

# Stanford

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## Judith Ford

Professor (Research) of Psychiatry and Behavioral Sciences, Emeritus

### Bio

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#### ACADEMIC APPOINTMENTS

- Emeritus Faculty-Med Ctr Line, Psychiatry and Behavioral Sciences

### Research & Scholarship

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#### CURRENT RESEARCH AND SCHOLARLY INTERESTS

I work with event-related brain potentials (ERPs), a functional brain imaging tool, giving millisecond to millisecond temporal information about sensory and cognitive processes. Recently, I have been combining functional Magnetic Resonance Imaging (fMRI) techniques with ERP data to provide high spatial resolution information about cortical sources of the various components of the ERP. ERPs enable assessment of cognition even in the absence of overt behavior, making them an ideal tool for understanding clinical groups in whom responses are unreliable or difficult to acquire. To understand how patients with schizophrenia experience auditory hallucinations, we are using fMRI and ERPs to probe the brain during periods with and without hallucinations. To understand the role of self-monitoring deficits in symptoms of schizophrenia, we are using ERP paradigms that elicit a negative wave in normal subjects when they realize they have made a mistake.

### Publications

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#### PUBLICATIONS

- **Function biomedical informatics research network recommendations for prospective multicenter functional MRI studies** *JOURNAL OF MAGNETIC RESONANCE IMAGING*  
Glover, G. H., Mueller, B. A., Turner, J. A., van Erp, T. G., Liu, T. T., Greve, D. N., Voyvodic, J. T., Rasmussen, J., Brown, G. G., Keator, D. B., Calhoun, V. D., Lee, H. J., Ford, et al  
2012; 36 (1): 39-54
- **Out-of-synch and out-of-sorts: Dysfunction of motor-sensory communication in schizophrenia** *BIOLOGICAL PSYCHIATRY*  
Ford, J. M., Roach, B. J., Faustman, W. O., Mathalon, D. H.  
2008; 63 (8): 736-743
- **Fine-tuning of auditory cortex during speech production** *PSYCHOPHYSIOLOGY*  
Heinks-Maldonado, T. H., Mathalon, D. H., Gray, M., Ford, J. M.  
2005; 42 (2): 180-190
- **Acquiring and inhibiting prepotent responses in schizophrenia - Event-related brain potentials and functional magnetic resonance imaging** *ARCHIVES OF GENERAL PSYCHIATRY*  
Ford, J. M., Gray, M., Whitfield, S. L., Turken, A. U., Glover, G., Faustman, W. O., Mathalon, D. H.  
2004; 61 (2): 119-129
- **Electrophysiological evidence of corollary discharge dysfunction in schizophrenia during talking and thinking** *Conference on Non Schizophrenic Psychoses*  
Ford, J. M., Mathalon, D. H.  
PERGAMON-ELSEVIER SCIENCE LTD.2004: 37-46
- **Are impairments of action monitoring and executive control true dissociative dysfunctions in patients with schizophrenia?** *AMERICAN JOURNAL OF PSYCHIATRY*  
Turken, U., Vuilleumier, P., Mathalon, D. H., Swick, D., Ford, J. M.

2003; 160 (10): 1881-1883

- **Reduced communication between frontal and temporal lobes during talking in schizophrenia** *BIOLOGICAL PSYCHIATRY*  
Ford, J. M., Mathalon, D. H., Whitfield, S., Faustman, W. O., Roth, W. T.  
2002; 51 (6): 485-492
- **Neurophysiological evidence of corollary discharge dysfunction in schizophrenia** *AMERICAN JOURNAL OF PSYCHIATRY*  
Ford, J. M., Mathalon, D. H., Heinks, T., Kalba, S., Faustman, W. O., Roth, W. T.  
2001; 158 (12): 2069-2071
- **Cortical responsiveness during inner speech in schizophrenia: An event-related potential study** *AMERICAN JOURNAL OF PSYCHIATRY*  
Ford, J. M., Mathalon, D. H., Kalba, S., Whitfield, S., Faustman, W. O., Roth, W. T.  
2001; 158 (11): 1914-1916
- **Cortical responsiveness during talking and listening in schizophrenia: An event-related brain potential study** *BIOLOGICAL PSYCHIATRY*  
Ford, J. M., Mathalon, D. H., Kalba, S., Whitfield, S., Faustman, W. O., Roth, W. T.  
2001; 50 (7): 540-549
- **N1 and P300 abnormalities in patients with schizophrenia epilepsy, and epilepsy with schizophrenialike features** *55th Annual Meeting of the Society-of-Biological-Psychiatry*  
Ford, J. M., Mathalon, D. H., Kalba, S., Marsh, L., Pfefferbaum, A.  
ELSEVIER SCIENCE INC.2001: 848-60
- **Event-related brain potential evidence of spared knowledge in Alzheimer's disease** *PSYCHOLOGY AND AGING*  
Ford, J. M., Askari, N., Gabrieli, J. D., Mathalon, D. H., Tinklenberg, J. R., Menon, V., Yesavage, J.  
2001; 16 (1): 161-176
- **Left temporal deficit of P300 in patients with schizophrenia: effects of task** *INTERNATIONAL JOURNAL OF PSYCHOPHYSIOLOGY*  
Ford, J. M., Mathalon, D. H., White, P. M., Pfefferbaum, A.  
2000; 38 (1): 71-79
- **Trait and state aspects of P300 amplitude reduction in schizophrenia: A retrospective longitudinal study** *BIOLOGICAL PSYCHIATRY*  
Mathalon, D. H., Ford, J. M., Pfefferbaum, A.  
2000; 47 (5): 434-449
- **Schizophrenia: The broken P300 and beyond** *PSYCHOPHYSIOLOGY*  
Ford, J. M.  
1999; 36 (6): 667-682
- **P300 amplitude is related to clinical state in severely and moderately ill patients with schizophrenia** *Meeting of the Biological-Psychiatry-Society*  
Ford, J. M., Mathalon, D. H., Marsh, L., Faustman, W. O., Harris, D., Hoff, A. L., Beal, M., Pfefferbaum, A.  
ELSEVIER SCIENCE INC.1999: 94-101
- **Failures of automatic and strategic processing in schizophrenia: comparisons of event-related brain potential and startle blink modification** *SCHIZOPHRENIA RESEARCH*  
Ford, J. M., Roth, W. T., Menon, V., Pfefferbaum, A.  
1999; 37 (2): 149-163
- **P300 amplitude is related to clinical state in severely and moderately ill schizophrenics.** *Biological Psychiatry*  
Ford, J., Mathalon, D., Marsh, L., Faustman, W O, Harris, D, Hoff, AL, Beal, DM, Pfefferbaum, A  
1999: 46: 94-101
- **Combined event-related fMRI and EEG evidence for temporal-parietal cortex activation during target detection** *NEUROREPORT*  
Menon, V., Ford, J. M., Lim, K. O., Glover, G. H., Pfefferbaum, A.  
1997; 8 (14): 3029-3037
- **Automatic and effortful processing in aging and dementia: Event-related brain potentials** *NEUROBIOLOGY OF AGING*  
Ford, J. M., Roth, W. T., Isaacs, B. G., Tinklenberg, J. R., Yesavage, J., Pfefferbaum, A.  
1997; 18 (2): 169-180

- **ELDERLY MEN AND WOMEN ARE LESS RESPONSIVE TO STARTLING NOISES - N1, P3 AND BLINK EVIDENCE** *Annual Meeting of the Society-for-Psychophysiological-Research*  
Ford, J. M., Roth, W. T., Isaacks, B. G., White, P. M., Hood, S. H., Pfefferbaum, A.  
ELSEVIER SCIENCE BV.1995: 57-80
- **THE RELATIONSHIP BETWEEN P300 AMPLITUDE AND REGIONAL GRAY-MATTER VOLUMES DEPENDS UPON THE ATTENTIONAL SYSTEM ENGAGED** *ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Ford, J. M., SULLIVAN, E. V., Marsh, L., White, P. M., Lim, K. O., Pfefferbaum, A.  
1994; 90 (3): 214-228
- **SCHIZOPHRENICS HAVE FEWER AND SMALLER P300S - A SINGLE-TRIAL ANALYSIS** *BIOLOGICAL PSYCHIATRY*  
Ford, J. M., White, P., Lim, K. O., Pfefferbaum, A.  
1994; 35 (2): 96-103
- **EVENT-RELATED POTENTIALS IN ALCOHOLIC MEN - P3-AMPLITUDE REFLECTS FAMILY HISTORY BUT NOT ALCOHOL-CONSUMPTION** *ALCOHOLISM-CLINICAL AND EXPERIMENTAL RESEARCH*  
Pfefferbaum, A., Ford, J. M., White, P. M., Mathalon, D.  
1991; 15 (5): 839-850
- **EVENT-RELATED POTENTIALS AND EYEBLINK RESPONSES IN AUTOMATIC AND CONTROLLED PROCESSING - EFFECTS OF AGE** *ELECTROENCEPHALOGRAPHY AND CLINICAL NEUROPHYSIOLOGY*  
Ford, J. M., Pfefferbaum, A.  
1991; 78 (5): 361-377
- **ERPS AND BRAIN STRUCTURE - RELATIONSHIPS ACROSS THE ADULT AGE SPAN IN ALCOHOLICS AND IN A PATIENT WITH HERPES-SIMPLEX ENCEPHALITIS** *INTERNATIONAL CONF ON EVENT-RELATED POTENTIALS ( EPIC IX )*  
Ford, J. M., Rosenbloom, M. J., SULLIVAN, E. V., Pfefferbaum, A.  
ELSEVIER IRELAND LTD.1991: 342-354