OMB No. 0925-0001 and 0925-0002 (Rev. 10/2021 Approved Through 09/30/2024)

BIOGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors.
Follow this format for each person. **DO NOT EXCEED FIVE PAGES.**

NAME: BAUCOM, Brian RW

eRA COMMONS USER NAME (credential, e.g., agency login): baucom

POSITION TITLE: Associate Professor

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

| INSTITUTION AND LOCATION | DEGREE(if applicable) | Completion DateMM/YYYY | FIELD OF STUDY |
| --- | --- | --- | --- |
| Vanderbilt Univ., Nashville, TN | B.S. | 05/2000 | Psychology |
| Vanderbilt, Univ. Nashville, TN | B.S. | 05/2000 | Engineering Science |
| Univ. of California, Los Angeles, Los Angeles, CA | M.A. | 11/2004 | Clinical Psychology |
| Univ. of California, Los Angeles, Los Angeles, CA | Ph.D. | 06/2008 | Clinical Psychology |
| Univ. of Southern California | (Post-doc) | 06/2012 | Clinical Psychology |
|  |  |  |  |

A. Personal Statement

My background is in clinical and quantitative psychology, and I have been conducting basic and applied research on couples and families coping with psychological distress, psychopathology, and chronic health conditions for more than 20 years. I have extensive expertise in conducting basic research and randomized clinical trials involving couples and families as well as conducting the statistical analyses in these studies. My work integrates multiple modalities of assessment including self-report, daily diary, psychophysiological, cognitive performance tasks, observational coding methods, speech signal processing methods (e.g., f0) and natural language processing. This work has been funded by the Department of Defense, National Science Foundation, multiple institutes of the National Institutes of Health, National Institute of Justice, Deutsche Forschungsgemeinschaft e.V (German Science Foundation), the Israeli Science Foundation, and Apple. In addition to conducting research implementing these methods, I have been active in teaching others how to implement these measurement and modeling techniques in their own research having given national and international workshops and taught graduate courses on advanced statistical modeling, and first- or co-authoring numerous manuscripts and chapters on emergent statistical and methodological techniques for complex data including clinical trials. In addition to extramural grants on which I am or was PI, I am currently or have previously been a co-I or consultant on 29 different federal or international government funded and foundation grants, and have also served as an informal methodological and/or statistical consultant for numerous additional projects and manuscripts that employ these and other related data acquisition and statistical methods. Finally, I have substantial experience in conducting multiple-PI/multisite research studies including on-going statistical collaborations with researchers at the University of North Carolina-Chapel Hill, Arizona State University, Duke University, Wesleyan University, the Ohio State University, George Washington University, and the University of Bremen, as well as on-going methodological collaborations with researchers at Northeastern University, the Pennsylvania State University, the University of Haifa, and Bar-Ilan University.

1. Atkins, D.A., & Baucom, B.R. (2016). Emerging Methodological and Statistical Techniques in Couple Research. In E. Lawrence and K. Sullivan (Eds.), *Oxford Handbook of Relationship Science*. New York, NY: Oxford University Press.
2. Baucom, B.R.W., Georgiou, P.G., Bryan, C.J., Garland, E.L., Leifker, F., May, A., & Narayanan, S.S. (2017). The promise and the challenge of technology-facilitated methods for assessing behavioral and cognitive markers of risk for suicide among U.S. Army National Guard personnel. *Journal of Environmental Research and Public Policy, Special Issue: From Understanding Suicide Risk to Preventing Suicide, 14,* 361.
3. May, A.M., Crenshaw, A.O., Leifker, F., Bryan, C.J., & Baucom, B.R.W. (2019). Knowledge of suicide history, current depressive symptoms, and future suicide risk within couples. *Behaviour Research and Therapy.* Epub.
4. Baucom, B.R.W. & Crenshaw, A.O. (2019). Evaluating the Efficacy of Couple and Family Therapy. In *APA Handbook of Contemporary Family Psychology*, (Eds.) B. Fiese, M. Whisman, M. Celano, K. Deater-Deckard, & E. Jouriles. American Psychological Association.

Relevant ongoing and recently completed projects are highlighted below:

Unrestricted gift B. Baucom (PI)

Apple

A standardized data set for benchmarking mental health status

The goal of this project is to develop a database of passive sensor, EMA, vocal, and health service utilization data that is shareable with the computational mental health research community.

R01CA201179 Langer/Porter (MPIs) 9/20/2016-8/31/2021

NIH

Couple Communication in Cancer: A Multi-Method Examination

The goal of this project is to use the results to inform measurement, theory and content of efficacious interventions that will improve couples’ communication, alleviate treatment-related distress, reduce caregiver burden, and optimize patient recovery.

Role: Consultant

R01 MH119084 01 Butner, Bulik (PI) 9/23/2019-7/31/2023

NIH / NIMH

Predicting binge and purge episodes in from passive and active apple watch data using a dynamical systems approach

The goal of this project is to develop quantitative descriptions of regulatory dynamics that are useful for predicting the likelihood of binge and purge episodes using passive sensor data.

Role: Co-Investigator

R01HD105718-01 Terrill (PI) 9/3/2021 – 8/31/2026

Testing efficacy of an intervention to promote Resilience in Stroke survivor-carepartner Dyads (ReStoreD)

NIA

The goal of this project is to conduct a randomized clinical trial of ReStoreD, an app-based dyadic intervention to reduce emotional distress in stroke survivors and their caregivers.

Role: Co-Investigator

R03MH116455 Fischer, D. Baucom (Multi-PI) 3/1/2018-2/29/2020

NIH / NIMH

Social Processes in RDoC: Function and Dysfunction of Interpersonal Emotion Regulation in Depression and Anxiety

The goal of this project is to test the unique and combinatory associations between anxiety, depression, relationship satisfaction and vocal arousal.

Role: Multi-PI

W81XWH-15-1-0632 B. Baucom & Georgiou (Multi-PIs) 9/30/2015-12/29/2020

Department of Defense

Technologies for Assessing Behavioral and Cognitive Markers of Suicide Risk

The goal of this project is to test the accuracy of an automated, signal-processing driven system for detecting risk for suicide based on dyadic conversations and cognitive performance tasks.

Role: Multi-PI

B. Positions, Scientific Appointments, and Honors

**Positions and Scientific Appointments**

2020- Action Editor, *Journal of Family Psychology*

2019- Associate Professor, Univ. of Utah, Department of Psychology

2019- Editorial Board, *Journal of Counseling Psychology*

2017-19 Action Editor, *Family Process*

2015- Editorial Board, *Family Process*

2015-17 Editorial Board, *Psychotherapy*

2014-15 Editorial Board (Statistical Consultant), *The Clinical Neuropsychologist*

2014- Member, Society for a Science of Clinical Psychology

2013- Editorial Board, *Journal of Family Psychology*

2013-16 Research Assistant Professor (Adjunct), Univ. of North Carolina, Chapel Hill, Dept. of Psych.

2012-19 Assistant Professor, Univ. of Utah, Department of Psychology

2011- Member, Association for Psychological Science

2008-11 Clinical Supervisor, Univ. of Southern California, Department of Psychology

2008-11 Lecturer, Univ. of Southern California, Department of Psychology

2008-09 Staff Researcher, Univ. of California, Los Angeles, Department of Psychology

2008-09 Psychology Fellow, West Los Angeles Veterans Administration, Department of Psychology

2007-08 Psychology Intern*,* West Los Angeles Veterans Administration, Department of Psychology

2006- Member, American Psychological Association

2006- Member, International Association of Relationship Researchers

2001- Member, Association for Behavioral and Cognitive Therapies

**Honors**

2011 Mobile Health (mHealth) Institute, National Institutes of Health

2010-12 Ruth L. Kirschstein NRSA Postdoctoral Fellowship

2010 Mellon Mentorship Award, USC

2003-06 National Science Fellow

1999 Tau Beta Pi Engineering Honors Society

# C. Contribution to Science

1. The central premise of my basic research on dysfunctional behavioral and emotional processes during couple conflict is that there are individual differences in emotional sensitivity to conflict, and that romantic partners are motivated to reduce aversive emotional activation. However, attempts to do so often have unintended consequences that maintain dysfunctional processes and promote maladaptive outcomes. My work in this area has been specifically focused on understanding an asymmetrical pattern of interaction, the demand/withdraw interaction pattern (DWIP). This type pattern of behavior is common among couples presenting for therapy and is associated with extreme forms of relationship dysfunction such as infidelity and intimate partner violence as well as adverse individual outcomes (e.g., depression, anxiety, and substance abuse). My work on DWIP demonstrates how both partner’s behaviors and emotional reactions are involved in maintaining and intensifying this form of behavior and that there is cross-cultural consistency in these associations. This work has led to refinement of long-standing theoretical models of demand/withdraw behavior that has direct implications for couple-based intervention for relationship distress as well as for psychological disorders and medical illnesses.
	1. Baucom, B.R., McFarland, P., & Christensen, A. (2010). Gender, topic, and time in observed demand/withdraw interaction in cross- and same-sex couples. *Journal of Family Psychology*, *24,* 233-242. doi: 10.1037/a0019717. PMID: 20545396.
	2. Baucom, B.R.,Atkins, D., Eldridge, K., McFarland, P., Sevier, M., & Christensen, A. (2011). The language of demand/withdraw: Verbal and vocal expressions in dyadic interaction. *Journal of Family Psychology, 25,* 570-580. doi:10.1037/a0024064. PMID: 21639632. PMC3156828.
	3. Baucom, B.R., Dickenson, J.A., Atkins, D.C., Baucom, D.H., Fischer, M.S., Weusthoff, S., Hahlweg, K., & Zimmermann, T. (2015). The interpersonal process model of demand/withdraw behavior. *Journal of Family Psychology, 29,* 80-90. PMID: 25495639.*.*
	4. Leo, K., Crenshaw, A.O., Hogan, J.N., Baucom, K.J.W., & Baucom, B.R.W. (2021). A replication and extension of the interpersonal process model of demand/withdraw behavior: Incorporating subjective emotional experience. *Journal of Family Psychology*, *35*(4), 534-545.
2. In addition to my observational work on dysfunctional interaction processes in romantic relationship, I conduct translational research aimed at developing and evaluating interventions that are grounded in well researched cognitive-behavioral models of relationship distress. The bulk of my work in this domain focuses on cognitive behavioral couple therapies including Behavioral Marital Therapy (BMT), Integrative Behavioral Couple Therapy (IBCT), and Cognitive Behavioral Couple Therapies for Anorexia Nervosa and Binge-Eating Disorder. My work has helped to evaluate the long-term efficacy of IBCT, to determine pre-treatment characteristics of spouses and couples associated with longer-term response to treatment and to elucidate several theoretically derived mechanisms of change. This research, in combination with other publications resulting from the same RCT, has led to IBCT considered an empirically validated treatment, which has, in turn, led to IBCT being rolled out as a primary intervention of choice for relationship difficulties in the Veteran’s Administration health care system.
	1. Baucom, B.R., Atkins, D., Simpson, L., & Christensen, A. (2014). Prediction of treatment response at 5-year follow-up in a randomized clinical trial of behaviorally based couple therapies. *Journal of Consulting and Clinical Psychology,* 77, 160-73. PMID: 18170462*.*
	2. Baucom, B.R., Sheng, E., Christensen, C., Georgiou, P.G., Narayanan, S.S., & Atkins, D. (2015). Behaviorally-based couple therapies reduce emotional arousal during couple conflict. Behaviour Research and Therapy. *Behavioural Research and Therapy, 72*, 49-55. PMID: 26183021. PMC4529783*.*
	3. Baucom, D.H., Kirby, J.S., Fischer, M.S., Baucom, B.R., Hamer, R. & Bulik, C.M. (2017). UCAN: Findings from a couple-based open trial for adult Anorexia Nervosa. *Journal of Family Psychology, 31*, 584.
	4. Runfola, C.D., Kirby, J.S., Baucom, B.R.W., Baucom, D.H., Fischer, M.S., Matherne, C.E., & Bulik, C.M. (2018). A Pilot Open Trial of UNITE-BED: A Couple-Based Intervention for Binge-Eating Disorder. *International Journal of Eating Disorders*. 51 (9), 1107-1112.
3. Basic and applied research on behavioral and emotional processes in psychology and psychiatry is heavily reliant on measuring emotional expression and behavior during interaction. Current methods for acquiring these data have produced a wealth of invaluable findings; however, these methods are also subject to a number of substantial limitations including compromised ecological validity, being time and resource intensive, and being limited in scalability. To overcome these limitations, I have developed a line of interdisciplinary research (involving collaborations with electrical engineers, computer scientists, and health informatics researchers) that applies signal processing and machine learning techniques to the study of couple interaction in both laboratory and real life settings. These efforts have produced a number of methodological and statistical advancements that not only increase the reliability, precision, and efficiency of studying couple interaction but also that open up entirely new possibilities.
	1. Baucom, B.R., Saxbe, D., Ramos, M.R., Spies, L., Duman, S.R., & Margolin, G. (2012). Characteristics and correlates of adolescents’ fundamental frequency during family conflict. *Emotion, 12,* 1281-1291. doi: 10.1037/a0028872. PMID: 22775127. PMC3957436.
	2. Black, M., Katsamanis, N., Baucom, B.R., Lee, C. Lammert, A., Christensen, A., Georgiou, P., & Narayanan, S. (2013). Towards automating a human behavioral coding system for married couples’ interactions using acoustic features. *Speech Communication*, 55, 1-21.
	3. Imel, Z.E., Barco, J., Brown, H., Baucom, B.R., Baer, J., & Atkins, D.C. (2014). The association of therapist empathy and synchrony in vocal fundamental frequency. *Journal of Consulting Psychology, 61,* 146 – 153. doi: 10.1037/a0034943. PMID: 24274679. PMC4133554.
	4. Bryan, C. J., Baucom, B. R., Crenshaw, A. O., Imel, Z., Atkins, D. C., Clemans, T. A., ... & Rudd, M. D. (2018). Associations of patient-rated emotional bond and vocally encoded emotional arousal among clinicians and acutely suicidal military personnel. *Journal of Consulting and Clinical Psychology*, *86*, 372.

## Complete list of published work in MyBibliography: <http://www.ncbi.nlm.nih.gov/sites/myncbi/1-uA05cyq6oQj/bibliography/47157519/public/?sort=date&direction=ascending>