

Thomas G. Fikes

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OBJECTIVE

I do consulting and contract work in behavioral sciences that allows me to creatively use and extend my skills in computer programming, experimental design and analysis, communication, and leadership. My areas of expertise include cognitive and perceptual psychology, social/cultural psychology, and psychophysiology, and can develop web-based or lab-based (e.g., MATLAB) applications for a variety of experiments. Much of my current development work is in economic games and implicit social cognition, and in quantitative EEG collection and analysis. I regularly collaborate with a number of colleagues to lead workshops and do tutorials on a variety of topics and methods in experimental, social, and cultural psychology.

PROFESSIONAL ACCOMPLISHMENTS

- **Teaching, communication, and leadership.** As Professor of Psychology and Neuroscience, I have developed and taught undergraduate courses and laboratories across the fields experimental psychology and neuroscience. I have won institution-wide awards for my teaching, and enjoyed a strong reputation amongst colleagues and students. I served as vice chair of the faculty (the highest elected administrated position for faculty), being elected to a second term. I have also consulted on the neuroscience and psychology of leadership. I am organized, with strong written and oral communication skills, and effectively led the psychology department as chair for 7 years, including strategic planning, program assessment, multiple staff and faculty hires, and a major institution-wide reaccreditation review.
- **Laboratory development and management.** I developed rigorous and popular teaching laboratories in behavioral neuroscience, computer programming in psychology; sensory systems, and experimental psychology. My own research laboratory in electroencephalography and other psychophysiological methods has focused on motor control and social/cultural neuroscience, and I have placed students in the country's top graduate programs. I have strong technical skills at all levels, and I work well within a team and as a manager.
- **Computer programming for behavioral science.** My computer skills are strong, encompassing data collection (lab-based, web-based, purpose-built instrument- and human-computer- interfaces); computational modeling, especially for nonlinear dynamical systems; data analysis (signal processing for neurophysiological and psychophysiological data; ANOVA-based analyses, including multiple comparison solutions and planned comparisons; regression-based analyses, including moderation and mediation). My preferred programming language is MATLAB, but I regularly code and develop in other languages as the tasks require.

PROFESSIONAL EXPERIENCE

Professor of Psychology and Neuroscience, Department of Psychology, Westmont College
September, 2006 – August, 2014.
September, 2000 – August, 2006. (Associate Professor of Psychology)
September, 1998 - August, 2000. (Assistant Professor of Psychology)

Visiting Assistant Professor, Department of Psychology, University of California, Santa Barbara. National Science Foundation Research Opportunity Award to work with Principle Investigator F. G. Ashby on Perceptual and Cognitive Processes in Identification and Categorization (NSF grant SBR-9514427).
June - August, 1997.

Assistant Professor, Department of Psychology, University of Puget Sound.
September, 1993 – June, 1998.

Postdoctoral Fellow: National Institute of Health Traineeship in Mathematical Modeling, Cognitive Science Program, Indiana University; Prof. James T. Townsend, advisor. (NIH Grant #PHSPR32MH19879-01).
September, 1993 - August, 1994.

Research Assistantship: Roberta Klatzky and Jim Pellegrino, University of California, Santa Barbara. Manual interaction with real objects (Air Force Grant #AFOSR 870230).
September, 1989 - December, 1990.

Research Assistantship: Richard Ivry, University of California, Santa Barbara. Cerebellar involvement in perceptual timing

in rats. (Office of Naval Research).
June, 1990 - September, 1990.

Research Assistantship: Aaron Ettenberg, University of California, Santa Barbara. Development and C-language programming of automatic data acquisition program for rat runways.
June 1991 - August, 1991.

Statistical Consulting: California State University, Fresno and University of California, Santa Barbara.
January, 1988 - June, 1993.

Computer Programming and Consulting: University of California, Santa Barbara and Indiana University.
September, 1989 - August, 1993.

EDUCATION

1993 Ph.D., Psychology (Human Information Processing emphasis), University of California, Santa Barbara; Prof. Roberta L. Klatzky, Advisor.

Dissertation Title: *System Architecture Analysis for Reaching and Grasping* (Committee members R.L. Klatzky (co-chair), F.G. Ashby (co-chair), D. Brainard, G. Jacobs).

1987 B.A., Psychology, Cum Laude, California State University, Fresno; emphases in learning and biopsychology; graduate work in clinical and experimental psychology, hypnosis and memory.

PROFESSIONAL SKILLS

- **Computer programming.** Languages include: Expertise in MATLAB/Octave and Psychtoolbox; some programming in Java, HTML/php, Pascal, C, Netlogo, , Python, SPSS syntax, and others. I have written all of my own data collection and analysis software, and have often consulted for other laboratories at Westmont, at other psychology departments in the United States, and internationally.
- **Teaching and communication.** Courses in behavioral neuroscience, sensation and perception, history and systems of psychology, experimental psychology, computer programming in psychology, general psychology. Developed teaching laboratories in animal and human neuroscience, sensory psychophysics, and general experimental psychology (focusing on laboratory, computer-based social/cultural psychology and implicit, behavioral phenomena).
- **Experimental design, statistics and data analysis.** Very strong skills in univariate and multivariate ANOVA, including planned comparisons and multiple-comparison correction; strong skills in regression-based approaches, including moderation and mediation analysis and design. In psychophysiology, depth and breadth of skill in digital signal processing (spectral analysis, coherence).
- **Psychophysiology and psychophysics.** Expertise in electroencephalography (EEG), particularly in power spectrum, event-related potential, and functional connectivity analyses; other psychophysiological expertise including electromyography, electrocardiology-based heart-rate variability and skin conductance for autonomic nervous system measurement. Expertise in neural and behavioral psychophysics, including signal detection theory, and multivariate approaches for categorization and decision theory.
- **Administration and management.** Department chair, vice-chair of faculty (during which time I lead a restructuring of the academic senate), various standing and ad-hoc committees, multiple hiring committees for faculty and senior administration. Supervised multiple senior research projects and major honors theses, and assisted senior and junior faculty in developing their teaching and research laboratories.
- **Program evaluation, assessment, and strategic planning.** Led psychology department in annual assessment and 6-year program review, as vice chair helped to restructure program review procedures, served for many years on long-range planning and strategic planning committees by presidential invitation and faculty election.

REFERENCES

- Gayle Beebe, President, Westmont College. beebe@westmont.edu
- Brenda Smith, Professor of Psychology, Westmont College. bsmith@westmont.edu
- Elizabeth Franz, Professor of Psychology, University of Otago, NZ lf Franz@otago.ac.nz