). Vigilance and iconic memory in children at high risk for alcoholism. *Journal of Studies on Alcohol*, 58: 428-434.
- Steinhauer, S.R., Morrow, L.A., Condray, R., and Dougherty, G.G., Jr. (1997). Event-related potentials in workers with ongoing occupational exposures. *Biological Psychiatry*, 42: 854-858.
- Hill, S.Y., Locke, J., Zezza, N., Kaplan, B., Neiswanger, K., Steinhauer, S.R., Wipprecht, G., and Xu, J. (1998). Genetic association between reduced P300 amplitude and the DRD2 dopamine receptor A1 allele in children at high-risk for alcoholism. *Biological Psychiatry*, 43: 40-51.
- Jennings, J.R., van der Molen, M.W., and Steinhauer, S.R. (1998). Preparing the heart, eye, and brain: Foreperiod length effects in a non-aging paradigm. *Psychophysiology*, 35: 90-98.
- Morrow, L.A., Steinhauer, S.R., and Condray, R. (1998). Predictors of improvement in P300 latency in solvent exposed adults. *Neuropsychiatry, Neuropsychology and Behavioral Neurology*, 11: 146-150.
- Condray, R., Steinhauer, S.R., Cohen, J.D., van Kammen, D.P., and Kasperek, A. (1999). Modulation of language processing in schizophrenia: Effects of context and haloperidol on the event-related potential. *Biological Psychiatry*, 45: 1336-1355.
- Hill, S.Y., Shen, S., Locke, J., Steinhauer, S.R., Konicky, C., Lowers, L., and Connolly, J. (1999). Developmental delay in P300 production in children at high risk for developing alcohol-related disorders. *Biological Psychiatry*, 46: 970-981.
- Hill, S.Y., Locke, J., Steinhauer, S.R., and Connolly, J. (1999). Absence of visual and auditory P300 reduction in non-depressed and depressed male and female alcoholics. *Biological Psychiatry*, 46: 982-989.
- Hill, S.Y., Shen, S., Locke, J., Lowers, L., Steinhauer, S.R., and Konicky, C. (2000). Developmental changes in postural sway in children at high and low risk for developing alcohol-related disorders. *Biological Psychiatry*, 47: 501-511.
- Steinhauer, S.R., Condray, R., and Kasperek, A. (2000). Cognitive modulation of midbrain function: Task-induced reduction of the pupillary light reflex. *International Journal of Psychophysiology*, 39: 21-30.
- Condray, R., Morrow, L., Steinhauer, S.R., Hodgson, M., and Kelley, M. (2000). Mood and behavioral symptoms in individuals with chronic solvent exposure. *Psychiatry Research*, 97: 191-206.
- Steinhauer, S.R., Morrow, L.A., Condray, R., and Scott, A.J. (2001). Respiratory sinus arrhythmia in persons with organic solvent exposure: Comparisons with anxiety patients and controls. *Archives of Environmental Health*, 56: 175-180.
- Siegle, G.J., Steinhauer, S.R., Thase, M.E., and Carter, C.S. (2002). Can't shake that feeling: Event-related fMRI assessment of sustained amygdala activity in response to emotional information in depressed individuals. *Biological Psychiatry*, 51: 693-707.

- Condray, R., Steinhauer, S.R., van Kammen, D.P., and Kasperek, A. (2002). The language system in schizophrenia: Effects of capacity and linguistic structure. *Schizophrenia Bulletin*, 28: 475-490.
- Condray, R., and Steinhauer, S.R. (2002). The residual normality assumption and models of cognition in schizophrenia. Commentary on M. Thomas and A. Karmiloff-Smith, "Are developmental disorders like cases of adult brain damage? Implications from connectionist modelling." *Behavioral and Brain Sciences*, 25:753-754.
- Gatzke-Kopp, L.M., Raine, A., Loeber, R., Stouthamer-Loeber, M., and Steinhauer, S.R. (2002). Serious delinquent behavior, sensation-seeking and electrodermal arousal. *Journal of Abnormal Child Psychology*, 30: 477-486.
- Siegle, G.J., Steinhauer, S.R., Carter, C.S., Ramel, W., and Thase, M.E. (2003). Do the seconds turn into hours? Relationships between sustained processing of emotional information and self-reported rumination. *Cognitive Therapy and Research*, 27: 365-382.
- Condray, R., and Steinhauer, S.R. (2003) Mechanisms of disrupted language comprehension in schizophrenia. Commentary on W.A. Phillips and S.M Silverstein, " Convergence of biological and psychological perspectives on cognitive coordination in schizophrenia." *Behavioral and Brain Sciences*, 26: 87-88.
- Siegle, G.J., Steinhauer, S.R., Stenger, V.A., Konecky, R., and Carter, C.S. (2003). Use of concurrent pupil dilation assessment to inform interpretation and analysis of fMRI data. *NeuroImage*, 20: 114-124.
- Condray, R., Greg J. Siegle, G.J., Cohen, J.D., van Kammen, D.P., and Steinhauer, S.R. (2003). Automatic activation of the semantic network in schizophrenia: N400 elicited by a brief inter-stimulus interval. *Biological Psychiatry*, 54: 1134-48.
- Frazier, T.W., Strauss, M.E., and Steinhauer, S.R. (2004). Respiratory sinus arrhythmia as an index of emotional response in young adults. *Psychophysiology*, 41: 75-83.
- Steinhauer, S.R., Siegle, G.J., Condray, R., and Pless, M. (2004). Sympathetic and parasympathetic innervation of pupillary dilation during sustained processing. *International Journal of Psychophysiology*, 52: 77-86.
- Siegle, G.J., Steinhauer, S.R., and Thase, M.E. (2004). Pupillary assessment and computational modeling of early and sustained processing on the Stroop task in depression. *International Journal of Psychophysiology*, 52: 63-76.
- Thompson, J.L., Watson, J.R., Steinhauer, S.R., Goldstein, G., and Pogue-Geile, M.F. (2005). Indicators of genetic liability to schizophrenia: A sibling study of neuropsychological performance. *Schizophrenia Bulletin*, 31: 85-96.
- Fung, M.S., Raine, A., Loeber, R., Lynam, D., Steinhauer, S.R. and Stouthamer-Loeber, M. (2005). Reduced electrodermal activity in adolescent psychopaths. *Journal of Abnormal Psychology*, 114: 187-196.

- Hill, S.Y., Muddasani, S., Prasad, I., Steinhauer, S.R., Scanlon, J., McDermott, M., and Keshavan, M. (2007). Cerebellar volume in offspring from multiplex alcohol dependence families. *Biological Psychiatry*, 61: 41-47.
- Siegle, G.J., Thompson, W., Carter, C.S., Steinhauer, S.R., and Thase, M.E. (2007). Increased amygdala and decreased dorsolateral prefrontal BOLD responses in depression: Related and independent features. *Biological Psychiatry*. 61: 198-209.
- Siegle, G.J., Ichikawa, N., and Steinhauer, S.R. (2008). Blink before and after you think: Blinks occur prior to and following cognitive load indexed by pupillary responses. *Psychophysiology*, 45: 679-687.
- Condray, R., Yao, J.K., Steinhauer, S.R., van Kammen, D.P., Reddy, R.D., and Morrow, L.A. (2008). Semantic memory in schizophrenia: Association with cell membrane essential fatty acids. *Schizophrenia Research*, 106: 13-28.
- Hill, S.Y., Steinhauer, S.R., Locke-Wellman, J., and Ulrich (2009). Childhood risk factors for young adult substance dependence outcome in offspring from multiplex alcohol dependence families: a prospective study. *Biological Psychiatry*, 66:750-757.
- Condray, R., Siegle, G.J., Keshavan, M., and Steinhauer, S.R. (2010). Effects of word frequency on semantic memory in schizophrenia: partial evidence for a deficit in linguistic access. *International Journal of Psychophysiology*, 75: 141-156. [doi:10.1016/j.ijpsycho.2009.10.010](https://doi.org/10.1016/j.ijpsycho.2009.10.010).
- Siegle, G.J., Condray, R., Thase, M.E., Keshavan, M., and Steinhauer, S.R. (2010). Sustained gamma-band EEG following negative words in depression and schizophrenia. *International Journal of Psychophysiology*, 75: 107-118. [doi:10.1016/j.ijpsycho.2008.04.008](https://doi.org/10.1016/j.ijpsycho.2008.04.008).
- Chakraborty, B.H. and Steinhauer, S.R. (2010). Reporting of minority participation rates and racial differences in schizophrenia and psychophysiological research: Improving but still not adequate. *Schizophrenia Research*, 123: 90-91. [doi: 10.1016/j.schres.2010.06.006](https://doi.org/10.1016/j.schres.2010.06.006)
- Siegle, G.J., Steinhauer, S.R., Carter, C.S., and Thase, M.E. (2011). Remission prognosis for cognitive therapy for recurrent depression using the pupil: Utility and neural correlates. *Biological Psychiatry*, 69: 726-733.
- Jain, J., Siegle, G.J., Gu, C., Moore, C.G., Ivanco, L.S., Studenski, S., Greenamyre, J.T, and Steinhauer, S.R. (2011). Pupillary unrest correlates with arousal symptoms and motor signs in Parkinson disease. *Movement Disorders*, 26: 1344-1337.
- Jain, J., Siegle, G.J., Gu, C., Moore, C.G., Ivanco, L.S., Jennings, J.R., Steinhauer, S.R, Studenski, S., and Greenamyre, J.T. (2011). Autonomic insufficiency in pupillary and cardiovascular systems in Parkinson disease. *Parkinsonism and Related Disorders*, 17:119-122. Pubmed PMID. 21115264.
- Jones, B.L, Holmes, B., Steinhauer, S., Zezza, N., Stiffler, S., Hill, S.Y. (2013). Attenuated auditory P300 development in childhood is associated CHRM2 gene variation and familial loading for alcohol dependence. *Psychiatry Research*, 209:504-511.
- Steinhauer, S.R., Condray, R., and Pless, M.L. (2015) Pharmacological isolation of cognitive components influencing the pupillary light reflex. *Journal of Ophthalmology*. Vol 2015: 1-7. doi: 10.1155/2015/179542.



- Hill, SY., Jones, B.L., Steinhauer, S.R., Zezza, N., and Stiffler, S. (2016). Longitudinal predictors of cannabis use and dependence in offspring from families at ultra high risk for alcohol dependence and in control families. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, 171:(383-395).Pubmed PMID. 26756393.
- Forster, S.E., Zirnheld, P., Shekhar, A., Steinhauer, S.R., O'Donnell, B.F., and Hetrick, W.P. (2017). Event-related potentials reflect impaired temporal interval learning following haloperidol administration. *Psychopharmacology*, 234: 2545-2562. DOI 10.1007/s00213-017-4645-2.
- Martin, E.A., Siegle, G.J., Steinhauer, S.R., and Condray, R. (2018). Timing matters in elaborative processing of positive stimuli: Gamma band reactivity in schizophrenia compared to depression and healthy adults. *Schizophrenia Research*. 2018 Aug 15. pii: S0920-9964(18)30500-0. doi: 10.1016/j.schres.2018.08.008. [Epub ahead of print] PubMed PMID: 30121184.
- Kelbsch, C., Strasser, T., Chen, Y, Fiegl, B., Gamlin, P.D., Kardon, R., Peters, T., Roecklein, K.A/, Steinhauer, S.R., Szabadi, E., Zele, A.J., Wilhelm, H., & Wilhelm, B. (in press). Standards in Pupillography. *Frontiers in Neurology: Section Neuro-Ophthalmology*.

**Books, Book Chapters, Proceedings, Invited Papers**

- Steinhauer, S., Hakerem, G., and Spring, B. (1979). The pupillary response as a potential indicator of vulnerability to schizophrenia. *Psychopharmacology Bulletin*, 1979, 15: 44-45.
- Steinhauer, S.R. (1982). Emitted and evoked pupillary responses and event-related potentials as a function of reward and task involvement. Doctoral Dissertation, City University of New York (1982).
- Steinhauer, S., and Zubin, J. (1982). Vulnerability to schizophrenia: Information processing in the pupil and event-related potential. In: E. Usdin and I. Hanin (Eds.), *Biological markers in psychiatry and neurology*. Oxford: Pergamon Press, 371-385.
- Werner, G., Black, F.O., Cornes, C., Larkin, A., and Steinhauer, S. (1982). Anomalies of neuro-sensory functions and representational world in schizophrenics. In: E. Usdin and I. Hanin (Eds.), *Biological markers in psychiatry and neurology*. Oxford: Pergamon Press (1982), 405-421.
- Kietzman, M.L., Zubin, J., and Steinhauer, S. (1984). Information processing in psychopathology. In: V. Sarris and A. Parducci (Eds.), *Perspectives in psychological experimentation*. Englewood Cliffs: Lawrence Erlbaum Associates, 1984, 291-309.
- Steinhauer, S.R. (1985). Neurophysiological aspects of information processing in schizophrenia. *Psychopharmacology Bulletin*, 1985, 3: 513-517.
- Zubin, J. Kietzman, M.L., and Steinhauer, S. (1985). Psychological foundations of psychiatry. In: M. Shepherd (Ed.), *Handbook of psychiatry*, volume 5. Cambridge: Cambridge Univ. Press, 1985, 80-105 (refs. 231-236).
- Zubin, J., Sutton, S., and Steinhauer, S.R. (1986). Event-related potential and behavioral methodology in psychiatric research. In: C. Shagass, R.C. Josiassen and R.A. Roemer (Eds.), *Brain electrical potentials and psychopathology*. Amsterdam: Elsevier, 1986, 1-26.

- Hill, S.Y., Steinhauer, S.R., and Zubin, J. (1987). Biological markers for alcoholism: A vulnerability model conceptualization. In: P.C. Rivers (Ed.), Nebraska symposium on motivation, vol 34: Alcohol and addictive behavior. Lincoln: University of Nebraska, 1987, 207-257.
- Day, R., Zubin, J., and Steinhauer, S.R. (1987). Psychosocial factors in schizophrenia in light of vulnerability theory. In: D. Magnusson and A. Ohman (Eds.), Psychopathology: An interactional perspective. New York: Academic Press, 1987, 25-39.
- Steinhauer, S.R. (1990). Book Review: Biological Psychiatry, by M. R. Trimble. Contemporary Psychology, 35: 458-459.
- Steinhauer, S.R., Zubin, J., Condray, R., Shaw, D.B., Peters, J.L., and van Kammen, D.P. (1991). Electrophysiological and behavioral signs of attentional disturbance in schizophrenics and their siblings. In: C.A. Tamminga and S.C. Schulz, (Eds.), Schizophrenia Research. Advances in neuropsychiatry and psychopharmacology, vol. 1. New York: Raven Press, pp. 169-178.
- Zahn, T.P., Frith, C.D., and Steinhauer, S.R. (1991). Autonomic functioning in schizophrenia: Electrodermal activity, heart rate, pupillography. In: Steinhauer, S.R., Gruzelier, J.H., and Zubin, J. (Eds.), Handbook of schizophrenia, vol. 5: Neuropsychology, psychophysiology, and information processing. Amsterdam: Elsevier, pp. 185-224.
- Steinhauer, S.R., Gruzelier, J.H., and Zubin, J. (Eds), (1991). Handbook of schizophrenia, vol. 5: Neuropsychology, psychophysiology and information processing. Amsterdam: Elsevier.
- Zubin, J., Steinhauer, S.R., and Condray, R. (1991). Schizophrenia from an American perspective. In: Flack, W.F., Miller, D.R., and Weiner, M. (Eds.), Conceptualizations of schizophrenia. New York: Springer-Verlag, pp. 17-31.
- Steinhauer, S.R., and Hakerem, G. (1992). The pupillary response in cognitive psychophysiology and schizophrenia. In: Friedman, D., and Bruder, G. (Eds.), Psychophysiology and experimental psychopathology: A tribute to Samuel Sutton. Annals of the New York Academy of Sciences, 658: 182-204.
- Steinhauer, S.R., and Friedman, D. (1995). Cognitive psychophysiological indicators of vulnerability in relatives of schizophrenics. In: Miller, G.A. (Ed.), The behavioral high-risk strategy in psychopathology. New York: Springer-Verlag, pp. 158-180.
- Steinhauer, S.R. (2003). Origins of psychopathology research: The discovery of P300 and cognitive psychophysiology. Psychopathology Research, 13: 1&6-10.
- Granholm, E., and Steinhauer, S.R. (2004). Introduction: Pupillometric measures of cognitive and emotional processing. International Journal of Psychophysiology, 52: 1-6.
- Steinhauer, S.R. and Condray, R. (2010). Psychophysiology of language processes in psychopathology: An overview of the special issue. International Journal of Psychophysiology, 75: 107-118. <http://dx.doi.org/10.1016/j.ijpsycho.2009.12.009>.
- Condray, R., and Steinhauer, S.R. (2016). Joseph Zubin (1900-1990). In: Ziegler-Hill, V., and Shackelford, T.D. (Eds.), Encyclopedia of Personality and Individual Differences. Switzerland: Springer International Press.

Published Abstracts

- Steinhauer, S.R., Jennings, J.R., Zubin, J., and Heidorn, P.B. (1981). Pupillary dilation, P300, and heart rate are influenced by conditional probability. *Psychophysiology*, 18: 140-141.
- Steinhauer, S.R., Zubin, J., and Heidorn, P.B. (1982). P300 reduction in psychiatric patients may reflect performance decrements. *Psychophysiology*(1982), 19: 350.
- Werner, G., and Steinhauer, S.R. (1982). Ocular fixations and stimulus complexity in normals and schizophrenics. *Psychophysiology* (1982), 19: 355.
- Steinhauer, S.R., Hakerem, G., Friedman, D., and Sutton, S. (1983) Pupillary responses and event-related potentials related to reward and task involvement. *Psychophysiology*, 19: 589.
- Steinhauer, S.R., Boller, F., Zubin, J., and Pearlman, S.B. (1983). Pupillary dilation to emotional visual stimuli revisited. *Psychophysiology*, 20: 472.
- Steinhauer, S.R., Jennings, J.R., and Zubin, J. (1985). Beat-by-beat cardiac responses in normals and schizophrenics to events varying in conditional probability. *Psychophysiology*, 1985, 22: 581-582.
- Steinhauer, S.R., Hill, S.Y., and Zubin, J. (1986). Elevated heart rate as a vulnerability marker for alcoholism. *Alcoholism: Clinical and Experimental Research*, 1986, 10: 101.
- Steinhauer, S.R., Hill, S.Y., and Zubin, J. (1986). Event-related potential similarity in adult siblings. *Psychophysiology*, 1986, 23: 464.
- Farah, M.J., Steinhauer, S.R., Lewicki, M.S., Zubin, J., and Peronnet, F. (1988). Individual differences in vividness of mental imagery: An event-related potential study. *Psychophysiology*, 1988, 25: 444-445.
- Steinhauer, S.R., Zubin, J., Condray, R., Shaw, D.B., and Peters, J.L. (1989). Electrophysiological and behavioral signs of attentional disturbance in schizophrenics and their siblings. *Schizophrenia Research*, 1989, 2: 88.
- Pogue-Geile, M.F., Watson, J.R., Steinhauer, S.R., Goldstein, G. (1989). Neuropsychological impairments among siblings of schizophrenic probands. *Schizophrenia Research*, 1989, 2: 70.
- Hill, S.Y., Locke, J., Steinhauer, S.R., and Zubin, J. (1989). Effects of alcoholism on familial resemblance in personality. *Biological Psychiatry*, 1989, 25: 10A.
- Steinhauer, S.R., Zubin, J., Condray, R., Peters, J.L., Jennings, J.R., and van Kammen, D.P. (1990). Cardiac responsivity and information processing in outpatient schizophrenics and their siblings. *Biological Psychiatry*, 27: 115A.
- Morrow, L.A., Steinhauer, S.R., Robin, N., Hodgson, M.J., Tortora, S., and Bober, S. (1991). Neurophysiological and neuropsychological impairment following chemical exposure. *Journal of Clinical and Experimental Neuropsychology*, 13: 60.
- Steinhauer, S.R., Condray, R., Zubin, J., and Dougherty, G. (1991). Schizotypal symptoms and information processing deficits in families of schizophrenic patients. *Schizophrenia Research*, 4: 393.

- Steinhauer, S.R. (1991). A model of the sources of pupillary dilation elicited during cognitive processing. *Psychophysiology*, 28: S52.
- Steinhauer, S.R., Condray, R., Saito, H., and Detka, C. (1995). A deficient sympathetic component of pupillary dilation in schizophrenics reflects impaired cognitive processing. *Biological Psychiatry*, 31: 116A.
- Hill, S.Y., and Steinhauer, S.R. (1996). Do neurobehavioral markers enhance identification of children at risk for alcoholism? *Biological Psychiatry*, 33: 102A.
- Condray, R., Steinhauer, S.R., Cohen, J., van Kammen, D.P., Kasperek, A., and Opitz, S. (1993). Semantic priming in schizophrenic inpatients: Neuroleptic effects on the event-related brain potential. *Schizophrenia Research*, 9: 155.
- Steinhauer, S.R., Condray, R., van Kammen, D.P., Saito, H., Dougherty, G.G., and Kasperek, A. (1990). Cognitive dysfunction in schizophrenia is associated with disruption of sympathetically mediated autonomic pathways. *Schizophrenia Research*, 9: 167-168.
- Barch, D.M., Cohen, J.D., Servan-Schreiber, D., Steingard, S., Steinhauer, S., and van Kammen, D. (1995). Lexical priming in schizophrenia: The effects of anti-psychotic medication. *Schizophrenia Research*, 15: 107-108.
- Cohen, J.D., Barch, D.M., Servan-Schreiber, D., Steingard, S., Steinhauer, S., and van Kammen, D. (1995). Lexical priming in schizophrenia: The effects of anti-psychotic medication. *Biological Psychiatry*, 37: 632-633.
- Condray, R., van Kammen, D.P., Steinhauer, S.R., and Yao, J.K. (1995). Language comprehension and anhedonia-asociality in schizophrenia. *Schizophrenia Research*, 15: 113.
- Morrow, L., Steinhauer, S.R., Condray, R., and Dougherty, G.G. (1995). P300 latency prolongation in journeymen painters exposed to organic solvents. *Journal of the International Neuropsychological Society*, 1: 165.
- Morrow, L., Lederer, A., Steinhauer, S., and Condray, R. (1995). Occupational exposure to organic solvents: Neurobehavioral effects. *Journal of the International Neuropsychological Society*, 1: 393.
- Saito, H., Inosaka, T., Masuoka, H., Sato, M., Steinhauer, S.R., and van Kammen, D.P. (1996). Delayed visual processing negativity (NA) in chronic schizophrenia. *Biological Psychiatry*, 39: 653.
- Steinhauer, S.R., Condray, R., and Dougherty, G.G., Jr. (1996). Psychophysiological windows on neurocognition in schizophrenia. *Journal of the International Neuropsychological Society*, 2: 19.
- Steinhauer, S.R., Beers, S.R., Goldstein, G., Shemansky, W.J., Morrow, L.A. (1996). Neurophysiological and neuropsychological characteristics of Gulf War veterans. *Journal of the International Neuropsychological Society*, 2: 68.
- Condray, R., Steinhauer, S.R., Cohen, J.D., van Kammen, D.P., Kasperek, A., and Kelley, M.E. (1997). Effects of haloperidol on the event-related potential in schizophrenics. *Schizophrenia Research*, 24: 232.

- Condray, R., Steinhauer, S.R., and van Kammen, D.P. (1997). N400 and expectancy for semantically associated contexts in schizophrenia. *Psychophysiology*, 34: S28.
- Steinhauer, S.R., Morrow, L.A., Condray, R., and Dougherty, G.G., Jr. (1997). Pupillary sensitivity and occupational exposure to solvents. *Psychophysiology*, 34: S86.
- Jennings, J.R., van der Molen, M, and Steinhauer, S.R. (1997). Physiological preparedness during unpredictable foreperiods: Preparing the heart, eye, and brain. *Psychophysiology*, 34: S47.
- Steinhauer, S.R., Condray, R., Kasperek, A., and Dougherty, G.G., Jr. (1998). Task relevancy and motor contributions to pupillary dilation are dissociated in the sympathetic and parasympathetic pathways. *Psychophysiology*, 35: S79.
- Steinhauer, S.R., Condray, R., Kasperek, A., and van Kammen, D.P. (1998). Cognitive modulation of midbrain function: Task-related inhibition of the pupillary light reflex. *Psychophysiology*, 35: S80.
- Steinhauer, S.R., Morrow, L.A., and Condray, R. (1998). Impaired respiratory sinus arrhythmia in patients with anxiety or toxic solvent exposure. *Psychophysiology*, 35: S80.
- Steinhauer, S.R., Morrow, L.A., Condray, R., and Scott, A. (1999). Event-related potential and cardiac measures differentiate patients with anxiety disorders from patients with toxic solvent exposure. *Journal of the International Neuropsychological Society*, 5: 130.
- Condray, R., Steinhauer, S.R., van Kammen, D.P., and Kasperek, A. (1999). Comprehension processes in schizophrenia: Effects of capacity and linguistic structure. *Schizophrenia Research*, 36:253.
- Siegle, G.J., and Steinhauer, S.R. (2000). Pupillary and reaction-time assessment of interference of emotional and nonemotional information on subsequent processing. *Psychophysiology*, 37: S90.
- Granholm, E., and Steinhauer, S.R., symposium co-chairs. (2000). In the mind's eye: A view through the pupil at cognition in psychopathology. *Psychophysiology*, 37: S14.
- Steinhauer, S.R., and Condray, R. (2000). Mechanisms of cognitive modulation in schizophrenia as determined by pupillary motility. *Psychophysiology*, 37: S15.
- Steinhauer, S.R., Condray, R., and Kasperek, A. (2000). Inhibition of the pupillary light reaction by cognitive activity: Evidence for dual parasympathetic components. *Psychophysiology*, 37: S94.
- Steinhauer, S.R., Condray, R., Kasperek, A. and Siegle, G.J. (2000). Pharmacological dissociation of autonomic pathways contributing to pupillary dilation following motor activity. *Psychophysiology*, 37: S95.
- Steinhauer, S.R., Kasperek, A., Condray, R. and Siegle, G.J. (2001). Pathways contributing to pupillary dilation during sustained processing. *Psychophysiology*, 38: S91.
- Siegle, G.J., Steinhauer, S.R., Thase, M.E., and Carter, C.S. (2001). Can't shake that feeling: Pupillary and fMRI assessment of sustained processing in response to emotional information in depressed individuals. 24th International Colloquium on the Pupil, Pacific Grove, CA, September 7-11. <http://www.jiscmail.ac.uk/files/PUPIL/ca.htm>.

- Steinhauer, S.R., Kasparek, A., Condray, R. and Siegle, G.J. (2001). Dilation of the pupil via sympathetic and parasympathetic pathways during a continuous processing task. 24th International Colloquium on the Pupil, Pacific Grove, CA.  
<http://www.jiscmail.ac.uk/files/PUPIL/ca.htm>.
- Siegle, G.J., Steinhauer, S.R., Thase, M.E., and Carter, C.S. (2001). Sustained pupillary and amygdala activity in response to emotional information in depressed individuals. *Psychophysiology*, 38: S9.
- Condray, R., Steinhauer, S.R., Cohen, J.D., van Kammen, D.P., and Kasparek, A. (2002). Automatic activation in schizophrenia: N400 elicited by short ISIs. *Biological Psychiatry*, 51: 113S.
- Steinhauer, S.R., Siegle, G.J., Condray, R., Carter, C.C., and Thase, M.E. (2002). Pupillary dilation, cognition, and psychiatric disorder: Insights to brain function. *International Journal of Psychophysiology*, 45: 43.
- Steinhauer, S.E. and Condray, R. (2002). Event-related potential indices of cognitive processing and familial risk for schizophrenia-spectrum disorder. *Clinical Electroencephalography*, 33: 142.
- Steinhauer, S.R., and Keshavan, M. (2002). Symposium Summary: Early detection of psychosis: Role of electrophysiology. *Electrophysiological markers of vulnerability to psychiatric disorders. Clinical Electroencephalography*, 33: 142.
- Condray, R., and Steinhauer, S.R. (2002). The time course of word frequency and semantic context effects during incidental priming: an ERP study. *Psychophysiology*, 39:S13.
- Fung, M.T., Adrian Raine, A., Lynam, D.R., Steinhauer, S.R., Loeber, R., and Stouthamer-Loeber, M. (2002). Reduced anticipatory and reactive skin conductance: Evidence for an adolescent analogue of psychopathy. *Psychophysiology*, 39:S37.
- Siegle, G., Steinhauer, S., Konecky, R., Thase, M., and Carter, C. (2002). Who's on last: Sustained resource allocation in emotional and non-emotional processing in depressed and never-depressed individuals. *Psychophysiology*, 39:S76.
- Siegle, G., Steinhauer, S.R., Carter, C., and Thase, M. (2003). Sustained processing on the Stroop task in depression. *Psychophysiology*, 40:S79.
- Condray, R., Steinhauer, S. R., and Keshavan, M. (2004). Semantic memory function in the schizophrenia spectrum. *Biological Psychiatry*, 55: 170S.
- Steinhauer, S. R., Condray, R., Siegle, G. J., Carter, K.N., and Yanuzo, A.D. (2004). Disruption of the temporal course of central inhibition in schizophrenia as reflected by the pupillomotor system. *Biological Psychiatry*, 55: 225S.
- Siegle, G., Silk, J.S., Forbes, E.E., Steinhauer, S.R., Dahl, R.E., Carter, C., and Thase, M. (2004). Sustained pupil dilation to emotional information in depression: Developmental and mechanistic considerations. *Psychophysiology*, 41: S4.
- Yang, Y., Raine, A., Loeber, R., Steinhauer, S.R., and Lacasse, L. (2004). Abnormal EEG responses to an emotional stressor in antisocial adolescents. *Psychophysiology*, 41: S50.

- Steinhauer, S. R., Condray, R., Siegle, G. J., and Gurklis, J.A. (2005). Cognitive inhibition of the pupillary light reaction in schizophrenia and alcoholism: physiological evidence for effortful processing. *Schizophrenia Bulletin*, 31: 378.
- Condray, R., Steinhauer, S.R., and Siegle, S. (2005) Semantic Memory in Schizophrenia. *Psychophysiology*, 42: S12.
- Steinhauer, S.R., Siegle, G.J., Condray, R., and Gurklis, J.A., Jr. (2006). Pupil dilation during sustained processing: An indicator of intact effortful processing in schizophrenia. *International Journal of Psychophysiology*, 61: 338.
- Siegle, G., Steinhauer, S., and Thase, M. (2006). fMRI correlates of prolonged psychophysiological activity to emotional information. *Psychophysiology*, 43: S12.
- Condray, R., Steinhauer, S.R., Siegle, G.J., Keshavan, M.S., Montrose, D.M., Beatrice Chakraborty, B. (2009). Effects of word frequency on semantic memory in schizophrenia. *Schizophrenia Bulletin*, 35(S1): 57.
- Steinhauer, S.R., Siegle, G.J., Condray, R., and Chakraborty, B.H. (2010). Working memory deficits in schizophrenia are reflected by deficits in pupillary dilation. *International Journal of Psychophysiology*, 77: 254.
- Chakraborty, B.H., Siegle, G.J., Condray, R., Clarke, A.L., Sheppard, J.C., and Steinhauer, S.R. (2010). Pupillary responses during digit span under light and darkness in psychiatric patients. *Psychophysiology*, 47: S80.
- Condray, R., Siegle, G.J., and Steinhauer, S.R. (2010). Semantic memory and word frequency modulate N400 in the family members of schizophrenia patients. *Psychophysiology*, 47: S10.
- Steinhauer, S.R., Clarke, A.L., Siegle, G.J., Condray, R., and Chakraborty, B.H. (2010). Reduced pupillary oscillations in schizophrenia and depression suggest central parasympathetic deficit. *Psychophysiology*, 47: S80.
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## PROFESSIONAL ACTIVITIES

### Presentations

- Steinhauer, S.R., and Hakerem, G. Effects of betting and guessing on pupillary dynamics and vertex evoked potential. Eastern Psychological Association, New York City, April, 1975.
- Steinhauer, S., and Hakerem, G. Cognition and pupillary dynamics. New Jersey Academy of Science, Madison, New Jersey, April, 1975.
- Hakerem, G., and Steinhauer, S. Winning and losing as expressed by pupillary dynamics and evoked cortical potentials. Ninth Colloquium on the Pupil, Iowa City, May, 1975.

- Steinhauer, S., and Hakerem, G. The pupillary response and vertex evoked potential as concomitants of the time estimation experience. Ninth Colloquium on the Pupil, Iowa City, May, 1975.
- Steinhauer, S., and Hakerem, G. Effects of winning and losing on emitted pupillary activity and event-related brain potentials. Eastern Psychological Association, New York City, April, 1976.
- Steinhauer, S., Hakerem, G., and Spring, B. Pupillary responses and evoked cortical responses to light and sound stimuli in psychiatric patients. Tenth Symposium on the Pupil, New York City, June, 1977.
- Hakerem, G., and Steinhauer, S. Pupillary motility as an indicator of cognitive processes. American Psychological Association, San Francisco, September, 1977.
- Steinhauer, S. Pupillography: research strategies. Workshop on Pupillography, Society for Psychophysiological Research, Philadelphia, October, 1977.
- Steinhauer, S., and Zubin, J. Does pupillary dilation reflect information processing or merely orienting? American Psychological Association, Montreal, September, 1980.
- Steinhauer, S., Jennings, J.R., Zubin, J., and Heidorn, P.B. Pupillary dilation, P300 and heart rate are influenced by conditional probability. Society for Psychophysiological Research, Vancouver, October, 1980.
- Steinhauer, S., and Zubin, J. Potential neurophysiological indicators for schizophrenia. American College of Neuropsychopharmacology, San Juan, December, 1980.
- Zubin, J., and Steinhauer, S. Vulnerability to schizophrenia: Information processing in the pupil and event-related potential. Conference on Biological Markers in Psychiatry and Neurology, New Orleans, May, 1981.
- Zubin, J., Kietzman, M.L., and Steinhauer, S. Information processing and psychopathology. International Symposium on Perspectives in Psychological Experimentation, Bad Homburg, West Germany, July, 1981.
- Steinhauer, S., Zubin, J., and Heidorn, P.B. P300 reduction in psychiatric patients may reflect performance decrements. Society for Psychophysiological Research, October - November, 1981.
- Werner, G., and Steinhauer, S. Ocular fixations and stimulus complexity in normals and schizophrenics. Society for Psychophysiological Research, October - November, 1981.
- Werner, G. Black, F.O., Larkin, A and Steinhauer, S. Anomalies of neuro-sensory functions in schizophrenics. First World Congress of the International Brain Research Organization, Lausanne, April, 1982.
- Steinhauer, S.R., Boller, F., and Zubin. Pupillary dilation in response to pleasant and aversive visual stimuli. American Psychological Association, Washington, D.C., August, 1982.
- Steinhauer, S.R., Hakerem, G., Friedman, D., and Sutton, S. Pupillary responses and event-related potentials related to reward and task involvement. Society for Psychophysiological Research, Minneapolis, October, 1982.



Steinhauer, S.R., and Zubin, J. Pupillary dilation and event-related potentials in schizophrenics. 13th Colloquium on the Pupil, Toronto, May, 1983.

Steinhauer, S.R., Boller, F., and Zubin, J. Salvaging the baby from the bathwater: Pupillary dilation to emotional visual stimuli revisited. 13th Colloquium on the Pupil, Toronto, May, 1983.

Steinhauer, S.R., Boller, F., Zubin, J., and Pearlman, S.B. Pupillary dilation to emotional visual stimuli revisited. Society for Psychophysiological Research, Carmel, Cal., September, 1983.

Steinhauer, S.R. Neurophysiological aspects of information processing in schizophrenia. American College of Neuropsychopharmacology, San Juan, December, 1984.

Steinhauer, S.R. Vulnerability to schizophrenia: Psychophysiological approaches. National Institutes of Mental Health, January, 1985.

Steinhauer, S.R., Zubin, J., and Sullivan, M.S. Topographic mapping of event-related potential (ERP) data. International Neuropsychological Society, San Diego, February, 1985.

Steinhauer, S.R. Cognitive psychophysiology and psychopathology. Institute for Basic Research in Developmental Disabilities, Staten Island, April, 1985.

Steinhauer, S.R., Jennings, J.R., and Zubin, J. Beat-by-beat cardiac responses in normals and schizophrenics to events varying in conditional probability. Society for Psychophysiological Research, Houston, October, 1985.

Steinhauer, S.R., Hill, S.Y., and Zubin, J. Event-related potentials in alcoholics and their siblings. American Psychopathological Association, New York, March, 1986.

Steinhauer, S.R., Hill, S.Y., and Zubin, J. Elevated heart rate as a vulnerability marker for alcoholism. Research Society on Alcoholism, San Francisco, April, 1986.

Steinhauer, S.R., Hill, S.Y., and Zubin, J. Event-related potentials in alcoholics and their first-degree relatives. Satellite Symposium on Alcoholism and Event-Related Potentials, Eighth International Conference on Event-Related Potentials of the Brain (EPIC VIII), Palo Alto, June, 1986.

Steinhauer, S.R., Hill, S.Y., and Zubin, J. Event-related potential similarity in adult siblings. Society for Psychophysiological Research, Montreal, October 18, 1986.

Steinhauer, S.R. Psychophysiological measures of information processing in schizophrenia. Society for Research in Psychopathology, Cambridge, Mass., October 24, 1986.

Steinhauer, S.R., Colbert, K., van Kammen, D.P., Peters, J.L., and Zubin, J. The pupillary light reflex in schizophrenia: Effects of haloperidol and relation to relapse prediction. American College of Neuropsychopharmacology, Washington, D.C., December, 1986.

Steinhauer, S.R., and Zubin, J. Pupillary dilation during information processing appears deviant in siblings of schizophrenics. International Congress on Schizophrenia Research, Clearwater, Florida, March 30, 1987.

- Steinhauer, S.R. Deviations in pupillary dilation during information processing in schizophrenics and their siblings. 16th Colloquium on the Pupil, New York City, September 17-19, 1987.
- Steinhauer, S.R., Shaw, D., Zubin, J., Colbert, K., and Sobolik, T. CPT and Span of Apprehension performance in schizophrenics and their siblings. Society for Research in Psychopathology, Atlanta, November 5-7, 1987.
- Farah, M.J., Steinhauer, S.R., Lewicki, M.S., Zubin, J., and Peronnet, F. Individual differences in vividness of mental imagery: an event-related potential study. Society for Psychophysiological Research, San Francisco, October 19-22, 1988.
- Steinhauer, S.R., Kabene, M., Watson, J.R., Condray, R., Zubin, J., and Shaw, D.B. Neurobehavioral elements of attention in psychiatric and metabolic disorders: A reflection on Mirsky's components. Society for Research in Psychopathology, Cambridge, Massachusetts, November 11-13, 1988.
- Steinhauer, S.R. Symposium Discussant: What has the study of attention contributed to our understanding of schizophrenia? Society for Research in Psychopathology, Cambridge, Massachusetts, November 11-13, 1988.
- Pogue-Geile, M.F., Watson, J.R., Steinhauer, S.R., and Goldstein, G. Neuropsychological impairment among schizophrenic probands, their siblings, and control subjects. Society for Research in Psychopathology, Cambridge, Massachusetts, November 11-13, 1988.
- Steinhauer, S.R., Zubin, J., Peters, J.L., Condray, R., and van Kammen, D.P. Event-related potentials in stabilized outpatient schizophrenics. American College of Neuropsychopharmacology, San Juan, December 11-16, 1988.
- Steinhauer, S.R., Zubin, J., Condray, R., Shaw, D.B., and Peters, J.L. Electrophysiological and behavioral signs of attentional disturbance in schizophrenics and their siblings. International Congress on Schizophrenia Research, San Diego, April 3, 1989.
- Pogue-Geile, M.F., Watson, J.R., Steinhauer, S.R., and Goldstein, G. Neuropsychological impairments among siblings of schizophrenic probands. International Congress on Schizophrenia Research, San Diego, April 1-5, 1989.
- Steinhauer, S.R. Vulnerability to schizophrenia. Centre Psychiatrique, University of Ibn Rochd, Casablanca, Morocco, June 9, 1989.
- Steinhauer, S.R. The evolution of vulnerability theory. Society for Research in Psychopathology, Coral Gables, November 11, 1989.
- Condray, R., Steinhauer, S.R., Peters, J.L., Zubin, J., and van Kammen, D.P. Association between schizotypal symptoms and attentional dysfunction in siblings of schizophrenics. Society for Research in Psychopathology, Coral Gables, November 11, 1989.
- Steinhauer, S.R., Zubin, J., Condray, R., Peters, J.L., Jennings, J.R., and van Kammen, D.P. Cardiac responsivity and information processing in outpatient schizophrenics and their siblings. Society of Biological Psychiatry, New York, May 9-12, 1990.

- Steinhauer, S.R. Techniques of behavioral research in schizophrenia. Invited workshop. Poised for Discovery: Schizophrenia 1990, An International Conference. Vancouver, Canada, July 15-18, 1990.
- Steinhauer, S.R. Psychophysiological indices of schizophrenia: Status of episode and vulnerability markers. American Psychological Association. Boston, August 9-13, 1990.
- Steinhauer, S.R. Psychophysiological deviations in schizophrenics and their relatives. Central Institute of Mental Health, Mannheim, West Germany, October 1, 1990.
- Steinhauer, S.R. Discussion, session on High-Risk and Vulnerability. Third International Symposium on Schizophrenia: Transactional Processes in Onset and Course of Schizophrenia. Bern, Switzerland, October 4-6, 1990.
- Zubin, J., Steinhauer, S.R., and Condray, R. Vulnerability to relapse. Third International Symposium on Schizophrenia: Transactional Processes in Onset and Course of Schizophrenia. Bern, Switzerland, October 4-6, 1990.
- Dougherty, G.G., Steinhauer, S.R., van Kammen, D.P., and Zubin, J. Spike potentials associated with eyeblinks. Society for Psychophysiological Research, Boston, October 18-21, 1990.
- Steinhauer, S.R. Neurobehavioral indicators of vulnerability to neuropsychiatric disorder. Department of Veterans Affairs RMEC Conference, Cleveland, November 8-9, 1990.
- Steinhauer, R., Zubin, J., Shaw, D.B., Clark, M., Condray, R., and Spring, B.J. Dichotic shadowing performance in schizophrenics and their brothers. Society for Research in Psychopathology, Boulder, Colorado, November 29-December 2, 1990.
- Bober, S.L., Condray, R., Steinhauer, S.R., and Zubin, J. Geographic distance, social distance and "clannishness" in the families of schizophrenics. Society for Research in Psychopathology, Boulder, Colorado, November 29-December 2, 1990.
- Condray, R., Steinhauer, S.R., and Zubin, J. Heterogeneity in the monozygotic twin paradigm: Clinical and behavioral variability in twins concordant for schizophrenia. Society for Research in Psychopathology, Boulder, Colorado, November 29-December 2, 1990.
- Morrow, L.A., Steinhauer, S.R., Robin, N., Hodgson, M.J., Tortora, S., and Bober, S. Neurophysiological and neuropsychological impairment following chemical exposure. International Neuropsychological Society, February 14-16, 1991.
- Steinhauer, S.R., Condray, R., Zubin, J., and Dougherty, G.G., Jr. Schizotypal symptoms and information processing deficits in families of schizophrenic patients. III International Congress on Schizophrenia Research, Tucson, April 25, 1991.
- Condray, R., Steinhauer, S.R., and Zubin, J. Concordance and discordance of attentional functioning in a pair of monozygotic twins "concordant" for schizophrenia. III International Congress on Schizophrenia Research, Tucson, April 25, 1991.
- Steinhauer, S.R. A model of the sympathetic and parasympathetic contributions to pupillary dilation evoked by information processing in humans. The 19th Pupil Colloquium, Woods Hole, Massachusetts, September 11-14th, 1991.

- Steinhauer, S.R. A model of the sources of pupillary dilation elicited during cognitive processing. Society for Psychophysiological Research, Chicago, October 9-13, 1991.
- Steinhauer, S.R. Deficient pupillary dilation in schizophrenia during cognitive processing: Implications of a physiological model. Society for Research in Psychopathology, Cambridge, Massachusetts, December 5-8, 1991.
- Condray, R., Steinhauer, S.R., and Zubin, J. Schizotypal personality disorder in individuals with and without schizophrenic relatives: Similarities and contrasts in neurocognitive and social functioning. Society for Research in Psychopathology, Cambridge, Massachusetts, December 5-8, 1991.
- Steinhauer, S.R., Condray, R., Saitoh, H., and Detka, C. A deficient sympathetic component of pupillary dilation in schizophrenics reflects impaired cognitive processing. Society of Biological Psychiatry, Washington, D.C., April 30, 1992.
- George, A., Soloff, P.H., and Steinhauer, S.R. Impaired visual vigilance in patients with borderline personality disorder. American Psychiatric Association, Washington, D.C., May 6, 1992.
- Condray, R., Steinhauer, S.R., and Goldstein, G. Deficits in language comprehension associated with schizophrenia-spectrum disorders. Society for Research in Psychopathology, Palm Springs, California, November 12-15, 1992.
- Hill, S.Y., and Steinhauer, S.R. Do neurobehavioral markers enhance identification of children at risk for alcoholism? Society for Biological Psychiatry, San Francisco, May 21, 1993.
- Steinhauer, S.R., Condray, R., van Kammen, D.P., Saito, H., Dougherty, G.G., and Kasperek, A. Cognitive dysfunction in schizophrenia is associated with disruption of sympathetically mediated autonomic pathways. International Congress on Schizophrenia Research, Colorado Springs, April 19, 1993.
- Dougherty, G.G., Jr., and Steinhauer, S.R. Common linear functional relationships in topographic ERP data: The noisy Gram-Schmidt process. International Society of Brain Electromagnetic Topography, Havana, July, 1993.
- Steinhauer, S.R., Morrow, L.A., and Condray, R. ERPs and autonomic responsivity in toxic solvent exposure. American Meeting on Cognitive ERP Research (AMCER), New York, July, 1993.
- Steinhauer, S.R., Morrow, L.A., and Condray, R. Psychophysiological consequences of toxic solvent exposure. Society for Research in Psychopathology, Chicago, October 11, 1993.
- Opitz, S.E., Kasperek, A., Condray, R., and Steinhauer, S.R. Reported level of functioning at follow-up related to Axis-II diagnoses. Society for Research in Psychopathology, Chicago, October 11, 1993.
- Morrow, L.A., Lederer, A., Steinhauer, S., and Condray, R. Occupational exposure to organic solvents: Neurobehavioral deficits. International Neuropsychological Society, Cincinnati, February, 1994.
- Morrow, L.A., Steinhauer, S.R., and Ryan C.M. The utility of psychophysiological measures in assessing the correlates and consequences of organic solvent exposure. ATSDR, Baltimore, April 7, 1994.

- Dougherty, G.G., Jr., and Steinhauer, S.R. Overlapping linear topography models of ERPs. International Society of Brain Electromagnetic Topography, Budapest, August, 1994.
- Morrow, L., Steinhauer, S.R., Condray, R., and Dougherty, G.G. P300 latency prolongation in journeymen painters exposed to organic solvents. International Neuropsychological Society, Seattle, February, 1995.
- Barch, D.M., Cohen, J.D., Servan-Schreiber, D. Steingard, S., Steinhauer, S., and van Kammen, D. Lexical priming in schizophrenia: The effects of anti-psychotic medication. International Congress on Schizophrenia Research, Warm Spring, VA, April 6-12, 1995.
- Condray, R. van Kammen, D.P., Steinhauer, S.R., and Yao, J.K. Language comprehension and anhedonia-asociality in schizophrenia. International Congress on Schizophrenia Research, Warm Springs, VA, April 6-12, 1995.
- Cohen, J.D., Barch, D.M., Servan-Schreiber, D. Steingard, S., Steinhauer, S., and van Kammen, D. Lexical priming in schizophrenia: The effects of anti-psychotic medication. Society for Biological Psychiatry, Miami, May, 1995.
- Steinhauer, S.R., Condray, R., and Dougherty, G.G., Jr. Psychophysiological windows on neurocognition in schizophrenia. International Neuropsychological Society, Chicago, February, 1996.
- Steinhauer, S.R., Beers, S.R., Goldstein, G. Shemansky, W.J., Morrow, L.A. Neurophysiological and neuropsychological characteristics of Gulf War veterans. International Neuropsychological Society, Chicago, February, 1996.
- Condray, R., Steinhauer, S.R., Cohen, J.D., van Kammen, D.P, Kasperek, A., and Kelley, M.E. Effects of haloperidol on the event-related potential in schizophrenics. International Congress on Schizophrenia Research, Colorado Springs, April 12-16, 1997.
- Steinhauer, S.R., Condray, R., van Kammen, D.P., and Dougherty, G.G., Jr. Sympathetic and parasympathetic components of pupillary dilation during cognition: Evidence from normal and psychiatric data. 22nd Colloquium on the Pupil, Point Clear, Alabama, Sept. 2-6, 1997.
- Steinhauer, S.R., Morrow, L.A., Condray, R., and Kasperek, A. Pupillary responses to cognitive activation in patients and workers exposed to organic solvents. 22nd Colloquium on the Pupil, Point Clear, Alabama, Sept. 2-6, 1997.
- Condray, R., Steinhauer, S.R., and van Kammen, D.P. N400 and expectancy for semantically associated contexts in schizophrenia. Society for Psychophysiological Research, Falmouth, MA, October 15-19, 1997.
- Steinhauer, S.R., Morrow, L.A., Condray, R., and Dougherty, G.G., Jr. Pupillary sensitivity and occupational exposure to solvents. Society for Psychophysiological Research, Falmouth, MA, October 15-19, 1997.
- Jennings, J.R., van der Molen, M, and Steinhauer, S.R. Physiological preparedness during unpredictable foreperiods: Preparing the heart, eye, and brain. Society for Psychophysiological Research, Falmouth, MA, October 15-19, 1997.

- Steinhauer, S.R., Hendrickson, R, Morrow, L.A., and Condray, R. Multiple Personality Disorder: A cognitive psychophysiology case study. Society for Research on Psychopathology, Palm Springs, October 23-26, 1997.
- Hill, S.Y., Locke, J., Steinhauer, S., Shen, S. Longitudinal analysis of P300 across childhood and adolescent in high and low-risk individuals. American College of Neuropsychopharmacology, Los Croabas, Puerto Rico, December 14-19, 1998.
- Locke, J., Hill, S.Y., Steinhauer, S. Absence of visual and auditory P300 reduction in non-depressed adult male and female alcoholics. American College of Neuropsychopharmacology, Los Croabas, Puerto Rico, December 14-19, 1998.
- Lowers, L., Hill, S.Y., Muka, D., Locke, J., Steinhauer, S. Distinguishing genetic versus prenatal effects in offspring of alcoholics. American College of Neuropsychopharmacology, Los Croabas, Puerto Rico, December 14-19, 1998.
- Steinhauer, S.R., Condray, R., Kasperek, A., and Dougherty, G.G., Jr. Task relevancy and motor contributions to pupillary dilation are dissociated in the sympathetic and parasympathetic pathways. Society for Psychophysiological Research, Denver, September 23-27, 1998.
- Steinhauer, S.R., Condray, R., Kasperek, A., and van Kammen, D.P. Cognitive modulation of midbrain function: Task-related inhibition of the pupillary light reflex. Society for Psychophysiological Research, Denver, September 23-27, 1998.
- Steinhauer, S.R., Morrow, L.A., and Condray, R. Impaired respiratory sinus arrhythmia in patients with anxiety or toxic solvent exposure. Society for Psychophysiological Research, Denver, September 23-27, 1998.
- Locke J, Hill SY, Steinhauer S: Absence of visual and auditory P300 reduction in non-depressed adult male and female alcoholics. American College of Neuropsychopharmacology, Los Croabas, Puerto Rico, December 14-19, 1998.
- Lowers L, Hill SY, Muka D, Locke J, Steinhauer S: Distinguishing genetic versus prenatal effects in offspring of alcoholics. American College of Neuropsychopharmacology, Los Croabas, Puerto Rico, December 14-19, 1998.
- Hill S.Y., Locke J, Steinhauer S., Shen S.: Longitudinal analysis of P300 across childhood and adolescent in high and low-risk individuals. American College of Neuropsychopharmacology, Los Croabas, Puerto Rico, December 14-19, 1998.
- Condray, R., Steinhauer, S.R., van Kammen, D.P., and Kasperek, A. Capacity constrains comprehension in schizophrenia. Society for Research on Psychopathology, Boston, November 12-15, 1998.
- Steinhauer, S.R., Condray, R., Kasperek, A., and Dougherty, G.G., Jr. Sympathetic and parasympathetic contributions to motor-related pupillary dilation: Dissociation by illumination and pharmacological blockade. 23rd Colloquium on the Pupil, Nottingham, Aug. 10-14, 1999.
- Steinhauer, S.R., Condray, R., and Kasperek, A. Inhibition of the pupillary light reflex by cognitive activation. 23rd Colloquium on the Pupil, Nottingham, Aug. 10-14, 1999.

- Frazier, T.W., Strauss, M.E., and Steinhauer, S.R. Vagal tone as an index of emotional response. Society for Psychophysiological Research, San Diego, October 18-22, 2000.
- Siegle, G.J., and Steinhauer, S.R. Pupillary and reaction-time assessment of interference of emotional and nonemotional information on subsequent processing. Society for Psychophysiological Research, San Diego, October 18-22, 2000.
- Steinhauer, S.R., symposium co-chair. In the mind's eye: A view through the pupil at cognition in psychopathology. Society for Psychophysiological Research, San Diego, October 18-22, 2000.
- Steinhauer, S.R., and Condray, R. Mechanisms of cognitive modulation in schizophrenia as determined by pupillary motility. Society for Psychophysiological Research, San Diego, October 18-22, 2000.
- Steinhauer, S.R., Condray, R., and Kasperek, A. Inhibition of the pupillary light reaction by cognitive activity: Evidence for dual parasympathetic components. Society for Psychophysiological Research, San Diego, October 18-22, 2000.
- Steinhauer, S.R., Condray, R., Kasperek, A. and Siegle, G.J. Pharmacological dissociation of autonomic pathways contributing to pupillary dilation following motor activity. Society for Psychophysiological Research, San Diego, October 18-22, 2000.
- Condray, R., Morrow, L., Steinhauer, S.R., Hodgson, M., and Kelley, M. Mood and behavioral symptoms in individuals with chronic low level solvent exposure. Society for Research in Psychopathology, Boulder, Colorado, November 30-December 1, 2000.
- Siegle, G. J., Carter, C. S., Steinhauer, S.R., Thase, M.E. Pupillary and fMRI correlates of depressive rumination. In C. Papageorgiou (Chair). Current Trends in Rumination and Depression. World Congress of Behavior Therapy, Vancouver, BC, June, 2001.
- Siegle, G.J., Steinhauer, S.R., Thase, M.E., and Carter, C.S. Can't shake that feeling: Pupillary and fMRI assessment of sustained processing in response to emotional information in depressed individuals. 24th Colloquium on the Pupil, Pacific Grove, CA, September 7-11, 2001.
- Steinhauer, S.R., Kasperek, A., Condray, R. and Siegle, G.J. Dilation of the pupil via sympathetic and parasympathetic pathways during a continuous processing task. 24th Colloquium on the Pupil, Pacific Grove, CA, September 7-11, 2001.
- Siegle, G.J., Steinhauer, S.R., Thase, M.E., and Carter, C.S. Sustained pupillary and amygdala activity in response to emotional information in depressed individuals. Society for Psychophysiological Research, Montreal, October 10-14, 2001.
- Steinhauer, S.R., Kasperek, A., Condray, R. and Siegle, G.J. Pathways contributing to pupillary dilation during sustained processing. Society for Psychophysiological Research, Montreal, October 10-14, 2001.
- Condray, R., Steinhauer, S.R., Cohen, J.D., van Kammen, D.P., and Kasperek, A. Automatic activation in schizophrenia: N400 elicited by short ISIs. Society of Biological Psychiatry, Philadelphia, May 16-18, 2002.

- Steinhauer, S.R., Siegle, G.J., Condray, R., Carter, C.C., and Thase, M.E. Pupillary dilation, cognition, and psychiatric disorder: Insights to brain function. 11<sup>th</sup> World Congress of Psychophysiology, Montreal, July 29-August 3, 2002.
- Steinhauer, S.E. and Condray, R. Event-related potential indices of cognitive processing and familial risk for schizophrenia-spectrum disorder. EEG and Clinical Neuroscience Society, Baltimore, September 11-14, 2002.
- Steinhauer, S.R. Co-chairperson. Symposium: Electrophysiological markers of vulnerability to psychiatric disorders. EEG and Clinical Neuroscience Society, Baltimore, September 11-14, 2002.
- Barnett, B.E., Glanz, L., Steinhauer, S.R., and Haas, G. L. Reasons for living, hopelessness and suicidal ideation in schizophrenia. Society for Research in Psychopathology, San Francisco, Sept. 26-29, 2002.
- Condray, R., and Steinhauer, S.R. The time course of word frequency and semantic context effects during incidental priming: an ERP study. Society for Psychophysiological Research, Washington, D.C., October 2-6, 2002.
- Fung, M.T., Adrian Raine, A., Lynam, D.R., Steinhauer, S.R., Loeber, R., and Stouthamer-Loeber, M. Reduced anticipatory and reactive skin conductance: Evidence for an adolescent analogue of psychopathy. Society for Psychophysiological Research, Washington, D.C., October 2-6, 2002.
- Siegle, G., Steinhauer, S., Konecky, R., Thase, M., and Carter, C. Who's on last: Sustained resource allocation in emotional and non-emotional processing in depressed and never-depressed individuals. Society for Psychophysiological Research, Washington, D.C., October 2-6, 2002.
- Siegle, G.J., Moore, P., Steinhauer, S. R., Thase, M.E., Henderson, R., and Carter, C.S. Rumination and the Brain: fMRI correlates of self-reported rumination in individuals with depression, anxiety, and Systemic Lupus Erythematosus, In N. Christenfeld (Chair). Rumination, forgiveness, and the impact of thoughts on health. Meeting of the Society of Behavioral Medicine, Washington, D.C. Annals of Behavioral Medicine, 24, S194, 2002.
- Siegle, G. J., Konecky, R. O., Steinhauer, S.R., Thase, M.E., Carter, C. S. Relationships between amygdala activity and volume during emotional information processing in depressed and never-depressed individuals: An fMRI investigation, Presentation at the meeting: The Amygdala in Brain Function: Basic and Clinical Approaches, Galveston Texas, 2002.
- Steinhauer, S. R., Siegle, G. J., and Condray, R. Cognitive and motor inhibition of the pupillary light reaction in schizophrenia and alcohol use disorders: Evidence for effortful processing in the parasympathetic pathway. 25th Colloquium on the Pupil, Kolympari, Crete, September 11-14, 2003.
- Siegle, G., Steinhauer, S.R, Thase, M., and Carter, C. Concurrent pupil dilation and fmri assessment: Applications to understanding information processing in healthy and depressed individuals. 25th Colloquium on the Pupil, Kolympari, Crete, September 11-14, 2003.



- Barnett, B.E., Haas, G.L., Steinhauer, S.R., and Mann, J.J. Factor structure of the Beck Scale for Suicide Ideation in depression and schizophrenia spectrum disorders. Society for Research in Psychopathology, Toronto, October 16-19, 2003.
- Steinhauer, S. R., Siegle, G. J., Condray, R., Magee, K.E., Yanuzo, A.D., and Carter, K.N. They try harder: Pupillometric indicators of effortful processing in schizophrenia. Society for Research in Psychopathology, Toronto, October 16-19, 2003.
- Steinhauer, S. R., Condray, R., and Siegle, G. J. Psychophysiological evidence for timing dysfunction in schizophrenia and depression. Society for Research in Psychopathology, Toronto, October 16-19, 2003.
- Carter, K.N., Yanuzo, A.D., Magee, K.E., Barnett, B. E., Condray, R., and Steinhauer, S. R. Structural and diagnostic discrepancies among substance use instruments: Contrasting the MAST, DAST and SCID. Society for Research in Psychopathology, Toronto, October 16-19, 2003.
- Siegle, G., Steinhauer, S.R, Carter, C., and Thase, M. Sustained processing on the Stroop task in depression. Society for Psychophysiological Research, Chicago, October 29- November 2, 2003.
- Siegle, G.J., Steinhauer, S.R., Condray, R., Carter, C.S., Thase, M.E. Rumination in depression: Controlled or Automatic? British Psychological Society, London, England April, 2004.
- Siegle, G., Condray, R., Steinhauer, S.R, Penkrot, V., and Thase, M.E. Sustained high frequency EEG activity in response to emotional information in depression. Cognitive Neuroscience Society, San Francisco, April 18-20, 2004.
- Condray, R., Steinhauer, S. R., and Keshavan, M. Semantic memory function in the schizophrenia spectrum. Society for Biological Psychiatry, New York, April 29-May 1, 2004.
- Steinhauer, S. R., Condray, R., Siegle, G. J., Carter, K.N., and Yanuzo, A.D. Disruption of the temporal course of central inhibition in schizophrenia as reflected by the pupillomotor system. Society for Biological Psychiatry, New York, April 29-May 1, 2004.
- Barnett, B.E., Gaither, M.L., and Steinhauer, S.R. Dialectical behavior therapy skills training and dual diagnosis. Society for Research in Psychopathology, St. Louis, October 7-10, 2004.
- Steinhauer, S.R. Symposium Organizer and Chair, Pupil dilation, psychopathology and development. Society for Psychophysiological Research, Santa Fe, October 21-24, 2004.
- Siegle, G., Silk, J.S., Forbes, E.E., Steinhauer, S.R, Dahl, R.E., Carter, C., and Thase, M. Sustained pupil dilation to emotional information in depression: Developmental and mechanistic considerations. Society for Psychophysiological Research, Santa Fe, October 21-24, 2004.
- Yang, Y., Raine, A., Loeber, R., Steinhauer, S.R., and Lacasse, L. Abnormal EEG responses to an emotional stressor in antisocial adolescents. Society for Psychophysiological Research, Santa Fe, October 21-24, 2004.
- Steinhauer, S. R., Condray, R., Siegle, G. J., and Gurklis, J.A. Cognitive inhibition of the pupillary light reaction in schizophrenia and alcoholism: physiological evidence for effortful processing. International Congress on Schizophrenia Research, Savannah, April 2-6, 2005.

- Steinhauer, S.R., Siegle, G.J., Condray, R., Barnett, B.E., Gurklis, J.A., Jr. Pupil dilation during a sustained processing task implicates intact effortful processing in schizophrenia. 26th Colloquium on the Pupil, Bear Mountain, NY, August 22-26, 2005.
- Siegle, G., Steinhauer, S., and Thase, M. Using pupil dilation and fMRI to predict recovery in Cognitive Behavior Therapy (CBT) for depression. 26th Colloquium on the Pupil, Bear Mountain, NY, August 22-26, 2005.
- Condray, R., Steinhauer, S.R., and Siegle, S. Semantic Memory in Schizophrenia. Society for Psychophysiological Research, Lisbon, September 21-25, 2005.
- Carter, K.N., Boyts, T.K., Jacoby, A., and Steinhauer, S.R. Identifying co-morbid psychiatric problems in alcohol-related disorders. Society for Research in Psychopathology, Coral Gables, October 27-30, 2005.
- Steinhauer, S.R., Siegle, G.J., Condray, R., and Gurklis, J.A., Jr. Pupil dilation during sustained processing: An indicator of intact effortful processing in schizophrenia. 13<sup>th</sup> World Congress of Psychophysiology, Istanbul, August 28- September 2, 2006.
- Condray, R., Steinhauer, S.R., and Siegle, S. Electrophysiology of language comprehension in schizophrenia. EEG and Clinical Neuroscience Society, Boston, September 13-17, 2006.
- Siegle, G., Steinhauer, S., and Thase, M. fMRI correlates of prolonged psychophysiological activity to emotional information. Society for Psychophysiological Research, Vancouver, October 24-28, 2006.
- Condray, R., Siegle, G.J., and Steinhauer, S.R. Language Deficits in Schizophrenia: Mediating Vulnerability Trait. Eighth Biennial Mt. Sinai Conference on Cognition in Schizophrenia, Colorado Springs, CO, March 27-28, 2007.
- Siegle, G., Ichikawa, N. and Steinhauer, S. 27<sup>th</sup> International Colloquium on the Pupil, Hamamatsu, Japan, October 1-5, 2007.
- Chakraborty, B.H., Clarke, A.L., and Steinhauer, S.R. Reporting of minority representation in schizophrenia and psychophysiological research: Improving but still not adequate. Society for Research in Psychopathology, Pittsburgh, Sept. 25-28, 2008.
- Siegle, G.J., Thompson, W.S., Steinhauer, S., Zhou, D., and Friedman, E. Emotion/cognition interactions: added clinical utility of just the sum of their parts. Austin, Society for Psychophysiological Research, October 1-5, 2008.
- Siegle, G.J., Steinhauer, S., Carter, C.S., Thase, M.E., Segal, Z.V. Cognitive Therapy Relapse, Prevention Trial (CTRP): Early Findings. Association for Behavioral and Cognitive Therapies, Orlando, November 13-16, 2008.
- Condray, R., Steinhauer, S.R., Siegle, G.J., Keshavan, M.S., Montrose, D.M., Beatrice Chakraborty, B. Effects of word frequency on semantic memory in schizophrenia. International Congress on Schizophrenia Research, San Diego, CA, March 28 - April 1, 2009.
- Condray, R., Steinhauer, S.R., Siegle, G.J. Semantic memory in schizophrenia: Deficit in semantic access or storage? Fifteenth International Congress on Event-Related Potentials of the Brain, Bloomington, IN, April 22 -25, 2009.

- Chakraborty, B.H., Siegle, G.J., Condray, R., Clarke, A.L., and Steinhauer, S.R. Pupillary responses during digit span under light and darkness in psychiatric patients. 28<sup>th</sup> International Colloquium on the Pupil, Champion, PA, August 17-21, 2009.
- Jain, S., Siegle, G.J., Studenski, S., Greenamyre, J.T., and Steinhauer, S.R. Sympathetic, parasympathetic and medication effects on pupil reactivity to light in Parkinson disease. 28<sup>th</sup> International Colloquium on the Pupil, Champion, PA, August 17-21, 2009.
- Steinhauer, S.R., Siegle, G.J., and Condray, R. Working memory and pupillary dilation: Impairments in schizophrenia, depression, and alcohol-related disorders. 28<sup>th</sup> International Colloquium on the Pupil, Champion, PA, August 17-21, 2009.
- Chakraborty, B.H., Siegle, G.J., Condray, R., Clarke, A.L., and Steinhauer, S.R. Pupillary responses during digit span under light and darkness in psychiatric patients. 28<sup>th</sup> International Colloquium on the Pupil. Champion, PA, August 17-21, 2009.
- Steinhauer, S.R., Siegle, G.J., Condray, R., Chakraborty, B.H., and Clarke, A.L. Pupillary dilation indices of working memory dysfunction reflect greater impairment for schizophrenia than for depression or alcohol use disorders. American College of Neuropsychopharmacology, Hollywood, FL, December 6-10, 2009.
- Chakraborty, B.H., Siegle, G.J., Condray, R., Clarke, A.L., and Steinhauer, S.R. Influence of parasympathetic and sympathetic activity on pupillary dilation elicited during the digit span task. International Neuropsychological Society, Acapulco, February 3-7, 2010.
- Steinhauer, S.R., Siegle, G.J., Condray, R., Chakraborty, B.H., and Clarke, A.L. Working memory deficits in schizophrenia are reflected by deficits in pupillary dilation. 15<sup>th</sup> World Congress on Psychophysiology, Budapest, September 1-4, 2010.
- Chakraborty, B.H., Siegle, G.J., Condray, R., Clarke, A.L., Sheppard, J.C., and Steinhauer, S.R. Pupillary responses during digit span under light and darkness in psychiatric patients. Society for Psychophysiological Research, Portland, OR, September 29-October 3, 2010.
- Condray, R., Siegle, G.J., and Steinhauer, S.R. Semantic memory and word frequency modulate N400 in the family members of schizophrenia patients. Society for Psychophysiological Research, Portland, OR, September 29-October 3, 2010.
- Steinhauer, S.R., Clarke, A.L., Siegle, G.J., Condray, R., and Chakraborty, B.H. (2010). Reduced pupillary oscillations in schizophrenia and depression suggest central parasympathetic deficit. Society for Psychophysiological Research, Portland, OR, September 29-October 3, 2010.
- Kelly, E.E., Condray, R., Chakraborty, B.H., Clarke, A.L., Siegle, G.S., and Steinhauer, S.R. Interpersonal dimensions of personality disorders among patients with Axis I disorders. Society for Research in Psychopathology, Ann Arbor, October 4-7, 2012.
- Martin, E.L., Condray, R., Steinhauer, S.R., Keshavan, M., Siegle, G. Aberrant elaborative Processing of positive stimuli in schizophrenia: Evidence from Gamma band EEG. Society for Research in Psychopathology, Evanston, September 18-21, 2015.
- Martin, E.L., Siegle, G., Steinhauer, S.R., Keshavan, M., Condray, R. Timing matters in elaborative processing of positive stimuli: Differences in Gamma band activity between a schizophrenia,

depression and healthy comparison group. Society for Research in Psychopathology, Baltimore, September 29-October 2, 2016.

Steinhauer, S.R., Siegle, G.J., Condray, R., Clarke, A.L., and Chakraborty, B.H. Reduction in pupillary oscillations indicate impairment of central parasympathetic function in schizophrenia and depression. 32<sup>nd</sup> International Colloquium on the Pupil, Morges, Switzerland, Sept. 6-9, 2017.

Forster, S., Ortiz, A., Forman, S. and Steinhauer S. (2018). Spontaneous blink rate as a prognostic marker of contingency management treatment response: A pilot study. Society for Research in Psychopathology, Indianapolis, Sept. 20-23, 2018.

#### Other Invited Lectures

Steinhauer, S.R. Cognitive psychophysiology of schizophrenia. Grand Rounds, Dept. of Psychiatry and Behavioral Sciences, New York Medical College, February 17-18, 1994.

Steinhauer, S.R. Cognitive psychophysiology: Applications to neuropsychiatry. Grand Rounds, Dept. of Psychiatry, Hadassah Hospital of Hebrew University, Jerusalem, October 25, 1994.

Steinhauer, S.R. Visiting Neuroscientist, Division of Neuroscience, University of Edmonton, Alberta, and Alberta Hospital Edmonton, Canada, May 15-19, 1996.

Steinhauer, S.R. Grand Rounds, New Jersey Neuroscience Institute, JFK Medical Center, Edison, N.J., May 6, 1998.

Steinhauer, S.R. Ethical Considerations in Psychological Research. Invited Lecture, VA Symposium on Ethical Considerations in Psychology, July 26, 2001.

Steinhauer, S.R. Windows on brain and thought in schizophrenia. Mental Illness Research, Education and Clinical Center, VA Pittsburgh Healthcare System, March 30, 2006.

Steinhauer, S.R. Psychophysiology of Cognitive and Emotional Processes in Schizophrenia and Depression. Department of Psychology, University of Nevada at Las Vegas, October 10, 2006.  
Marchak, F., and Steinhauer, S.R. Fundamentals of pupillary measures and eye tracking (Day-long workshop), Society for Psychophysiological Research, Boston, Sept. 14, 2011.

Steinhauer, S.R. Neurophysiology of Schizophrenia: Its salience to the diagnosis, treatment and prognosis of schizophrenia. Invited Lecture, 28<sup>th</sup> Annual Pittsburgh Schizophrenia Conference, Pittsburgh, Dec. 8, 2011

#### Teaching

Recurring: At University of Pittsburgh, participation in first year medical student psychiatry module. Present seminars to medical students, psychiatry residents and staff in Department of Psychiatry, and seminars to Department of Psychology, and to the NIMH Undergraduate Scholars Program at WPIC. Participation in MS-1 medical school training for Psychiatry.

Recurring: At Highland Drive VAMC, teach section on Psychology Internship rotation related to research issues and future professional development. Present seminars to ward personnel and

specific departments (e.g., Psychology Service, Social Work Service), to Psychology interns and nursing classes.

Queens College, CUNY: Instructor for courses in General Psychology for eight semesters, teaching assistant for Statistics in the Behavioral Sciences. Supervised and trained graduate students at Queens College in the Pupillography Laboratory, both at Queens College and at the Biometrics Research Laboratories then located at Kingsborough Psychiatric Center.

Richmond College, CUNY: Laboratory and lecture courses in Learning- Experimental Psychology.

C.W. Post Center, L.I.U.: Introductory Psychology

University of Pittsburgh, Department of Psychology: Graduate Seminar in Experimental Psychopathology, Fall, 1983. Supervision and service on dissertation committee (Dr. John Watson), 1986-87.

University of Pittsburgh, Department of Pharmaceutical Sciences, Supervision and service on dissertation committee (Dr. Marci Chew), 2006-2007.

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## RESEARCH GRANTS

### Funding History

Co-Principal Investigator (Joseph Zubin, Ph.D., PI): "Vulnerability to Episodes of Functional Psychoses." Veterans Administration Medical Research Service, 4/77-9/85, Total Direct Costs: \$362,501.

Principal Investigator: "Visuo-spatial representation of cortical electrophysiological topography." Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Clinical Research Center Project: 3/83-12/84, Total Direct Costs: \$5730

Co-Investigator (Joseph Zubin, Ph.D., PI): "Reducing Recidivism in Schizophrenia," Veterans Administration Health Services Research and Development - 1/83-12/86, Total Direct Costs: \$396,000.

Co-Investigator, NIAAA #R01 AA5909-01, "Cognitive/Personality factors in relatives of alcoholics," (Shirley Y. Hill, Ph.D., PI), 1/84-12/86, Total Direct Costs: \$306,160; 1/87-12/90, TDC: \$995,827.

Co-Principal Investigator: "Psychobiological indicators in schizophrenics and their siblings," Veterans Administration Medical Research Service, 1/86-4/88, Total Direct Costs: \$236,439.

Principal Investigator: NIMH #1-R29-MH43615-01, "Vulnerability to schizophrenia: Neurobehavioral aspects," 9/30/87-9/29/91, Total Direct Costs: \$349,832. Psychophysiological and behavioral markers in relatives of schizophrenics.

Principal Investigator: Dept. of Veterans Affairs Medical Research, "Psychophysiological aspects of schizophrenia," 4/88-3/92 (Joseph Zubin, Ph.D., Co-PI). Total Direct Costs: \$360,000.

Co-Principal Investigator (with Lisa Morrow, Ph.D., Co-PI): NIMH, "Solvents: Neurobehavioral and Neurophysiological Sequelae," 5/92-4/95, Total Direct Costs: \$498,998.

Co-Investigator (Gerald Goldstein, PI): Veterans Administration Medical Research Service, "Gulf War Study" (neuropsychological and neurophysiological evaluation of Gulf War Veterans). 4/94-3/96, Total Direct Costs: \$50,000.

Core Faculty Member: National Science Foundation Training Grant, "Neural Processing in Cognition." 9/90-8/95, (Walter Schneider, Ph.D., G. Bard Ermentrout, Ph.D., and Daniel J. Simons, Ph.D., Co-Principal Investigators). Total Direct Costs: \$1,458,222.

Core Member (Robert Moore, M.D., PI): NIMH, "Center for Functional Brain Imaging." 9/30/92-8/31/97, Total Direct Costs: \$1,218,677.

Co-Investigator (Ruth Condray, Ph.D., PI): NIMH, "Language Processes in Schizophrenia and SPD," 5/1/93-4/30/97, Total Direct Costs \$279,999.

Co-Investigator (Adrian Raine, PI): NIMH, "Social and Physiological Factors for Violence." 10/94-9/98, Total Direct Costs: \$619,247.

Co-Principal Investigator (with Lisa Morrow, Ph.D., Co-PI): NIMH, "Neuropsychiatric Changes in Adults Exposed to Solvents." 8/1/95-7/31/2000; TDC \$691,342.

Co-Investigator (Ruth Condray, Ph.D., PI): NIMH, "Neurocognitive Boundaries of the Schizophrenia Spectrum." 7/1/98-6/30/03 (no cost extension to 6/04). Total Direct Costs: \$890,000.

Principal Investigator: "Utility of Structured Checklists in Identifying Co-Morbid Psychiatric Problems in Alcohol-Related Disorders," VA MIRECC-CEDPSGP, 8/2004-12-2005, TDC \$5,000.

Principal Investigator: Dept. of Veterans Affairs, "Neurocognitive and Affective Components of Schizophrenia." 10/04-10/09, TDC \$796,000.

Previous years funded: 4/01-4/04, TDC: \$368,000;

Local Site Co-PI: Department of Veterans Affairs Cooperative Study #572 (PIs: Siever, Harvey, Concato, Gaziano; Local Site PI: Haas), "Genetics of Functional Disability in Schizophrenia and Bipolar Illness." 5/1/2010-4/30/2012. This study involves evaluation of 9000 schizophrenia and 9000 bipolar patients at approximately 25 VA sites. Blood samples for genetic analysis, a cognitive and demographic battery, and diagnostic information will be compiled and provide an essential resource for examining genetic bases of functional outcome.

Principal Investigator: NIMH R01 55762-08, "Components of Pupillary Dilation and Cognition." 3/2006-2/2012, Total Direct Costs: \$1,291,781. Previous Years 1/97-12/99, Total Direct Costs: \$289,000; 1/00-12/05, TDC \$592,582.

Co-Investigator (Steven Forman, PI): Dept. of Veterans Affairs Rehabilitation R&D Service Project #B5026-R, "Targeted Transcranial Magnetic Stimulation to Decreased Food Craving."

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#### OTHER ACTIVITIES

**Extra-Mural Review:**

2013-2021: VA Mental Health Merit Review Board MHBA/MHBB  
2013-2014: NIH ZRG1 BDCN(55)R SIDS and BRAIN - Chairperson  
NIH ZRG1 BDCN2 Special Emphasis Panel, Feb 2008-present  
(Co-Chair, Feb. 2009; Chair, June 2009,)  
NIH ERB Center Review, June 2008, March 2009  
NIH Neural Basis of Psychopathology, Addictions and Sleep Disorders Study  
Section, 2001 – 2007 (formerly Brain Disorders & Clinical Neuroscience 6)  
NIMH Special Projects Committee reviewer, 1993  
NIMH Clinical Neuroscience and Biological Psychopathology Committee  
Ad Hoc Reviewer, 1994-95  
NIMH Special Review site visitor  
NIDA RFA Special RFA Study Section, August, 2004  
NIH Biological Disorders and Clinical Neuroscience Committee SEP, February, 2008  
Reviewer, Alzheimers Association, 2007, 2008

**External Reviews for:**

NIMH (CNBP and BStart)  
Dept. of Veterans Affairs Merit Review Board  
Dept. of Veterans Affairs Research Advisory Group  
Dept. of Veterans Affairs Eastern R&D Office reviewer  
Dept. of Veterans Affairs VISN 4 CPPF

**Editorial Review:**

Editorial Board, International Journal of Psychophysiology (1992-2011)  
Editorial Board, Neuropsychology Review (1990-1996)  
Editorial Board, Frontiers in Human Neuroscience (2009-present)

**Ad hoc reviewer for:**

Alcoholism: Clinical and Experimental Research  
American Journal of Psychiatry  
Archives of General Psychiatry  
Autonomic Neuroscience  
Biological Psychiatry  
Biological Psychology  
Biomarker Insights  
Bipolar Disorders  
Brain and Behavioral Sciences  
Brain Research  
Clinical Autonomic Research  
Clinical EEG and Neuroscience  
Cognitive, Affective & Behavioral Neuroscience  
Contemporary Psychology  
Ear and Hearing  
Health Psychology  
International Journal of Psychophysiology  
Journal of Abnormal Psychology  
Journal of Autism and Developmental Disorders

Journal of Gerontology  
Journal of NeuroEngineering and Rehabilitation  
Journal of Neural Transmission  
Journal of Psychophysiology  
Perceptual and Motor Skills  
Psychological Bulletin  
Psychological Reports  
Psychological Review  
Psychopharmacology  
Psychophysiology  
Psychiatry and Clinical Neurosciences  
Scandinavian Journal of Work and Environmental Health  
Schizophrenia Bulletin  
Schizophrenia Research  
Sleep  
Social Neuroscience  
Vision Research

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#### SERVICE

Department of Veterans Affairs, VA Pittsburgh Healthcare System:

Research Financial Conflict of Interest Officer, 2014-2016  
Research Scientific Evaluation Committee, 2003-present  
(Chairperson, 2005-2012; 2014-present)  
Research and Development Committee, 1977-8/97; 7/98-8/2001; 2014-present;  
Chairperson, 2000-2001)  
IRB1, 2014-present  
IRB2 (Formerly: Research Compliance Committee, 2001-2010), 2014-present  
(Chairperson, 2001-2002; 2008-2010)

Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine:

Research Committee (1988-present)  
Clinical Research Center Seed Committee (1989-1995)  
Psychology Discipline Committee (1990-1992)  
Reviewer, Research Committee and CRC Seed Committee

Society for Research in Psychopathology

Executive Board, 1986-1992  
Archivist, 2002-2013

Society for Psychophysiological Research

Program Committee, 2001; Bylaws Committee, 2004-2006

11<sup>th</sup>-17<sup>th</sup> World Congress of Psychophysiology, Organizing Committees, 2001-2014