

Timothy Raymond Brick, PhD

CONTACT INFORMATION

231 HHD Building	(814) 865-4868
Human Development and Family Studies	tbrick@psu.edu
Pennsylvania State University	http://www.timbrick.net
University Park, PA 16802	https://sites.psu.edu/realtimescience

FORMAL EDUCATION

PhD Psychology August 2011

University of Virginia, Charlottesville, VA (advisor Steven M. Boker)

Dissertation Title: *(Re)moving Parts: Towards A System for the Separation of Affective Movements in Facial Video*

MS Computer Science and Engineering August 2007

University of Notre Dame, Notre Dame, IN (primary advisor Matthias Scheutz)

Thesis Topic: TIDE: *A Timing-sensitive Incremental Discourse Engine*

BA Psychology May 2002

Magna Cum Laude University of Notre Dame, Notre Dame, IN

BS Computer Science and Engineering May 2001

Magna Cum Laude University of Notre Dame, Notre Dame, IN

ACADEMIC POSITIONS

- 2014–Present: *Assistant Professor*, Department of Human Development and Family Studies, co-funded by Institute for Computational and Data Sciences to promote and engage researchers in interdisciplinary team science around computational and data science.
- 2014–Present: *Visiting Researcher*, (Summers) Center for Lifespan Psychology, Max Planck Institute for Human Development
- 2011-2014: *Forschungsstipendiat (Postdoctoral Research Fellow)*, Formal Methods Project, Center for Lifespan Psychology, Max Planck Institute for Human Development
- Fall 2008: *Adjunct Instructor*, Department of Psychology, University of Virginia.
Co-instructor for Introductory Graduate Statistics
- 2007–2011: *Graduate Student*, Department of Psychology, University of Virginia.
- 2005–2007: *Graduate Student*, Joint Program in Computer Science and Psychology, University of Notre Dame

PEER REVIEWED ARTICLES AND PAPERS

Proceedings listed here are written, journal-quality papers published after full peer-review.

*indicates student or postdoctoral coauthors

**indicates supervised research staff

† indicates co-first authors

40. *Heshmati, S., **Brick, T. R.**, Roeser, R., Oravec, Z. (2020). Momentary PERMA as a correlational network: Empirical evidence for daily measures of well-being via network analysis. *Journal of Applied Developmental Science*. doi: 10.1080/10888691.2020.1766356.
39. *Shewark, E. A., **Brick, T. R.**, & Buss, K. A. (accepted). Capturing the temporal dynamics of fear behaviors on a second by second basis. *Infancy*. doi: 10.1111/infa.12328.
38. **Brick, T. R.**, **Mundie, J., **Weaver, J., Fraleigh, R., & Oravec, Z. (2020). Wear-IT: Low-burden Mobile Monitoring and Intervention through Real-time Analysis. *Journal of Medical Internet Research (JMIR): Formative Research*. 4(6):e16072. doi: 10.2196/16072.
37. **Brick, T.R.** & Bailey, D. H. (2020). Rock the MIC: Using the Matrix of Implied Causation to Understand Complex Causal Models. *Advances in Methods and Practices in Psychological Science*. doi: 10.1177/2515245920922775.
36. Hilpert, P., **Brick, T. R.**, Flückiger, C., Vowels, M., Ceuleman, E., Kuppens, P., & Sels, L. (2020). What Can Be Learned From Couple Research: Examining Emotional Co-Regulation Processes in Face-to-Face Interactions. *Journal of Counseling Psychology*. doi: 10.1037/cou0000416.
35. *Osotsi, A., Oravec, Z., Li, Q., Smyth, J., & **Brick, T. R.** (2020). Individualized modeling to distinguish between high and low arousal states using physiological data. *Journal of Healthcare Research Informatics*. doi: 10.1007/s41666-019-00064-1.
34. *Jenkins, A. I. C., Fredman, S. J., Le, Y., Sun, X., **Brick, T. R.**, Skinner, O. D., & McHale, S. M. (2020). Prospective associations between depressive symptoms and marital satisfaction in Black couples. *Journal of Family Psychology*, 34, 12–23. doi: 10.1037/fam0000573.
33. Oravec, Z., Dirsmith, J., Heshmati, S., Vandekerckhove, J. & **Brick, T. R.** (2020). Psychological Well-Being and Personality Traits are Associated with Experiencing Love in Everyday Life. *Journal of Personality and Individual Differences*, 153, 109620. doi: 10.1016/j.j.paid.2019.109620.
32. *Adams, E., Marini, M. E., **Brick, T.R.**, Paul, I. M., Birch, L., & Savage, J. (2019) Ecological momentary assessment of using food to soothe during infancy in the INSIGHT trial. *International Journal of Behavioral Nutrition and Physical Activity*. 16(1):1-11. doi: 10.1186/s12966-019-0837-y.
31. *Li, Y., Ji, L., Oravec, Z., **Brick, T. R.**, Hunter, M. D., & Chow, S.-M. (2019). dynr.mi: An R Program for Multiple Imputation in Dynamic Modeling. *International Journal of Computer, Electrical, Automation, Control and Information Engineering*, 13(5), 302–311.

30. Oravecz, Z., & **Brick, T. R.** (2019). Associations Between Slow- and Fast-Timescale Indicators of Emotional Functioning. *Social Psychological and Personality Science*. doi: 10.1177/1948550618797128.
29. *Snoke, J., **Brick, T. R.**, Slavković, A., & Hunter, M. D. (2018). Providing Accurate Models Across Private Partitioned Data: Secure Maximum Likelihood Estimation. *Annals of Applied Statistics* 12:2, 877–914. doi: 10.1214/18-AOAS1171.
28. † Pritikin, J., †**Brick, T.R.**, & Neale, M.C. (2018). Multivariate normal maximum likelihood with both ordinal and continuous variables, and data missing at random. *Behavior Research Methods*. 50(2):490. doi: 10.3758/s13428-017-1011-6.
† Co-first-authors (from the author note: J.P. and T.B. contributed equally.)
27. **Brick, T.R.**, *Gray, A. L., & Staples, A. D. (2018). Recurrence quantification for the analysis of coupled processes in aging. *Journal of Gerontology B: Psychological Sciences/Social Sciences*. 73(1), 134–147. doi: 10.1093/geronb/gbx018.
26. **Brick, T.R.**, *Koffer, R., Gerstorf, D., & Ram, N. (2018). Feature selection methods for optimal design of studies for developmental inquiry. *Journal of Gerontology B: Psychological Sciences/Social Sciences*. 73(1), 113-123. doi: 10.1093/geronb/gbx008.
25. *Brinberg, M., Ram, N., Hülür, G., **Brick, T.R.**, & Gerstorf, D. (2018). Analyzing Dyadic Data Using Grid-Sequence Analysis: Interdyad Differences in Intradynamic Dynamics. *The Journals of Gerontology: Series B*, 73(1), 5–18. doi: 10.1093/geronb/gbw160.
24. *Szymanski, C., Müller, V., **Brick, T. R.**, von Oertzen, T., & Lindenberger, U. (2017). Hyper-transcranial alternating current stimulation: Experimental manipulation of inter-brain synchrony. *Frontiers in Human Neuroscience*, 11, 539. doi: 10.3389/fnhum.2017.00539.
23. Perdakis, D., *Volhard, J., Müller, V., Kaulard, K., **Brick, T.R.**, Walraven, C., & Lindenberger, U. (2017). Brain synchronization during perception of facial emotional expressions with natural and unnatural dynamics. *PLoS One*. 12(7):e0181225. doi: 10.1371/journal.pone.0181225.
22. Fredman, S. J., *Le, Y., Marshall, A. D., **Brick, T. R.**, & Feinberg, M. E. (2017). A dyadic perspective on PTSD symptoms' associations with couple functioning and parenting stress in first-time parents. *Couple and Family Psychology: Research and Practice*, 6, 117-132. doi: 10.1037/cfp0000079.
21. *Pritikin, J. N., Hunter, M. D., Oertzen, von, T., **Brick, T. R.**, & Boker, S. M. (2017). Many-Level multilevel Structural Equation Modeling: An efficient evaluation strategy. *Structural Equation Modeling: a Multidisciplinary Journal*, 24(5), 684-698. doi: 10.1080/10705511.2017.1293542.
20. *Szymanski, C., Pesquita, A., Brennan, A. A., Perdakis, D., Enns, J. T., **Brick, T. R.**, Müller, V., & Lindenberger, U. (2017). Teams 'on the same wavelength' perform better: Inter-brain phase synchronization constitutes a neural substrate for social facilitation. *Neuroimage* 152: 425-436. doi: 10.1016/j.neuroimage.2017.03.013.

19. *Bezawada, S., Hu, Q., Gray, A., **Brick, T. R.**, & Tucker, C.. (2016). Automatic facial feature extraction for predicting designers' comfort with engineering equipment during prototype creation. *Journal of Mechanical Design*. doi: 10.1115/1.4035428.
18. *Hu, Q., Bezawada, S.*, Gray, A.*, **Brick, T. R.**, & Tucker, C. (2016). Exploring the link between task complexity and students' affective states during engineering laboratory activities. *Proceedings of the ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (IDETC/CIE 2016)*. doi: 10.1115/DETC2016-59757.
17. *Snok, J., **Brick, T. R.**, & Slavković, A. (2016). Accurate estimation of Structural Equation Models with remote partitioned data. In Domingo-Ferrer, J., & Pejić-Bach, M. *Privacy in Statistical Databases: UNESCO Chair in Data Privacy, International Conference, PSD 2016, Dubrovnik, Croatia, September 14–16, 2016, Proceedings*. (pp. 109-209) doi: 10.1007/978-3-319-45381-1_15.
16. *Doub, A.E., Small, M. L., Levin, A., & LeVangie, K., **Brick, T. R.** (2016). Identifying users of traditional and Internet-based resources for meal ideas: An association rule learning approach. *Appetite*, 103:128–136. doi: 10.1016/j.appet.2016.04.006.
15. Ram, N., *Benson, L., **Brick, T. R.**, Conroy, D. E., & Pincus, A. L. (2016). Behavioral landscapes and earth mover's distance: A new approach for studying individual differences in density distributions. *Journal of Research in Personality*. Available online 6 June 2016. doi: 10.1016/j.jrp.2016.06.010.
14. Boker, S. M., **Brick, T. R.**, von Oertzen, T., Estabrook, R., Pritikin, J. N., Hunter, M. D., Maes, H.H., & Neale, M. C. (2015). Maintained individual data distributed likelihood estimation (MIDDLE). *Multivariate Behavioral Research*, 50(6), 706–720. doi: 10.1080/00273171.2015.1094387.
13. *Filevich, E., Dresler, M., **Brick, T.R.**, & Kühn, S. (2015). Metacognitive mechanisms underlying lucid dreaming. *Journal of Neuroscience*. 35(3), 1082–8. doi: 10.1523/JNEUROSCI.3342-14.2015.
12. Neale, M. C., Hunter, M. D., Pritikin, J., Zahery, M., **Brick, T. R.**, Kirkpatrick, R. M., Estabrook, R., Bates, T. C., Maes, H. H., & Boker, S.M. (2015). OpenMx 2.0: Extended structural equation and statistical modeling. *Psychometrika*. doi: 10.1007/s11336-014-9435-8.
11. Kühn, S., **Brick, T. R.**, Müller, B. C. N., & Gallinat, J. (2014). Is this car looking at you? How anthropomorphism predicts fusiform face area activation when seeing cars. *PLoS ONE*, 9(12): e113885. doi: 10.1371/journal.pone.0113885.
10. von Oertzen, T., & **Brick, T. R.** (2014). Efficient hessian computation using sparse matrix derivatives in RAM notation. 46(2), 385–95 *Behavior Research Methods*. doi: 10.3758/s13428-013-0384-4.

9. **Brick, T. R.**, & Boker, S. M. (2011). Correlational methods for analysis of dance movements. *Dance Research*, 29(2), 283–304. doi: 10.3366/drs.2011.0021.
8. Boker, S., Neale M., Maes, H., Wilde, M., Spiegel, M., **Brick, T.**, Spies, J., Estabrook, R., Kenny, S., Bates, T., Mehta, P, & Fox J. (2011). OpenMx: An Open Source Extended Structural Equation Modeling Framework. *Psychometrika*. doi: 10.1007/s11336-010-9200-6.
7. Boker, S., Cohn, J., Theobald, B., Matthews, I., Mangini, M., Spies, J., Ambadar, Z. & **Brick, T.** (2011) Something in the way we move: Motion dynamics, not perceived sex, influence head movements in conversation. *Journal of Experimental Psychology: Human Perception & Performance*. 37(2), 631—640. doi: 10.1037/a0021928.
6. **Brick, T. R.**, Hunter, M. D., & Cohn, J. (2009). Get the FACS Fast: Automated FACS face analysis benefits from the addition of velocity. *Proceedings of the 2009 International Conference on Affective Computing & Intelligent Interactions (ACII 2009)*. doi: 10.1109/ACII.2009.5349600.
5. Boker, S., Cohn, J., Theobald, B., Matthews, I., **Brick, T.**, & Spies, J. (2009) Effects of damping facial expression in dyadic conversation using real-time facial expression tracking and synthesized avatars. *Philosophical Transactions of the Royal Society B*, 364(1535). doi: 10.1098/rstb.2009.0152.
4. **Brick, T. R.**, Spies, J. R., Theobald, B.-J., Matthews, I. & Boker, S. M. (2009). High-presence, low-bandwidth, apparent 3d video-conferencing with a single camera. *Proceedings of the 10th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2009)*. doi: 10.1109/WIAMIS.2009.5031494.
3. Theobald, B., Matthews, I., Mangini, M., Spies, J., **Brick, T.**, Cohn, J. F. & Boker, S. (2009) Mapping and manipulating facial expression. *Journal of Language and Speech*, 52(2/3), 369–386. doi: 10.1177/0023830909103181.
2. **Brick, T. R.**, Schermerhorn, P.W., & Scheutz, M. (2007). Speech and action: Integration of action and language for mobile robots. *Proceedings of the 2007 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2007)*, 1423–1428. doi: 10.1109/IROS.2007.4399576.
1. **Brick, T.**, & Scheutz, M. (2007). Incremental natural language processing for HRI. *Proceedings of the Second ACM IEEE International Conference on Human-Robot Interaction (HRI 2007)*. doi: 10.1145/1228716.1228752.

Total Peer Reviewed Publications: 40
31 since beginning at Penn State.

CHAPTERS IN BOOKS AND EDITED COLLECTIONS

2. **Brick, T. R.**, Prindle, J. J. (2017). Time-series Analysis. In Hopkins, B., Geangu, E., & Linkenauger, S. (Eds.) *The Cambridge Encyclopedia of Child Development, Second Edition*. New York, NY: Cambridge University Press. doi: 10.1017/9781316216491.
1. Mårtensson, J., Eriksson, J., **Brick, T.**, Bodammer, N., Lindgren, M., Johansson, M., Nyberg, L., & Lövdén, M. (2014). Proficiency and brain structure during intense language learning. In Horne, M., Lindgren, M., Nilsson, M., Roll, M., Shtyrov, Y., Ståhlberg, F., & Topgaard, D., (Eds.) *Microstructures of Learning: Novel methods and approaches for assessing structural and functional changes underlying knowledge acquisition in the brain*. (pp 17-20). Frontiers Media SA. ISBN 978-2-88919-480-3.

Total Chapters In Books And Edited Collections: 2

MANUSCRIPTS IN REVIEW/REVISION

*indicates graduate student and postdoctoral coauthors

**indicates supervised research staff

Manuscripts available upon request

9. *Husmann, K., **Brick, T. R.** & DiPerna, J. (submitted). Applying the Measurement Model of Derivatives to Evaluate and Refine Measurement Scales in Longitudinal Education Data Using the ECLS-K.
8. *Knapp, K. S., Cleveland, H. H., **Brick, T. R.** & Bunce, S. C. (submitted). Social Exchanges and Negative Affect Predict Daily Craving for Opioid Use Disorder Patients.
7. *Dickens, C.N., *Gray, A.L., *Heshmati, S., Oravec, Z., & **Brick, T. R.** (under revision). Implications of Felt Love for Sleep.
6. *Schneider, J., **Brick, T.R.**, & Dziobek, I. (submitted). Towards an understanding emotional arousal in facial expression.
5. Wiegand, A., Trilla, I., Enk, L., O'Connell, G., Prehn, K., **Brick, T. R.**, Dziobek, I. (submitted). How much of Me do I see in Other Minds? Modulating Egocentricity in Emotion Judgments by tDCS.
4. Wan, S., Alvares-Vargas, D., **Brick, T. R.**, & Bailey, D. H. (in revision). Toward a Causally Informative Fit Index of Longitudinal Models: A Within-Study Design Approach.
3. **Brick, T. R.**, Staples, A. D., & Boker, S. M. (under revision). Attributed Emotions from Thin Slices of Natural Conversation are Primarily Mixed Emotions.
2. *Schneider, J., **Brick, T.R.**, & Dziobek, I. (under revision). Difficulty of emotional facial expression perception from dynamic stimuli.

1. *Dickens, C., Oravecz, Z., & **Brick, T. R.** (under revision). Modeling Sleep and Psychological Well-Being Dynamics in Daily Life using Group Iterative Multiple Model Estimation.

Total Manuscripts In Review/Revision: 9

SOFTWARE PUBLICATIONS

8. **Mundie, J., **Weaver, J., Oravecz, Z., & **Brick, T.R.** (2019). *Wear-IT* smartphone app. Low-burden active and passive data collection application for context-sensitive, individually-tailored, responsive analysis, assessment, and intervention in real time. Demo available. Role: Project lead, primary author, supervised of staff developers.
7. **Brick, T. R.**, & Jacobucci, R. (2019). mxregsem. Software for regularization for eXtended SEM, e.g. multigroup and timeseries models and missingness. Available at <https://github.com/trbrick/mxregsem>. Role: Primary author and developer.
6. **Brick, T. R.** & Bailey, D. H. (2019). MICr: Matrices of Implied Causation (MICs) for Structural Equation Models. Available at <https://github.com/trbrick/MICr>. Role: Primary author and developer.
5. *Husmann, K., & **Brick, T. R.** (2019). mxmmod: Measurement Model of Derivatives in OpenMx. Available at <https://github.com/khusmann/mxmmod>. Role: Co-author and co-designer, supervised student programmer.
4. *Schneider, J. & **Brick, T. R.** (2018). plsR: An R package for PLS analysis. Available at CRAN or <https://github.com/jschn/plsr>. Role: Designer, supervised student programmer, co-author.
3. Neale, M. C., Hunter, M. D., Pritikin, J., Zahery, M., **Brick, T. R.**, Kirkpatrick, R. M., Estabrook, R., Bates, T. C., Maes, H. H., and Boker, S. M. (2014). *OpenMx: Extended Structural Equation Modeling Framework (Latest Version 2.0)*. Available at <http://openmx.ssri.psu.edu/>. Role: Primary developer, computational kernel.
2. **Brick, T. R.**, Braun, J.*, Harrill, C., & Yu, M. (2013) "Face Modeling GUI, Version 0.2 β ." Software for facial expression analysis and stimulus synthesis. Additional contributor J.R. Spies. Available upon request. Role: Primary developer, supervised of student co-developers.
1. **Brick, T. R.** (2007) "TIDE: Timing-sensitive Incremental Discourse Engine." A module for incremental discourse understanding and generation for the DIARC Robotic Architecture. Paper available from <http://timbrick.net/papers/Brick-2007-IR0S.pdf>. Role: Primary author and developer.

Total Software Publications: 8

PATENTS

2. US Provisional Patent Application Ser. No. 62/842,221. [**Brick, T.R.**, Mundie, J., & Oravec, Z. (2019). Automatic Delivery of Personalized Messages.]
1. Boker, S. M., **Brick, T. R.**, & Spies, J. R. (2015). "System and method for low bandwidth image transmission." *U.S. Patent No. 9030486 B2*. Washington, DC: USPTO.

Total Patents And Provisional Patents: 2

MEDIA MENTIONS

5. Dolan, Eric. (2020, June 19). New study highlights important links between depressive symptoms, Black identity and marital satisfaction in African-American couples. Psypost.org. <https://www.psypost.org/2020/06/new-study-highlights-important-links>. Popular science news website discussing the results of the article *Prospective associations between depressive symptoms and marital satisfaction in Black couples*, published in Journal of Family Psychology.
4. Swayne, M. (2019, November 25). *All the feels: Feeling loved in everyday life linked with improved well-being*. Penn State News. <https://news.psu.edu/story/599763/2019/11/25/research/all-feels-feeling-loved-everyday-life-linked-improved-well-being>. Penn State official news release regarding our article *Associations Between Slow- and Fast-Timescale Indicators of Emotional Functioning*. Also picked up by Science Daily and others.
3. Baker, N. (2019, November 26). Science Says Experiencing Love in Everyday Life Improves Your Mental Well-Being. <https://www.marthastewart.comMarthaStewart.com>. <https://www.marthastewart.com/2224466/everyday-love-improves-mental-well-being>. Martha Stewart dot com's take on the article *Associations Between Slow- and Fast-Timescale Indicators of Emotional Functioning*.
2. Wertz, P. K. (2015, September 16). NSF grant allows researchers to explore use of co-robots in teaching. Penn State News. <http://news.psu.edu/story/370235/2015/09/16/research/nsf-grant-allows-researchers-explore-use-co-robots-teaching>. Penn State News posting of a research grant on co-robotics, associated with several papers.
1. Jacobs, K. (2015, June 08). New system allows researchers to conduct studies while participants keep privacy. Penn State News. <http://news.psu.edu/story/359800/2015/06/08/research/new-system-allows-researchers-conduct-studies-while-participants>. Penn State News reporting of early work on the MIDDLE project. Also picked up by phys.org and others.

Total Popular Media Mentions: 5

EXTERNAL FUNDING

8. **UG3/UH3:Use of a GLP-1 Agonist to Treat Opioid Use Disorder in Rats and Man.** PI: Grigson. Funded by the National Institute on Drug Abuse (NIDA; 1 UG3 DA050325-01). 06/01/2019 to 05/31/2024. Award Amount: \$17,983,309. The major goals of this project are to evaluate a GLP-1 agonist for craving in patients undergoing medically assisted recovery from Opioid Use Disorder, and to examine the associated mechanisms of craving, sleep, hunger, and stress in real time in residential and outpatient treatment. Role: Co-I in charge of ambulatory data collection and modeling of sleep, craving, stress and reactivity in both residential and outpatient settings.
7. **R01: Investigating Sleep and Circadian-Dependent Mechanisms Contributing to Response to Buprenorphine MAT in the Human Laboratory and Natural Environment with Dual Orexin Antagonist Suvorexant,** PI: Krishnamurthy. Funded by the National Institute on Drug Abuse (NIDA). 09/01/2019 to 08/31/2023. Award Amount: \$2,622,439. Role: Invited after project start to take charge of data collection and modeling of sleep, stress, and recovery.
6. **R01: The Fragile Families Sleep Sub-Study: Longitudinal behavioral, sociodemographic and contextual predictors of young adult sleep health and well being.** PI: Hale. Funded by the National Institutes of Health (2R01HD073352 - 06A1). 7/1/2019-6/30/2024. Award Amount: \$1,700,335. The major goals of this project are: To test whether sleep health trajectories are associated with disparities in physical health, social-emotional health, and socioeconomic wellbeing. Role: Co-I in charge of EMA/wearable data collection and analysis; Grant Co-author.
5. **IGE: Individualized Pathways and Resources to Adaptive Control Theory-Inspired Scientific Education (iPRACTISE),** PI: Chow. Funded by the National Science Foundation (DGE-1806874); September 1, 2018–August 31, 2021. PI: Sy-Miin Chow. Award Amount:\$490,804. Role: Co-I, Grant Co-author.
4. **The Center for Innovation in Intensive Longitudinal Studies (CIILS).** Funded by the National Institute on Alcohol Abuse and Alcoholism (1 U24 AA027684-01). September 20, 2018–August 31, 2022. PI: Sy-Miin Chow. Award Amount: \$1,835,411. Role: Co-I in charge of data harmonization, Grant Co-author.
3. **STINT: Brain change and knowledge acquisition during 2015-2018 university studies of math or language,** Funded by the Swedish Foundation for International Cooperation in Research and Higher Education (STINT); 2015-2018. PI: Johan Mårtensson. Award Amount: \$35,000. Role: Co-I, Grant Co-author.
2. **NSF NRI: Observation, Inference and Intervention: An Adaptive Co-robot System that Provides Individually Customized Performance Feedback Based on Students' Affective States** PI: Conrad Tucker. Co-PI: Timothy R. Brick. Funded by the National Science Foundation National Robotics Institute (NRI-1527148); September 1, 2015–August 31, 2018. Award Amount: \$342,574.00. Role: Co-PI, Grant Co-author.

1. **BMBF: Vom Emotionsmodell zum adaptiven Lernen: Emotionssensitive Systeme zum Training sozialer Kognition (EMOTISK) [From emotional modeling to adaptive learning: An Emotion-sensitive System for Training Social Cognition (EMOTISK)]**. Funded by the German Ministry for Education and Research (BMBF); April 1, 2015–March 31, 2018. PI: Isabel Dziobek. Award Amount: \$1,280,720. Role: Co-I, Grant Co-author.

Total External Funding Sources: 8

EDITORIAL RESPONSIBILITIES

Section Editor Quantitative Methods for the Behavioral Sciences (QCMB). 2019-present.

Editorial Board Journal of Gerontology: Psychological Sciences. 2019-present.

Review Editor Frontiers in Quantitative Psychology and Measurement. 2017-present.

Grant Reviewer - Federal NSF Graduate Research Fellowship Program;

Grant Reviewer - Outside University NIH Clinical and Translational Science Institute (University of Buffalo); Research Council KU Leuven; Research Foundation - Flanders

Ad Hoc Reviewer Psychological Methods, Behavior Research Methods, Perception, Current Psychology, Experimental Gerontology, Journal of Gerontology: Psychological Sciences, Journal of Child and Family Studies, Journal of the Royal Society-Interface, Frontiers in Psychology, Journal of Applied Developmental Science, Frontiers in Neuroscience, Journal of Consulting and Clinical Psychology, Aging Neuropsychology and Cognition, Dance Research Electronic, IEEE Transactions on Affective Computing, European Journal of Personality, Topics in Cognitive Science (TopiCS), Applied Perception in Graphics and Visualization (APGV), International Conference on Affective Computing & Intelligent Interactions (ACII), International Conference on Intelligent Robots and Systems (IROS), International Conference on Robotics and Automation (ICRA) International Symposium on Robot and Human Interactive Communication (ROMAN), Human Technology Journal, Symmetry. Student Session for the Annual Meeting of the Society for Multivariate Experimental Psychology (SMEP).

INTERNATIONAL AND DOMESTIC INVITED TALKS

Brick, T. R. (2019). Net Effect: How does thinking in networks change the way we understand and measure emotion? Or: Towards a Network Model of Emotion and Regulation. Presented to the University of Southern California's Quantitative Methods series. Los Angeles, CA; March 25, 2019.

Brick, T. R. (2018). Finding What Matters: Sequence Learning and Feature Selection for Real-time Science. Presented to the Psychologisch Instituut, KU Leuven. Leuven, Belgium; Sept. 20, 2018.

- Brick, T. R.** (2018) “Data Mining and Precision in Theory (Or: Rethinking Confirmatory Analysis)”. Presented talk as part of the Advanced Methods at Purdue (AMAP 2018) interdisciplinary scientific planning group. West Lafayette, IN, USA; October 29, 2018.
- Brick, T. R.** (2017). Towards Science in Real Time: Machine Learning and Image Processing for Behavioral Science. Presented to the Lund University Department of Psychology, Cognitive Psychology Group. Lund, Sweden; May 12, 2017.
- Brick, T. R.** (2017). Faces and Factors: Computer vision and Data reduction in the Behavioral Science. Presented to the Humanities Laboratory at the Centre for Languages and Literature, Lund University. Lund, Sweden; May 16, 2017.
- Brick, T. R.** (2016). Dynamical Systems Theory. Presented to the LIFE Academy Methods Series. Berlin, Germany; December 15, 2016.
- Brick, T. R.** (2016). Towards continual prediction: Personalized selection of features in longitudinal and timeseries data. Presented to the conference COGITO: Ten Years Later. Berlin, Germany; October 5–7, 2016.
- Brick, T. R.** (2016). Driving the dynamics: Simulations to assist real time modeling. Presented to the Dynamical Systems Modeling Expert Meeting. Aberdeen, Scotland, UK; August 08–09, 2016.
- Brick, T. R.** (2015) Dynamical Systems and Emotional Interaction. Presented at the 2015 meeting of the Animal Behavior Society. Anchorage, AK, USA; June 13, 2015.
- Brick, T. R.** (2013) Computerized Interpretation and Generation of Emotional Expression. Presented at the *MPI-B Research Colloquium*; Berlin, Germany; May 5, 2013.
- Brick, T. R.** (2013) Face Reading and Interactive Responses. Presented to the Fraunhofer Institute; Berlin, Germany; August 20, 2013.

MENTORSHIP

Current Graduate Students

Chelsea Dickens (co-advised with Dr. Martin Sliwinsky)

Kyle D. Husmann (co-advised with Dr. Zita Oravec)

Kyler S. Knapp (Methodology Advisor; Prevention and Methodology Training Grant)

Current Postdoctoral Fellows

Alaina Pearce (F32 mentor).

Past Graduate Students

Joshua Snoke, PhD. (Social Data Analytics (SoDA) Program Advisor). Data Scientist at Rand Corporation.

Allison Gray, MS. (Advisor). Data Scientist at the University of Virginia.

Allison Doub Hepworth, PhD. (Co-advised with Dr. Meg Small). Tenure-track Assistant Professor at Oklahoma State.

Jan Schneider, PhD. (Co-advised with Dr. Ulrike Lücke). Data Scientist.

Caroline Szymanski, PhD. (Co-advised for one year with Viktor Müller). Currently co-founder of a design thinking startup company.

WORKSHOPS

“Rethinking Time and Variability. Or: What’s wrong with all the models we’ve talked about”. Part of the 2017 Advanced Genetic Epidemiology Statistical Workshop. Richmond, VA, USA; October 23-27, 2017. Role: Faculty.

“Data Heterogeneity and a few ways to look for it (including latent class analysis and SEM Trees)” and “Optimization: A Primer”. Part of the 2015 Advanced Genetic Epidemiology Statistical Workshop. Richmond, VA, USA; October 26-30, 2015. Role: Faculty.

“Time and Variability: An Introduction to Intraindividual Variability and Dynamical Systems Analysis.” Part of the “It’s About Time” workshop at the 2015 meeting of the Animal Behavior Society. Anchorage, AK, USA; June 10, 2015. Role: Faculty.

Workshop: “Introduction to Structural Equation Modeling”. Max Planck Institute for Human Development, Berlin. April 26, 2013. Role: Faculty, co-organizer.

Workshop: “Structural Equation Modeling”. Freie Universität, Berlin. March 14–15, 2013. Role: Faculty, co-organizer.

Workshop: “2nd Annual INAPIC Fall Workshop: Longitudinal Methods to Analyze Brain-Behavior Relationships”. Zurich, Switzerland; August 2012. Role: Faculty.

Workshop: “New methods for conceptualizing, analyzing, and visualizing dyadic data within and across persons”. Zurich, Switzerland; August 2011. Role: Faculty.

2010 International Workshop on Statistical Genetics and Methodology of Twin and Family Studies. Boulder, CO; March 2010. Role: Faculty.

“Introduction to L^AT_EX”. Single-session seminar on L^AT_EX typesetting system. Charlottesville, VA. 2007 and 2008. Role: Instructor and Organizer.

CONFERENCE TALKS, POSTERS, AND PUBLISHED ABSTRACTS

Underline indicates presenter/copresenter other than first author.

*indicates graduate students.

- *Knapp, K. S., Cleveland, H., **Brick, T. R.**, & Bunce, S. C. (2019). [ABSTRACT] Exploring daily processes of addiction: Associations between social experiences and craving among opioid addicts in treatment. *Annals of Behavioral Medicine*. (53), (pp. S398–S398).
- Brick, T. R.** (2019). Sequence Mining for Complex Pattern Finding. Part of Symposium: Interest Group Session—Measurement, Statistics, and Research Design: Analysis of Developmental and Complex Systems: Understanding the Dynamics of Aging. Presented at the *2019 meeting of the Gerontological Society of America (GSA 2019)*. Austin, TX; November 13-17, 2019
- Brick, T. R.** (2019). Lowering burden in ecological momentary assessment: Measurement approaches and real-time methods. Presented at the *6th Biennial Conference of the Society for Ambulatory Assessment (SAA 2019)*. Syracuse, NY; June 19-22, 2019.
- *Knapp, Kyler, Cleveland, H. H., **Brick, T. R.**, & Bunce, S. C. (2019). Having purpose during recovery: Are daily fluctuations in affect and social experiences associated with eudaimonic wellbeing during opioid treatment?. Presented at the *6th Biennial Conference of the Society for Ambulatory Assessment (SAA 2019)*. Syracuse, NY; June 19-22, 2019.
- *Hepworth, A. D., **Brick, T. R.**, Small, M. (2019). Exploring Parents' Satisfaction with Infant and Toddler Feeding Information: A Repeated-Measures Analysis of Information Need and Acquisition Characteristics (P17-006-19). *Current Developments in Nutrition*. 3(Supplement_1), nzz038.P17-006-19. Paper presented at the *American Society for Nutrition (ASN1029)*. Baltimore, MD; June 8-11, 2019. doi: 10.1093/cdn/nzz038.P17-006-19.
- *Hepworth, A. D., Small, M. L., **Brick, T. R.** (2019). Classifying parents' behavioral application of information about infant and toddler feeding using decision tree modeling. Poster presented at the *2019 Biennial meeting of the Society for Research in Child Development (SRCD 2019)*, Baltimore, MD; March 21–23, 2019.
- *Shewark, E., **Brick, T. R.**, Buss, K. (2019). Capturing Temporal Dynamics of Fear Behaviors on a Second by Second Basis. Presented at the *2019 Biennial meeting of the Society for Research in Child Development (SRCD 2019)*, Baltimore, MD; March 21–23, 2019.
- Enk, L., O'Connell, G., Prehn, K., Domke, J., **Brick, T. R.**, Dziobek, I., Wiegand, A. (2018). How much of me do I see in you: Neural correlates of self-other distinction in the affective domain. Poster presented at the *11th Scientific Meeting for Autism Spectrum Conditions*. Frankfurt am Main, Germany; March 15–16, 2018.
- Filevich, E., **Brick, T. R.**, Kühn, S., & Verrel, J. (2017). Metacognition of movement: the case of facial expressions. Presented to the *Association for the Scientific Study of Consciousness (ASSC21)*, Beijing, China.

- *Hepworth, A. D., Small, M. L., **Brick, T. R.** (2017). A new conceptual model of information seeking and use can inform obesity prevention and treatment. Poster presented at the annual meeting of the Obesity Society: Obesity Week 2017, Washington, DC; November, 2017.
- Brick, T. R.** (2017). Selection of measurement types and times for real-time dynamical modeling. Presented at the Dynamical Systems Experts Meeting as part of the *5th Biennial Conference of the Society for Ambulatory Assessment (SAA 2017)*. Belval, Luxembourg; June 15–17, 2017.
- Brick, T. R.** (2017). Data mining approaches for the dynamics of well-being. Presented at the Workshop on Models and Methods to Study Psychological Well-Being as part of the *29th Annual Convention of the Association for Psychological Science (APS 2017)*. Boston, MA, USA; May 25–28, 2017.
- *Shewark, E., **Brick, T. R.**, Buss, K. (2017). Capturing Temporal Dynamics of Fear Behaviors on a Second by Second Basis. Presented to the *2017 Biennial meeting of the Society for Research in Child Development (SRCD 2017)*. Austin, TX, USA; April 6–8, 2017.
- Brick, T. R.**, & Tucker, C. (2016) Real Time Observation, Inference and Intervention of Co-robot Systems: Towards Individually Customized Performance Feedback Based on Students' Affective States. Presented to the *National Robotics Initiative Principal Investigators meeting (NRI-PI 2016)*. Washington, DC, USA; November 29–30, 2016.
- Brick, T.R.**, Koffer, R.*, Gray, A.*, Gerstorff, D. & Ram, N. (2016). Finding the Right Variables, Study Design, and Theory Using Feature Selection Methods. Presented to the *Meeting of the Gerontological Society of America (GSA 2016)*. New Orleans, LA, US; November 17–20, 2016.
- *Brinberg, M., **Brick, T.R.**, Hülür, G., Gerstorff, D. & Ram, N. (2016). Dyadic Analysis Using Grid Sequence Methods: Inter-Dyad Differences in Intra-Dyad Dynamics. Presented to the *Meeting of the Gerontological Society of America (GSA 2016)*. New Orleans, LA, US; November 17–20, 2016.
- Heidle, C. I.**, Small, M. L., **Brick, T. R.**, & Hepworth, A. D.*(April, 2017). Can an existing theory be adapted to better predict parents' infant feeding information seeking behaviors? Poster presented at the *Penn State University Undergraduate Research Exhibition*, University Park, PA. Awarded 1st place in the University Libraries Information Literacy Award competition.
- Brick, T. R.** (2016). Dynamic adaptation and re-adaptation: Modeling minute-to-minute changes in rapport. Presented to the *28th Annual Convention of the Association for Psychological Science (APS 2016)*. Chicago, IL, US; May 26–29, 2016.
- Brick, T. R.** (2016). Event-contingent Assessment and Model-based Missingness. Presented to the *28th Annual Convention of the Association for Psychological Science (APS 2016)*. Chicago, IL, US; May 26–29, 2016.

- *Hepworth, A. D., Small, M. L., Birch, L. L., **Brick, T. R.** (2016). #HealthyKids on Instagram: Posts reflect interest in food, family, and personal experience, not children's weight status. Poster presented at the *annual meeting of the Obesity Society: Obesity Week 2016*, New Orleans, LA; October 21–November 4, 2016.
- *Hepworth, A., Small, M., Birch, L., & **Brick, T. R.** (2016). Portrayals of infant feeding practices on social media: Baby-led weaning on Instagram. Presented to the *Society for Research in Child Development's Special Topics Meeting on Technology and Media in Children's Development*. Irvine, CA, US; October 27–30, 2016.
- Fredman, S. J., *Le, Y., Marshall, A. D., **Brick, T. R.**, & Feinberg, M. E. (2016). A dyadic perspective on the associations among PTSD symptoms, perceived couple functioning, and parenting stress. In S. J. Fredman (Chair), *Partnering and parenting in the presence of PTSD*. Symposium conducted at the 50th annual convention of the *Association for Behavioral and Cognitive Therapies*. New York, NY, US; October 27–30, 2016.
- *Snoke, J., **Brick, T. R.**, & Slavković, A. (2016). Accurate Estimation of Structural Equation Models with Remote Partitioned Data. Presented to *Privacy in Statistical Databases: UNESCO Chair in Data Privacy, International Conference, (PSD 2016)*. Dubrovnik, Croatia, September 14–16, 2016.
- *Gray, A., **Brick, T. R.**, & Boker, S.M. (2016). Multiple Information Pathways in the Expression of Conversational Affect. Presented to the *28th Annual Convention of the Association for Psychological Science (APS 2016)*. Chicago, IL, US; May 26–29, 2016.
- *Koffer, R., Ram, N., **Brick, T. R.**, Almeida, D., & Tucker, C. S. (2015). [Abstract]. Machine learning and gerontology: Boosted regression trees predict age differences in stressor experience. *Gerontologist*, 55(Issue Suppl_2):461–462. doi: 10.1093/geront/gnv195.10.. Poster presented as Machine Learning and Developmental Science: Using Boosted Regression Trees to Predict Interpersonal Stressor Occasions to the *68th Annual Scientific Meeting of the Gerontological Society of America (GSA 2015)*. Baltimore, MD, USA; November 18-22, 2015.
- Doub, A.*, Small, M., Levin, A., LeVangie, K., & **Brick, T. R.** (2015) Examining traditional and Internet-based resources for home cooking information: An association rule learning approach. Poster presented to *Obesity Week 2015*. Los Angeles, CA, USA; November 2-6, 2015.
- Tucker, C., **Brick, T. R.**, *Dering, M., *Gray, A., *Bezawada, S., *Kohler, A., *Mohammed, A., *Shartle, O., & *Viola, T. (2015) Real Time Observation, Inference and Intervention of Co-robot Systems: Towards Individually Customized Performance Feedback Based on Students' Affective States. Poster presented at the *NSF National Robotics Initiative Principal Investigators meeting (NRI-PI 2015)*. Washington, DC, USA; November 5–6, 2015
- Brick, T. R.** (2015) Row Fit Derivative Clustering for Heterogeneity Analysis. Presented at *Modern Modeling Methods (M³) 2015*; Storrs, CT, USA; May 20, 2015.

- Brick, T. R.** (2014) Avatars and live videoconference manipulation. Presented at the *1st Annual Workshop on Computationally Intensive Modeling (CompTIES 2014)*; Tuscon, AZ, USA; Nov. 7, 2014.
- Brick, T. R.**, Brandmaier, A. M., & Prindle, John J. (2014) Row Derivatives and Theory Guided Exploration. Presented at the *26th Annual Convention for the Association for Psychological Science (APS 2014)*; San Francisco, CA, USA; May 25, 2014.
- Brick, T. R.**, von Oertzen, T. & Brandmaier, A. M. (2014) Integrating other ideas: PPML and Ω yx. Presented at the *26th Annual Convention for the Association for Psychological Science (APS 2014)*; San Francisco, CA, USA; May 22, 2014. Part of the pre-conference OpenMx/SEM workshop.
- Estabrook, R., & **Brick, T. R.** (2014) MxThreshold: Improving OpenMx Pathic Specification. Presented at the *26th Annual Convention for the Association for Psychological Science (APS 2014)*; San Francisco, CA, USA; May 22, 2014. Part of the pre-conference OpenMx/SEM workshop.
- Brick, T. R.**, Brandmaier, A. M., & Prindle, John J. (2014) Row Derivatives and Theory Guided Exploration. Poster presented at the *26th Annual Convention for the Association for Psychological Science (APS 2014)*; San Francisco, CA, USA; May 25, 2014.
- Brick, T. R.** (2013) Multilevel SEM: Towards a Common Specification. Presented at the *25th Annual Convention for the Association for Psychological Science (APS 2013)*; Washington, DC, USA; May 24, 2013.
- Brick, T. R.** & Brandmaier, A. M. (2012) Modeling Facial Expression Mirroring in Conversation. Presented at the *17th Herbstakademie: The Implications of Embodiment–Enactive, Clinical, Social*; Heidelberg, Germany; October 2, 2012.
- Brick, T. R.** (2012) Facing the Odds: Bayesian Modeling of Facial Expression Data. Presented to the *MPS/UCL Symposium on Computational Psychiatry and Aging*; Ringberg, Germany; September 21, 2012.
- Brick, T. R.** (2012) Dyadic Longitudinal Models (and a bit about Ergodicity). Presented at the *2nd Annual INAPIC Fall Workshop: Longitudinal Methods to Analyze Brain-Behavior Relationships*; Zurich, Switzerland; September 15, 2012.
- Brick, T. R.** (2011) Time-Frequency Transformation for the Separation of Speech and Affect in Facial Movements. Presented at *New England Sequencing and Timing*; Amherst, MA; March 5, 2011.
- Brick, T. R.**, & Boker, S. M. (2010) Introduction to Dynamical Systems Analysis. *Advanced Genetic Epidemiology and Statistical Molecular Genetics Workshop*; Richmond, Virginia; October 20, 2010.

- Boker, S., Neale, M., Maes, H., Mehta, P., Wilde, M., **Brick, T.**, Spies, J., Spiegel, M., Estabrook, R., Hunter, M., Kenny, S., Fox, J., & Bates, T. (2009) OpenMx: An Open Source and Extensible SEM Framework. *Annual Meeting of the Society of Multivariate Experimental Psychology*; Salishan, Oregon; October 10, 2009.
- Boker, S., Neale, M., Maes, H., Wilde, M., Spiegel, M., **Brick, T.**, Spies, J., Estabrook, R., Kenny, S., Bates, T., Mehta, P., & Fox, J. (2009) OpenMx: Multipurpose Software for Statistical Modeling. *Facilitating Interdisciplinary Research: Methodological and Technological Innovation in the Behavioral and Social Sciences Meeting*; Bethesda, Maryland; October 8, 2009.
- Brick, T. R.**, Hunter, M. D., & Cohn, J. (2009) Get the FACS Fast: Automated FACS face analysis benefits from the addition of velocity. Presented to the *2009 International Conference on Affective Computing & Intelligent Interactions (ACII 2009)*.; Amsterdam, Netherlands.
- Brick, T. R.**, Spies, J. R., Theobald, B.-J., Matthews, I. & Boker, S. M. (2009) High-Presence, Low-Bandwidth, Apparent 3D Video-conferencing With A Single Camera. Presented to the *9th International Workshop on Image Analysis for Multimedia Interactive Services (WIAMIS 2009)*; London, England; May 6–8, 2009.
- Brick, T. R.**, & Boker, S. M. (2009) Synchronization with Ambiguous Auditory Rhythms During Unstructured Dance. Presented to the *New England Sequencing and Timing 2009*; New Haven, Connecticut; March 7, 2009.
- Brick, T. R.**, Hunter, M. D., & Cohn, J. (2009). Towards Automatic Coding of Facial Expression [Abstract]. *Multivariate Behavioral Research*. doi: 10.1080/00273170903467356.. Presented at the *Annual Meeting of the Society of Multivariate Experimental Psychology*; Salishan, Oregon; October 9, 2009.
- Boker, S. M., **Brick, T. R.**, Monpetite, M. A. & Bergeman, C. S. (2008) Modeling Individual Changes due to Resiliency using Differential Equations. *Individual Pathways of Change*; The Pennsylvania State University; September 11, 2008.
- Boker, S. M., **Brick, T. R.** & Spies, J. R. (2008) Coordination of Facial Expressions and Head Movement in Dyadic Conversation. *New England Sequencing and Timing*; New Haven, Connecticut; March 8, 2008.
- Matthews, I., Boker, S. M., Theobald, B.-J., Cohn, J. F., Mangini, M., Spies, J. R., **Brick, T. R.**, & Abadar, Z. (2007) Facial Expression and Motion in Dyadic Conversation. *Meeting of Minds: The Thinking Head Thinking Systems Project*; Parramatta, Australia; November 23, 2007.
- Brick, T. R.**, Boker, S. M., Waddell, J. R., & Covey, E.S. Effects of Ambiguous Rhythmic Stimuli on Unconstrained Dance. *2007 Auditory Perception, Action and Cognition Meeting*, Long Beach, California; November 16–18 2007.

- Brick, T. R.**, Schermerhorn, P. W., & Scheutz, M. Speech and Action: Integration of Action and Language for Mobile Robots. *2007 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS '07)*, San Diego, California; October 28 – November 2, 2007.
- Boker, S. M., Cohn, J. F., Lucey, S., Theobald, B.-J., Matthews, I., Abadar, Z., Mangini, M., Spies, J. R., & **Brick, T. R.** (2007) Measuring and Manipulating Coordination Dynamics during Conversation. *Annual Meeting of the Society of Multivariate Experimental Psychology*; Chapel Hill, NC; October 18, 2007.
- Boker, S. M., Cohn, J. F., Lucey, S., Theobald, B.-J., Matthews, I., Abadar, Z., Mangini, M., Spies, J. R., & **Brick, T. R.** (2007) Manipulation of Appearance and Dynamics during Dyadic Interaction. Invited talk presented to the *National Science Foundation Human and Social Dynamics Program Annual PIs Meeting*; Arlington, Virginia; October 2, 2007.
- Brick, T.** & Scheutz, M. (2007) Incremental Natural Language Processing for HRI. Poster presented at the *Second ACM IEEE International Conference on Human-Robot Interaction*, Boston, Massachusetts; March 2007.
- Boker, S. M., Cohn, J., Matthews, I., Ashenfelter, K., Spies, J., **Brick, T.**, Deboeck, P., Covey, E. & Tiberio, S. (2006) Coordinated Motion and Facial Expression in Dyadic Conversation. Poster presented to the *2006 NSF-HSD P.I. meeting*; Washington, DC; September 14–15, 2006.
- Schermerhorn, P., Kramer, J., **Brick, T.**, Anderson, D., Dingler, A., & Scheutz, M. (2006) DIARC: A Testbed for Natural Human-Robot Interaction. In *Proceedings of the 2006 AAAI Mobile Robot Workshop*, Boston, Massachusetts, July 2006.
- Brick, T. R.**, Boker, S. M., & Waddell, J. L. (2006) Joint Location and Angle Extraction for Pose Estimation from Underconstrained Motion Capture Data. Presented at the *Annual Conference of the North American Association for Computational, Social, and Organizational Science*, Notre Dame, Indiana; June 22–23, 2006.

SELECTED INTERNAL FUNDING

- Seed Funding: Distributed Privacy Approaches.** Funded by the Institute for Computational and Data Sciences; July 2020-June 2021. PI: Timothy R. Brick. Award Amount: \$30,000. Role: PI.
- The Dynamics of Social Identity in Addiction Recovery: Developing and Piloting a Mobile App to Assess the Daily Role of Social networks in the Recovery of Substance-Dependent Individuals.** Funded by Penn State Global Programs and Monash University. August 2019–August 2020. PI: Timothy R. Brick. Award Amount: \$17,625. Role: PI.
- Facilitated Support: Wear-IT.** Funded by the Social Science Research Institute; July 2015–June 2019. PI: Timothy R. Brick. Award Amount: \$59,461 Role: PI.

Parent Regulation in Stressful Moments (PRISM). Funded by the Social Science Research Institute; August, 2018–July 2019. PI: Erika Lunkenheimer. Award Amount: \$5,000. Role: Co-I.

Discovery To Innovation: Wear-IT Together: An integrative framework for physiological and social data collection. Funded by the Penn State Research Foundation and the College of Health and Human Development; August 15, 2016–August 14, 2017. PI: Timothy R. Brick. Co-PI: Zita Oravec. Award Amount: \$54,000. Role: PI.

GRADUATE AND UNDERGRADUATE TEACHING EXPERIENCE

Courses Taught and Developed at Penn State

Health, Technology, and Personal Data Collection (HD FS 497D). Penn State University. Discussion of current trends in modern health-data collection and management tools (e.g. electronic health records, wearables, etc), and discussion of issues of privacy, law, ethics, and logistics associated with their adoption, 2016 & 2017.

Mining the Internet with Python (HD FS 597-001). Original design for an introduction to computational thinking and Python programming using the example of Internet data collection, processing, and analysis. 2016, 2018.

Data Mining for Human Development (HD FS 597-004). Penn State University. Biennial; Developer and Classroom Head. Original design for a broad introduction to modern data mining techniques and exploratory visualizations, and their application in the behavioral sciences with an emphasis on longitudinal and timeseries data analysis., 2015, 2017, & 2020.

Methods of Research in Human Development (HD FS 516). Redesigned course using R, RStudio and literate computing approaches, 2015 & 2016.

Applied Statistics Laboratory (HD FS 518). Redesigned course using R, RStudio and literate computing approaches. Introductory applications of statistics and literate computing in R/RStudio, 2015 & 2016.

Course Designed and Taught as Adjunct Instructor at University of Virginia

Quantitative Methods I and Laboratory (PSY 771/772). University of Virginia. Co-designer, co-instructed. Introductory statistical methods and lab, 2008. Charlottesville, VA; May 2010.

PAST AND CURRENT PROFESSIONAL MEMBERSHIPS

American Psychological Association (APA), Association for Psychological Science (APS), Association for Computing Machinery (ACM), Institute of Electrical and Electronic Engineers (IEEE), Society for Mathematical Psychology, Society for Ambulatory Assessment, Gerontological Society of America, Psychometric Society.