# Emilio Ferrer Curriculum Vitae

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#### **Education**

Ph.D. Quantitative Psychology. University of Virginia, 2003.

M.S. Social Psychology of Sports and Physical Activity. University of Oregon, 1997.

Universidad de Alicante, Spain. Sociology, 1994.

Licenciatura. Physical Education. Universidad Politécnica de Madrid, Spain, 1989.

## **PROFESSIONAL HISTORY**

<i>Employment</i> 2012 –	<u>Professor</u> Department of Psychology, University of California, Davis
2012	Trolessor Department of rayenology, offiversity of Camornia, Davis
2008 – 2012	<u>Associate Professor</u> Department of Psychology, University of California, Davis
2003 – 2008	Assistant Professor Department of Psychology, University of California, Davis
2002 – 2003	<u>Postdoctoral Fellow</u> Institute for Developmental & Health Research Methodology University of Virginia

## Teaching – UC Davis Courses

Applied Multivariate Analysis (Graduate)
Applied Longitudinal Data Analysis (Graduate)
Longitudinal Methodology in Developmental Research (Graduate)
Statistical Analysis in Psychology (Graduate)
Structural Equation Modeling (Graduate)
Statistical Analysis of Psychological Data (Undergraduate)

# Teaching – Workshops

09/2017	Instructor Workshop on Longitudinal Data Analysis, Basque Center on Cognition, Brain, and Language (CCBL), San Sebastián, Spain
05/2017	<u>Instructor</u> Workshop on Advanced Structural Equation Modeling, National Institute of Education, Singapore
05/2017	<u>Instructor</u> Workshop on Longitudinal Data Analysis, Institute of Adult Learning, Singapore
2002 – 2014	Instructor American Psychological Association Advanced Training Institute on Longitudinal Methods, University of Virginia and University of California, Davis

07/2013	<u>Instructor</u> Workshop on Longitudinal Data Analysis, Summer Institute in Social and Personality Psychology, Society for Personality and Social Psychology, University of California, Davis
2010 – 2013	<u>Instructor</u> Longitudinal Research Institute, Advanced Longitudinal Data Analysis Workshop, University of California, Davis
07/2011	<u>Instructor</u> Course on Latent Growth Curve Models, Congreso de Metodología de las Ciencias Sociales y de la Salud, Universidad del País Vasco, San Sebastian, Spain
04/2010	<u>Instructor</u> Workshop on Advanced Longitudinal Data Analysis, Center for Research in Pedagogy and Practice, National Institute of Education, Singapore
08/2005	<u>Instructor</u> Workshop on Longitudinal Data Analysis, Curry School of Education, University of Virginia
06/2005	<u>Instructor</u> Advanced Training Institute on Longitudinal Methods, University of Southern California
04/2005	<u>Instructor</u> Applied Longitudinal Data Analysis Bay Area Affective Science Training Program (Stanford University, UC Berkeley, UC Davis, UC San Francisco)

# University Service - Department of Psychology UC Davis

2018 – 2019	Member, Measurement Search Committee, School of Education
2016 –	Member, Psychology Committee on Mentoring
2016 – 2017	Member, Computational Neuroscience HIP Search Committee
2015 – 2016	Chair, Quantitative Faculty Search Committee
2014 – 2017	Head, Quantitative Psychology Area
2014 – 2015	Chair, Quantitative Faculty Search Committee
2013 – 2014	Member, Social-Personality Faculty Search Committee
2006 – 2011	Head, Quantitative Psychology Area
2008 – 2011	Member, Executive Committee
2006 – 2009	Chair, Graduate Admissions Committee
2007 – 2009	Member, Undergraduate Advising Committee
2004 – 2007	Chair, Undergraduate Curriculum Committee
2006 – 2008	Member, Developmental Faculty Search Committee
2005 – 2006	Member, Quantitative Faculty Search Committee

# University Service - Graduate Group in Education UC Davis

2016 – Member, Graduate Group in Education

# University Service – Graduate Group in Biostatistics UC Davis

2011 – Member, Graduate Group in Biostatistics

2011 - Member, Committee of Master's Examination in Biostatistics

2013 – Member, Admissions and Awards Committee in Biostatistics

# University Service – Graduate Group in Human Development

2013 – Member, Graduate Group in Human Development

# University Service – UC Davis Campus

2017 –	Chair, Program Review Committee (Communication Graduate Program Review)
2016 –	Member, Campus Teaching Laboratories Committee
2016 –	Member, Social Science Data Service Committee
2016 –	Member, Graduate Council's Program Review Committee, Academic Senate
2012 –	Member, Steering Committee, University of California, Davis – Madrid Branch Campus
	Initiative
2012 – 2013	Member, Graduate Council Student Committee
2012 – 2013	Reviewer, Graduate Fellowships

# Outside Service

2016 –	Chair, Dissertation Grants Committee, Society of Multivariate Experimental Psychology
2013 –	Member, Dissertation Grants Committee, Society of Multivariate Experimental
	Psychology
2007 –	Member, Research Review Board, National Collegiate Athletic Association
2011	Invited Participant, Cognition Workshop for the NICHD Vision, National Institute of Child
	Health and Human Development

# **Community Service**

2010 – Coach, American Youth Soccer Organization

# Consultation

2014 -	Consultant, National Institute of Education, Singapore
2013 –	Consultant, California Department of Corrections and Rehabilitation
2013 –	Consultant, Office of the Attorney General
2010	Consultant, National Institute of Education, Singapore
2006	Consultant, California Department of Social Services

# **Honors and Awards**

2017	Visiting Fellow, Institute for Adult Learning, Singapore
2013	Raymond B. Cattell Early Career Research Award for contributions to multivariate
	psychology, Society of Multivariate Experimental Psychology
2012	State-of-the-Art Lecture, The Psychometric Society
2011	Elected member, Graduate Group in Biostatistics, University of California, Davis
2006	Education Abroad Program, University of California
	Visiting Scholar - Universidad de Granada, Spain (May-June 2006)
2005	Elected member, Society of Multivariate Experimental Psychology
2005	APA Division 5 Dissertation Award, American Psychological Association
2002	The Society of Multivariate Experimental Psychology Dissertation Award
2000 – 2002	Institute on Longitudinal Methods Scholarship, The Pennsylvania State University

# **Professional Memberships**

American Psychological Association Society of Multivariate Experimental Psychology Society for Research in Child Development

#### **Editorial Board**

2010 - present Psychological Methods

2016 - present Psychological Science (Statistical Advisor)

2018 - present Structural Equation Modeling

#### Reviewer

## Journals

Alcoholism: Clinical and Experimental Research, American Psychologist, Archives of General Psychiatry, BMC Medicine, Child Development Perspectives, Cognitive Therapy and Research, Communication in Statistics, Developmental Psychology, European Physical Education Review, Experimental Aging Research, Intelligence, International Journal of Psychophysiology, Journal of Applied Developmental Psychology, Journal of Cognition and Development, Journal of Consulting and Clinical Psychology, Journal of Educational Psychology, Journal of Experimental Child Psychology, Journal of Personality Assessment, Journal of School Psychology, Journal of Sport and Exercise Psychology, Learning and Individual Differences, Motivation and Emotion, Multivariate Behavioral Research, Prevention Science, Psychological Assessment, Psychological Bulletin, Psychological Methods, Psychology and Aging, Psychological Science, Psychometrika, Research on Human Development, Research Quarterly for Exercise and Sport, Revista Mexicana de Psicología, The Journal of Gerontology: Psychological Sciences

#### Grants

National Science Foundation, Netherlands Organisation for Scientific Research, National Institute of Education, Singapore

#### **Books**

Oxford University Press, American Psychological Association Books, Routledge – Taylor & Francis Group, Chapman & Hall/CRC Press

## **Professional Societies**

American Psychological Association, Division 5 (Evaluation, Measurement, and Statistics)

## Tenure and Promotion Evaluation

Australian Catholic University, Northeastern University, Notre Dame University, University of California Merced, University of California Riverside, University of Virginia

#### **PUBLICATIONS**

## **Books**

Ferrer, E. & Chow, S.M. (Under contract). Dynamics of dyadic interactions. New York: Springer.

**Ferrer, E.**, Boker, S.M., & Grimm, K.J. (2019). Longitudinal multivariate psychology. New York: Taylor & Francis.

Chow, S.M., **Ferrer, E.**, & Hsieh, F. (2010). *Statistical methods for modeling human dynamics: An interdisciplinary dialogue*. New York: Taylor and Francis.

Articles and Book Chapters (\* = Trainee in Ferrer's Lab)

Google Scholar

## In Press

- 125. Weissman, D. G., Guyer, A. E., Ferrer, E., Robins, R.W., Hastings, P. D. (in press) Adolescents' brain-autonomic coupling during emotion processing. *NeuroImage*.
- 124. Niendam, T.A., Ray, K.L., Iosif, A.M, Lesh, T.A., Ashby, S., Patel, P., Smucny, J., **Ferrer, E.**, Solomon, M., Raglan, J.D., & Carter, C.S. (in press). Evidence for stable, non-deteriorating prefrontal functioning following the onset of schizophrenia: A longitudinal fMRI study. *JAMA Psychiatry*.
- 123. Starrett, M.J., Stokes, J.D., Huffman, D.J., **Ferrer, E.**, & Ekstrom, A.D. (in press). Learning-dependent evolution of spatial representations in large-scale virtual environments. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.
- 122. Steele, J.\*, Gonzales, J.E.\*, & **Ferrer, E**. (in press). Uses and limitations of continuous time models to examine dyadic interactions. In K. van Montfort, J. Oud, & M. Voelkle (Eds.), *Continuous time modeling in the behavioral and related sciences*. NY: Springer.
- 121. Estrada, E.\*, **Ferrer, E.**, Shaywitz, B.A., Holahan, J.N., & Shaywitz, S.E. (in press). Identifying atypical change at the individual level from childhood to adolescence. *Developmental Psychology*.
- 120. Rast, P., & **Ferrer, E.** (in press). A mixed-effects location scale model for dyadic interactions. *Multivariate Behavioral Research*.
- 119. Estrada, E.\*, Sbarra, D.A., & **Ferrer, E**. (in press). Models for dyadic data. In A.G.C. Wright & M.N. Hallquist (Eds.), In: Handbook of Research Methods in Clinical Psychology. Cambridge University Press, Cambridge, MA.

118. **Ferrer, E.** (2019). Discrete- and semi-continuous time latent change score models of fluid reasoning development from childhood to adolescence. In **E. Ferrer**, S.M. Boker, & K. Grimm (Eds.), *Longitudinal multivariate psychology* (pp. 38-60). New York: Taylor & Francis.

- 117. Witczak, L.R., **Ferrer, E.**, & Bales, K.L. (2018). Effects of aggressive temperament on endogenous oxytocin levels in adult titi monkeys. *American Journal of Primatology*. http://dx.doi.org/10.1002/ajp.22907
- 116. Shelton, A.L, Wang, J.Y., Fourie, E., Tassone, F., Chen, A., Frizzi, L., Hagerman, R.J., **Ferrer, E.,** Hessl, D., & Rivera, S.M. (2018). Middle cerebellar peduncle width: A novel MRI biomarker for FXTAS? *Frontiers in Genetics: Genetic Disorders*. https://doi.org/10.3389/fnins.2018.00379
- 115. Rogers, F.D., Rhemtulla, M., **Ferrer, E.**, & Bales, K.L. (2018). Longitudinal trajectories and interparental dynamics of prairie vole biparental care. *Frontiers in Ecology and Evolution*, *6*:73. <a href="https://doi.org/10.3389/fevo.2018.00073">https://doi.org/10.3389/fevo.2018.00073</a>
- 114. Atherton, O.E., **Ferrer, E.**, & Robins, R.W. (2018). The development of externalizing symptoms from late childhood through adolescence: A longitudinal study of Mexican-origin youth. *Developmental Psychology*, *54*, 1135-1147. DOI: 10.1037/dev0000489

- 113. O'Laughlin, K.D.\*, Martin, M.J., & **Ferrer, E.** (2018). Cross-sectional analysis of longitudinal mediation processes. *Multivariate Behavioral Research*, *53*, 375-402. https://doi.org/10.1080/00273171.2018.1454822
- 112. Bringmann, L.\*, **Ferrer, E**., Hamaker, E., Borsboom, D. & Tuerlinckx, F. (2018). Modeling non-stationary emotion dynamics in dyads using a time-varying vector-autoregressive model. *Multivariate Behavioral Research*, *53*, 293-314. <a href="https://doi.org/10.1080/00273171.2018.1439722">https://doi.org/10.1080/00273171.2018.1439722</a>
- 111. Isiordia, M.\* Gonzales, J.E.\*, & **Ferrer, E**. (2018). Controlling measurement heterogeneity in longitudinal data using covariate residualized indicators. *Multivariate Behavioral Research, 53*, 128-129. <a href="https://doi.org/10.1080/00273171.2017.1404895">https://doi.org/10.1080/00273171.2017.1404895</a>
- 110. Schriber, R.A., Rogers, C.R., **Ferrer, E.**, Conger, R.D., Robins, R.W., Hastings, P.D., & Guyer, A.E. (2018). Do hostile school environments promote social deviance by shaping neural response to social exclusion? *Journal of Research on Adolescence, 28*, 103-120. DOI: 10.1111/jora.12340
- 109. Shickman, R., Famula, J., Tassone, F., **Ferrer, E.,** Rivera, S.M., & Hessl, D. (2018). Age- and CGG repeat-related slowing of manual movement in Fragile X carriers: A Prodrome of Fragile X-Associated Tremor Ataxia Syndrome? *Movement Disorders, 33*, 628-636. DOI: 10.1002/mds.27314
- 108. Isiordia, M.\* & **Ferrer, E**. (2018). Curve of factors model: A latent growth modeling approach for educational research. *Educational and Psychological Measurement, 78*, 203-231. DOI: <a href="https://doi.org/10.1177/0013164416677143">https://doi.org/10.1177/0013164416677143</a>

- 107. Isiordia, M.\*, Conger, R., Robins, R. W., & Ferrer, E. (2017). Using the factor of curves model to evaluate associations among multiple family constructs over time. *Journal of Family Psychology, 31*(8), 1017-1028. http://dx.doi.org/10.1037/fam0000379
- 106. Wendelken, C., **Ferrer, E.**, Ghetti, S., Bailey, S., Cutting, L., & Bunge, S.A. (2017). Fronto-parietal structural connectivity in childhood predicts development of functional connectivity and reasoning ability: A large-scale longitudinal investigation. *Journal of Neuroscience*. <a href="https://doi.org/10.1523/JNEUROSCI.3726-16.2017">https://doi.org/10.1523/JNEUROSCI.3726-16.2017</a>
- 105. Holahan, J.N., **Ferrer, E.**, Shaywitz, B.A., & Shaywitz, S.E. (2017). Growth in reading comprehension and verbal ability from grades 1 through 9. *Journal of Psychoeducational Assessment*. DOI: 10.1177/0734282916680984
- 104. Miller, M.L.\*, & **Ferrer, E**. (2017). The Effect of sampling-time variation on latent growth curve model fit. *Structural Equation Modeling*, *24*, 831-854. <a href="https://doi.org/10.1080/10705511.2017.1346476">https://doi.org/10.1080/10705511.2017.1346476</a>
- 103. **Ferrer, E.**, & Rast, P. (2017). Partitioning the variability of daily emotion dynamics in dyadic interactions with a mixed-effects location scale model. *Current Opinion in Behavioral Sciences*, *15*, 10-15. <a href="https://doi.org/10.1016/j.cobeha.2017.05.005">https://doi.org/10.1016/j.cobeha.2017.05.005</a>
- 102. Maninger, N., Hinde, K., Mendoza, S.P., Mason, W.A., Larke, B.H., Ragen, B.J., Jarcho, M.R., Cherry, S., Rowland, D., **Ferrer, E.**, & Bales, K.L. (in press). Pair bond formation leads to a sustained increase in

- global cerebral glucose metabolism in monogamous male Titi monkeys (Callicebus cupreus). *Neuroscience*, *348*, 302-312. <a href="http://dx.doi.org/10.1016/j.neuroscience.2017.02.028">http://dx.doi.org/10.1016/j.neuroscience.2017.02.028</a>
- 101. De Andrade, A.L., Cassepp-Borges, V.\*, **Ferrer, E.**, & Sanchez-Arágon, R. (2017). Análises de dados diádicos: Um exemplo a partir da pesquisa com casais (Analysis of dyadic data: An example from research with couples). *Trends in Psychology/Temas em Psicologia, 25*, 1571-1588. DOI: 10.9788/TP2017.4-05
- 100. Wang, J.Y., Hessl, D., Hagerman, R.J., Simon, T.J., Tassone, F., **Ferrer, E.**, & Rivera, S.M. (2017). Abnormal trajectories in cerebellum and brainstem volumes in carriers of the fragile X premutation. *Neurobiology of Aging*, *55*, 11-19. <a href="mailto:doi.org/10.1016/j.neurobiologing.2017.03.018">doi.org/10.1016/j.neurobiologing.2017.03.018</a>
- 99. Atherton, O.E., Tackett, J.L., **Ferrer, E.**, & Robins, R.W. (2017). Bidirectional pathways between relational aggression and temperament from late childhood to adolescence. *Journal of Research in Personality*, *67*, 75-84. DOI: 10.1016/j.jrp.2016.04.005
- 98. Bendayan, R., Ramirez-Maestre, C., **Ferrer, E.**, Lopez, A., & Esteve, R. (2017). From acute to chronic back pain: Using linear mixed models to explore changes in pain intensity, disability, and depression. *Scandinavian Journal of Pain, 16*, 45-51. http://dx.doi.org/10.1016/j.sjpain.2017.02.009
- 97. Green, C.T., Bunge, S.A., Briones, V., Barrow, M., & **Ferrer, E**. (2017). Fluid reasoning predicts future mathematical performance among children and adolescents. *Journal of Experimental Child Psychology*, 157-125-143. http://dx.doi.org/10.1016/j.jecp.2016.12.005
- 96. Greenland-White, S.E., Ragland, J.D., Niendam, T.A., **Ferrer, E.**, & Carter, C.S. (2017). Episodic memory functions in first episode psychosis and clinical high risk individuals. *Schizophrenia Research*, *188*, 151-157. http://dx.doi.org/10.1016/j.schres.2017.01.035

- 95. Hinde, K., Muth, C.\*, Maninger, N., Ragen, B.J., Larke, B.H., Jarko, M.R., Mendoza, S.P., Mason, W.A., **Ferrer, E.**, & Bales, K.L. (2016). Challenges to the pair bond: Neural and hormonal effects of separation and reunion in a monogamous primate. *Frontiers in Behavioral Neuroscience*. http://dx.doi.org/10.3389/fnbeh.2016.00221
- 94. Gonzales, J.E.\*, & **Ferrer, E**. (2016). An introduction to growth curve modeling. In S.K. Whitbourne (Ed.), *The Encyclopedia of Adulthood and Aging*. Hoboken, NJ: JohnWiley & Sons. DOI: 10.1002/9781118528921.wbeaa219.
- 93. Schuurman, N.K., **Ferrer, E.**, de Boer–Sonnenschein, M., & Hamaker, E.L. (2016). How to compare cross-lagged associations in a multilevel autoregressive model. *Psychological Methods*, *21*, 206-221. doi: 10.1037/met0000062.
- 92. Libero, L.E., Nordahl, C.W., Li, D.D., **Ferrer, E.**, Rogers, S.J., Amaral, D.G. (2016). Persistence of megalencephaly in a subgroup of young boys with Autism spectrum disorder. *Autism Research*. doi: 10.1002/aur.1643.
- 91. Carp, S.B., Rothwell, E.S., Bourdon, A., Freeman, S.M., **Ferrer, E.** & Bales, K.L. (2016). Development of a partner preference test that differentiates between established pair bonds and other relationships in

- socially monogamous titi monkeys (Callicebus cupreus). *American Journal of Primatology, 78*, 326-339. doi: 10.1002/ajp.22450.
- 90. Schneider, A., Johnston, C., Tassone, F., Sansone, S., Hagerman, R.J., **Ferrer, E.**, Rivera, S.M., & Hessl, D. (2016). Broad autism spectrum and obsessive compulsive symptoms in adults with the Fragile X premutation. *The Clinical Neuropsychologist*, *30*, 929-943. doi:10.1080/13854046.2016.1189536.
- 89. **Ferrer, E**. (2016). Exploratory approaches for studying social interactions, dynamics, and multivariate processes in psychological science. *Multivariate Behavioral Research*, *51*, 240-256. doi: 10.1080/00273171.2016.1140629.
- 88. **Ferrer, E.**, Conger, R.D., & Robins, R.W. (2016). Longitudinal dynamics of substance use and psychiatric symptoms in count data with zero inflation. *Multivariate Behavioral Research*, *51*, 279-295. doi: 10.1080/00273171.2016.1144501.
- 87. Wendelken, C., **Ferrer, E.**, Whitaker, K. & Bunge, S.A. (2016). Fronto-parietal network reconfiguration supports the development of reasoning ability. *Cerebral Cortex, 26(5),* 2178-90. doi: 10.1093/cercor/bhv050.
- 86. Masarik, A.S., Martin, M.J., **Ferrer, E.**, Lorenz, F.O., Conger, K.J., & Conger, R.D. (2016). Couple resilience to economic pressure over time and across generations. *Journal of Marriage and Family, 78*, 326-345. doi: 10.1111/jomf.12284.

- 85. Rosenberg, E.L., Zanesco, A.P., King, B.G., Aichele, S.R.\*, Jacobs, T.L., Bridwell, D.A., MacLean, K.A., Shaver, P.R., **Ferrer, E.**, Sahdra, B.K., Lavy, S., Wallace, B.A., Saron, C.D. (2015). Intensive meditation training influences emotional responses to suffering. *Emotion*, *15*, 775-790. doi: 10.1037/emo0000080.
- 84. Bringmann, L.\*, **Ferrer, E.**, Hamaker, E., Borsboom, D. & Tuerlinckx, F. (2015). Modeling non-stationary emotion dynamics in dyads using a semi-parametric time-varying vector-autoregressive model. *Multivariate Behavioral Research*, *50*, 730-731. doi: 10.1080/00273171.2015.1120182.
- 83. **Ferrer, E.**, Shaywitz, B.A., Holahan, J.N., Marchione, K., Michaels, R., & Shaywitz, S.E. (2015). Achievement gap in reading is present as early as first grade and persists through adolescence. *The Journal of Pediatrics*, *167*, 1121-1125. doi: 10.1016/j.jpeds.2015.07.045.
- 82. Liu, C., C. Dang, C\*., Braeken, J., Colom, R., & **Ferrer, E.** (2015). Do processing speed and short-term storage exhaust the relation between working memory capacity and intelligence? *Personality and Individual Differences*, 74, 241–247. doi:10.1016/j.paid.2014.10.012.
- 81. Atherton, O.E., Conger, R.D., **Ferrer, E.**, & Robins, R.W. (2015). Risk and protective factors for early substance use initiation: A longitudinal study of Mexican-origin youth. *Journal of Research on Adolescence*. doi: 10.1111/jora.12235.
- 80. Castro-Schilo, L.\*, **Ferrer, E.**, Hernández, M.M., & Conger, R.D. (2015). Developmental consequences of school attachment among students of Mexican origin. *Journal of Research in Adolescence*, 1-16. doi: 10.1111/jora.12223

- 79. Isiordia, M.\*, & **Ferrer, E**. (2015). Modeling the dynamics of internalizing problem behaviors and interest in reading across time. *International Journal of School and Cognitive Psychology, 2*: 133. doi: 10.4172/ijscp.1000133.
- 78. Muth, C.\*, Bales, K.L., Hinde, K., Maninger, N., Mendoza, S.P., & **Ferrer, E.** (2015). Alternative models for small samples in psychological research: Applying linear mixed effects models and generalized estimating equations to repeated measures data. *Educational and Psychological Measurement*, 1–24. doi: 10.1177/0013164415580432.
- 77. Harris, M.A., Steiger, A.E., **Ferrer, E.**, Donnellan, M.B., Allemand, M., Fend, H., Conger, R.D., & Trzesniewski, K.H. (2015). Do parents foster self-esteem? Testing the prospective impact of parent closeness on adolescent self-esteem. *Child Development*. doi: 10.1111/cdev.12356.
- 76. Estrada, E.\*, **Ferrer, E.**, Abad, F.J., Roman, F.J., Colom, R. (2015). A general factor of intelligence fails to account for changes in tests' scores after cognitive practice: A longitudinal multi-group latent-variable study. *Intelligence*, *50*, 93-99. doi:10.1016/j.intell.2015.02.004.
- 75. Gonzales, J.E.\*, & **Ferrer, E**. (2015). Efficacy of methods for ovulation estimation and their effect on statistical detection of ovulation-linked behavioral fluctuations. *Behavior Research Methods*. doi: 10.3758/s13428-015-0638-4.
- 74. Gonzales, J.E.\*, & **Ferrer, E**. (2015). Longitudinal analyses of sexual development through early adulthood. In J. Wright (Ed.), *International Encyclopedia of Social and Behavioral Sciences* (pp. 328-339). San Diego, CA: Elsevier.
- 73. Gonzales, J.E.\*, & **Ferrer, E**. (2015). Sensitivity to restricted factor analysis model misspecification. *Published Abstract, Multivariate Behavioral Research, 50,* 132-133. doi: 10.1080/00273171.2014.988992
- 72. Laredo, S.A., Steinman, M.Q., Robles, C.F., **Ferrer, E.**, Ragen, B.J., Bales, K.L., & Trainor, B.C. (2015). Effects of defeat stress on behavioral flexibility in males and females: modulation by the mu-opioid receptor. *European Journal of Neuroscience*, 41(4):434-441. doi: 10.1111/ejn.12824.

- 71. **Ferrer, E**. & Gonzales, J.E.\* (2014). Longitudinal models for studying multivariate change and dynamics. *Annals of Nutrition and Metabolism*, *65*, 184-197. doi: 10.1159/000365581.
- 70. **Ferrer, E.**, & Steele, J.\* (2014). Differential equations for evaluating theoretical models of dyadic interactions. In P.C.M. Molenaar, K.M. Newell, & R.M. Lerner (Eds.), *Handbook of developmental systems theory and methodology* (pp. 345-368). NY: Guilford Press.
- 69. Steele, J.\*, **Ferrer, E.**, & Nesselroade, J.R. (2014). An idiographic approach to estimating models of dyadic interactions with differential equations. *Psychometrika*, *79*, 675-700. doi: 10.1007/s11336-013-9366-9.
- 68. Helm, J.\*, Sbarra, D.A., & **Ferrer, E.** (2014). Coregulation of respiratory sinus arrhythmia in adult romantic partners. *Emotion*, *14*, 522-531.

- 67. Gonzales, J.E.\*, & **Ferrer, E**. (2014). Individual pooling for group-based modeling under the assumption of ergodicity. *Multivariate Behavioral Research*, *42*, 245–260.
- 66. Gu, F., Preacher, K., & **Ferrer, E.** (2014). A state space modeling approach to mediation analysis. *Journal of Educational and Behavioral Statistics*, *39*, 117-143.

- 65. **Ferrer, E**. & Gonzales, J.E.\*, & Steele, J.\* (2013). Intra- and inter-individual variability of daily affect in adult couples. *Geropsych*, *26*(*3*), 163-172.
- 64. **Ferrer, E**. & Helm, J.\* (2013). Dynamical systems modeling of physiological coregulation in dyadic interactions. *International Journal of Psychophysiology, 88*, 296-308. DOI: 10.1016/j.ijpsycho.2012.10.013.
- 63. **Ferrer, E.**, Whitaker, K.J., Steele, J.\*, Green, C.T., Wendelken, C., & Bunge, S.A. (2013). White matter maturation supports the development of reasoning ability through its influence on processing speed. *Developmental Science*, pp. 1-13. DOI: 10.1111/desc.12088.
- 62. Castro-Schilo, L.\*, & **Ferrer, E.** (2013). Comparison of nomothetic versus idiographic-oriented methods for making predictions about distal outcomes from time series data. *Multivariate Behavioral Research*, 48, 175–207.
- 61. Castro-Schilo, L.\*, Taylor, Z.E., **Ferrer, E.**, Widaman, K.F., Robins, R.W., & Conger, R.D. (2013). Parental optimism, positive parenting, and child peer competence in Mexican-origin families. *Parenting: Science and Practice, 13*, 95-112. DOI: 10.1080/15295192.2012.709151.
- 60. Dang, C.\*, Braeken, J., Colom, R., **Ferrer, E.**, & Liu, C. (2013). Why is working memory related to intelligence? Different contributions from storage and processing. *Memory*. DOI: 10.1080/09658211.2013.797471.
- 59. Kail, R.V., McBride-Chang, C., **Ferrer, E.**, Cho, J-R., & Shu, H. (2013). Cultural differences in the development of processing speed. *Developmental Science*, *16*, 476–483. DOI: 10.1111/desc.12039.
- 58. Jacobs, T. L., Shaver, P. R., Epel, E. S., Zanesco, A. P., Aichele, S. R. \*, Bridwell, D. A., Rosenberg, E. L., King, B. G., MacLean, K. A., Sahdra, B. K., Kemeny, M. E., **Ferrer, E.**, Wallace, B. A., & Saron, C. D. (2013). Self-reported mindfulness and cortisol during a Shamatha meditation retreat. *Health Psychology*, *32*, 1104-9. doi:10.1037/a0031362.
- 57. McAssey, M., Helm, J.\*, Hsieh, F., Sbarra, D.A., & **Ferrer, E.** (2013). Methodological advances for detecting physiological synchrony during dyadic interactions. *Methodology*, 9(2), 41–53. DOI: 10.1027/1614-2241/a000053

# 2012

56. Conger, R. D., Song, H.\*, Stockdale, G. D., **Ferrer, E.**, Widaman, K.F., & Cauce, A.M. (2012). Resilience and vulnerability of Mexican origin youth and their families: A test of a culturally-informed model of family economic stress. In P. K. Kerig, M. S. Schulz, & S. T. Hauser (Eds.), *Adolescence and beyond: Family processes and development* (pp. 268-286). New York: Oxford University Press.

- 55. Cuadrado, I., Navas, M., Molero, F., **Ferrer, E.**, & Morales, J.F. (2012). Gender differences in leadership styles as a function of leader and subordinates sex and type of organization. *Journal of Applied Social Psychology*, *42*, 3083–3113. DOI: 10.1111/j.1559-1816.2012.00974.x.
- 54. Dang, C.\*, Braeken, J., **Ferrer, E.**, & Liu, C. (2012). Unitary or non-unitary nature of working memory? Evidence from its relation to general fluid and crystallized intelligence. *Intelligence*, *40*, 499-508.
- 53. **Ferrer, E.**, & Grimm, K.J. (2012). Issues in collecting longitudinal data. In Harris Cooper. (Ed.), *APA Handbook of research methods in psychology* (pp. 275-290). Washington, DC: APA Press.
- 52. **Ferrer, E.**, & Song, H.\* (2012). Longitudinal structural models for examining dynamics in dyadic interactions. In Rick H. Hoyle. (Ed.), *Handbook of structural equation modeling* (pp. 601-616). New York, NY: Guilford Press.
- 51. **Ferrer, E.**, & Steele, J.\* (2012). Dynamic systems analysis of affective processes in dyadic interactions using differential equations. In G.R. Hancock & J.R. Harring (Eds.), *Advances in longitudinal methods in the social and behavioral sciences* (pp. 111-134). Charlotte, NC: Information Age Publishing.
- 50. **Ferrer, E.**, Steele, J.\*, & Hsieh, F. (2012). Analyzing dynamics of affective dyadic interactions using patterns of intra- and inter-individual variability. *Multivariate Behavioral Research*, *47*, 136-171.
- 49. Helm, J.\*, Sbarra, D.A., & Ferrer, E. (2012). Assessing cross-partner associations of physiological responses via coupled oscillator models. *Emotion*, *12*, 748-762. PMID: 21910541.
- 48. Saggar, M., King, B.G., Zanesco, A.P., MacLean, K.A., Aichele, S.R.\*, Jacobs, T.L., Bridwell, D.A., Shaver, P.R., Rosenberg, E.L., Sahdra, B.K., **Ferrer, E.**, Tang, E.C., Mangun, G.R., Wallace, B.A., Miikkulainen, R.., & Saron, C.D. (2012). Intensive training induces longitudinal changes in meditation state-related EEG oscillatory activity. *Frontiers in Neuroscience*, *6*, 1-14. DOI: 10.3389/fnhum.2012.00256.
- 47. Song, H.\*, & **Ferrer, E.** (2012). Bayesian estimation of random coefficient dynamic factor models. *Multivariate Behavioral Research, 47*, 26-60.

- 46. **Ferrer**, E., & Ghisletta, P. (2011). Methodological issues in the psychology of aging. In K.W. Schaie & S.L. Willis (Eds. 7<sup>th</sup> Edition), *Handbook of the psychology of aging* (pp. 25-39). San Diego, CA: Elsevier.
- 45. Hsieh, F., **Ferrer, E.**, Chen, S., Mauss, I.B., Oliver, J., & Gross, J.L. (2011). A network approach for evaluating coherence in multivariate systems: An application to psycho-physiological emotion data. *Psychometrika*, *76*, 124-152.
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- 41. Sahdra, B. K., MacLean, K. A., **Ferrer, E.**, Shaver, P. R., Rosenberg, E. L., Jacobs, T. L., Zanesco, A. P., Aichele, S. R. \*, King, B. G., Bridwell, D. A., Mangun, G. R., Lavy, S., Wallace, B. A., & Saron, C. D. (2011). Enhanced response inhibition during intensive meditation training predicts improvements in self-reported adaptive socio-emotional functioning. *Emotion, 11*, 299-312. PMID: 21500899. doi: 10.1037/a0022764.
- 40. Steele, J.\* & **Ferrer, E.** (2011). Latent differential equation modeling of self-regulatory and coregulatory affective processes. *Multivariate Behavioral Research, 46*, 956-984.
- 39. Steele, J.\*, & **Ferrer, E.** (2011). Randomness and Residuals: A reply to Oud and Folmer's Critique. *Multivariate Behavioral Research, 46*, 994-1003.
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- 36. **Ferrer, E.**, & McArdle, J.J. (2010). Longitudinal modeling of developmental changes in psychological research. *Current Directions in Psychological Science*, *19*, 149-154.
- 35. **Ferrer, E.**, Shaywitz, B.A., Holahan, J.N., Marchione, K., & Shaywitz, S.E. (2010). Uncoupling of reading and IQ over time: Empirical evidence for a definition of dyslexia. *Psychological Science*, *21*, 93-101. PMID: 20424029.
- 34. Gaffney, T., Cudeck, R., **Ferrer, E.**, & Widaman, K.F. (2010). On the factor structure of standardized educational achievement tests. *Journal of Applied Measurement*, *11*, 1-25. PMID: 21164227.
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- 32. Larzelere, R. E., **Ferrer, E.**, & Khun, B.R. (2010). Differences in causal estimates from longitudinal analyses of residualized versus simple gain scores: Contrasting controls for selection and regression artifacts. *International Journal of Behavioral Development, 34*, 180-189.
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- 27. **Ferrer, E.**, & Zhang, G. (2009). Time series models for examining psychological processes: Applications and new developments. In R. E. Millsap, & A. Maydeu-Olivares (Eds.), *Handbook of quantitative methods in psychology* (637-657). London: Sage Publications.
- 26. Song, H.\*, & **Ferrer, E.** (2009). State-space modeling of dynamic psychological processes via the Kalman smoother algorithm: Rationale, finite sample properties, and applications. *Structural Equation Modeling*, *16*, 338-363.
- 25. Song, H.\*, Thompson, R.A., & **Ferrer, E.** (2009). Attachment and self-evaluation in Chinese adolescents: Developmental and gender differences. *Journal of Adolescence*, *32*, 1267-1286. PMID: 19223067.

## 2008

- 24. Corbett, B., Shickman, K., & **Ferrer, E.** (2008). The effects of Tomatis sound therapy on language in children with autism. *Journal of Autism and Developmental Disorders, 38*, 562-566. PMID: 17610057.
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- 22. **Ferrer, E.**, Balluerka, N., & Widaman, K.F. (2008). Factorial Invariance and the specification of second-order latent growth models. Methodology, 4, 22-36. PMID: 20046801.
- 21. Wright, S.B., Matlen, B.J., Baym, C.L., **Ferrer, E.**, & Bunge, S.A. (2008). Neural correlates of fluid reasoning in children and adults. *Frontiers in Neuroscience*, *1*, 1-8. PMID: 18958222.

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- 19. Chow, S –M., **Ferrer, E.**, & Nesselroade, J.R. (2007). An unscented Kalman filter approach to the estimation of nonlinear dynamical systems models. *Multivariate Behavioral Research*, *42*, 283-321.

- 18. **Ferrer, E.**, McArdle, J.J., Shaywitz, B.A., Holahan, J.N., Marchione, K., & Shaywitz, S.E. (2007). Longitudinal models of developmental dynamics between reading and cognition from childhood to adolescence. *Developmental Psychology*, *43*, 1460-1473. PMID: 18020824.
- 17. Kail, R.V., & **Ferrer, E.** (2007). Processing speed in childhood and adolescence: Longitudinal models for examining developmental change. *Child Development*, *78*, 1760-1770. PMID: 17988319.
- 16. Shaywitz, B.A., **Ferrer, E.**, & Shaywitz, S.E. (2007). A case of less than meets the eye. *Annals of Neurology*, *10.1002*, 21156. PMID: 17539017.

- 15. **Ferrer, E.** (2006). Application of dynamic factor analysis to affective processes in dyads. In A.D. Ong & M. van Dulmen (Eds.), *Handbook of methods in positive psychology* (pp. 41-58). New York: Oxford University Press.
- 14. Sbarra, D.A., & **Ferrer, E.** (2006). The Structure and process of emotional experience following non-marital relationship dissolution: Dynamic factor analyses of love, anger, and sadness. *Emotion, 6,* 224-238. PMID: 16768555.

#### 2005

13. **Ferrer, E.**, Salthouse, T.A., McArdle, J.J., Stewart, W.F. & Schwartz, B.S. (2005). Multivariate modeling of age and practice in longitudinal studies of cognitive abilities. Psychology and Aging, 20, 412-422. PMID: 16248701.

## 2004

- 12. **Ferrer, E.**, Hamagami, F., & McArdle, J.J. (2004). Modeling latent growth curves with incomplete data using different types of structural equation modeling and multilevel software. *Structural Equation Modeling*, *11*, 452-483.
- 11. **Ferrer, E.** & McArdle, J.J. (2004). An experimental analysis of dynamic hypotheses about cognitive abilities and achievement from childhood to early adulthood. *Developmental Psychology, 40*, 935-952. PMID: 15535749.
- 10. **Ferrer, E.**, Salthouse, T.A., Stewart, W.F. & Schwartz, B.S. (2004). Modeling age and retest processes in longitudinal studies of cognitive abilities. *Psychology and Aging*, *19*, 243-259. PMID: 15222818.
- 9. Salthouse, T.A., Schroeder, D.H. & **Ferrer, E.** (2004). Estimating retest effects in longitudinal assessment of cognitive functioning in adults between 18 and 60 years of age. *Developmental Psychology*, 40, 813-822. PMID: 15355168.

- 8. **Ferrer, E.** & McArdle, J.J. (2003). Alternative structural models for multivariate longitudinal data analysis. *Structural Equation Modeling*, *10*, 493-524.
- 7. **Ferrer, E.** & Nesselroade, J.R. (2003). Modeling affective processes in dyadic relations via dynamic factor analysis. *Emotion*, *3*, 344-360. PMID: 14674828.

6. Salthouse, T.A., & **Ferrer-Caja, E.** (2003). What needs to be explained to account for age-related effects on multiple cognitive variables? *Psychology and Aging, 18*, 91-110. PMID: 12641315.

#### 2002

- 5. **Ferrer-Caja, E.**, Crawford, J.R., & Bryan, J. (2002). A structural modeling examination of the executive decline hypothesis of cognitive aging through reanalysis of Crawford et al.'s (2000) data. *Aging, Neuropsychology, and Cognition, 9*, 231-249.
- 4. **Ferrer-Caja, E.,** & Weiss, M.R. (2002). Cross-validation of a model of intrinsic motivation in physical education with students enrolled in elective courses. *Journal of Experimental Education*, *71*, 41-65.
- 3. McArdle, J.J., **Ferrer-Caja, E.**, Hamagami, F., & Woodcock, R.W. (2002). Comparative longitudinal structural analyses of the growth and decline of multiple intellectual abilities over the life-span. *Developmental Psychology*, *38*, 115-142. PMID: 11806695.
- 2. Weiss, M.R., & **Ferrer-Caja, E.** (2002). Motivational orientations in sport. In T.S. Horn (Ed.), *Advances in sport psychology* (2nd ed., pp. 101-183). Champaign, IL: Human Kinetics.

#### 2000

1. **Ferrer-Caja, E.**, & Weiss, M.R. (2000). Predictors of intrinsic motivation among adolescent students in physical education. *Research Quarterly for Exercise and Sport, 71*, 267-279.

## Selected Media Coverage

2018

VH1 – U.S. Cable Hip Hop Squares

http://mms.tveyes.com/transcript.asp?StationID=9135&DateTime=7%2f12%2f2018+1%3a37%3a38+PM&PlayClip=true

## 2017

Synchronization of physiology in couples. *UFA Show & Factual,* German public TV ARD channel. TV quiz show attempting to replicate findings from psycho-physiological research.

The science of how your heart can break. *Men's Health*. http://www.menshealth.com/health/hearts-and-minds

Dos corazones bailan como uno solo cuando hay amor [Two hearts dance like one when there is love]. *El Mundo, Spain.* 

http://www.elmundo.es/blogs/elmundo/yomono/2017/04/29/dos-corazones-bailan-como-uno-solo.html#comentarios

## 2015

Dyslexia: Could an early intervention narrow the achievement gap? *Science World Report*. <a href="http://www.scienceworldreport.com/articles/32338/20151103/dyslexia-could-an-early-intervention-narrow-the-achievement-gap.htm">http://www.scienceworldreport.com/articles/32338/20151103/dyslexia-could-an-early-intervention-narrow-the-achievement-gap.htm</a>

Closing the dyslexia achievement gap. *EurekAlert American Association for the Advancement of Science*. <a href="https://www.eurekalert.org/pub\_releases/2015-11/yu-ctd110315.php">https://www.eurekalert.org/pub\_releases/2015-11/yu-ctd110315.php</a>

Early intervention in dyslexia can narrow achievement gap. *Medical Xpress*. <a href="http://medicalxpress.com/news/2015-11-early-intervention-dyslexia-narrow-gap.html">http://medicalxpress.com/news/2015-11-early-intervention-dyslexia-narrow-gap.html</a>

Dyslexia requires early intervention. *The Davis Enterprise*.

http://www.davisenterprise.com/local-news/ucd/study-dyslexia-requires-early-intervention/

Early intervention in dyslexia can narrow achievement gap, UC Davis study says. *UC Davis News and Information*.

UC Davis develops intervention program for dyslexic children. The California Aggie.

https://www.ucdavis.edu/news/early-intervention-dyslexia-can-narrow-achievement-gap-uc-davis-study-says?id=11349

Closing the dyslexia achievement gap. Yale News.

http://news.yale.edu/2015/11/03/closing-dyslexia-achievement-gap

"La dislexia es evidente ya en primer grado y tratable desde preescolar" [Dyslexia is already evident in first grade and is treatable in preschool]. *Univision*.

http://www.univision.com/noticias/educacion-especial/la-dislexia-es-evidente-ya-en-primer-grado-y-tratable-desde-preescolar

Lover's hearts beat in sync. *UK Sky 1 Channel. Duck Quacks Don't Echo*. TV program set up to replicate findings from psycho-physiological research.

## 2013

Lover's Hearts Beat At The Same Rate. Nature.

http://www.nature.com/scitable/blog/labcoat-life/lovers hearts beat at the

Lovers' Hearts Beat in Sync. Science Daily.

https://www.sciencedaily.com/releases/2013/02/130213093220.htm

UC Davis Study Shows Lovers' Heartbeats Match. Television Interview. *CBS Sacramento*. http://sacramento.cbslocal.com/2013/02/11/uc-davis-study-shows-lovers-heartbeats-match/

New research shows lovers' heartbeats match-up when together. National Public Radio - Los Angeles.

Lovers' hearts beat in sync. Science Blog.

#### 2012

Couples in the same place emotionally stay together, UC Davis study says. *UC Davis: News and Information*.

https://www.ucdavis.edu/news/couples-same-place-emotionally-stay-together-uc-davis-study-says/

In-Sync Feelings Are Key. The Huffington Post.

Couples in the same place emotionally stay together. *Health*.

Couples in the same place emotionally stay together. *KGO Radio* (San Francisco), *KFBK Radio* (Sacramento).

#### **GRANTS**

## **Ongoing Research Support**

**Current Support:** 

Emily Solari (PI) 07/01/2015 – 06/30/2019

IES – R324A150091 \$3,500,000

Testing the efficacy of "Reading RULES": First grade intervention for the prevention of comprehension and decoding difficulties

Role: Co-PI

1R01 MH117991-01 G.R. Mangun (PI)

07/01/2018 - 06/30/2023

NIMH

Mechanisms of attentional control: Structure and dynamics from simultaneous EEG-fMRI and machine learning

This grant will utilize simultaneous EEG and fMRI recordings, advanced signal processing, and machine learning to investigate the fine structure of attentional control in humans.

Role: Co-Investigator

P200A150303 CFDA #84.200A-Mundy (PI)

09/01/2015 - 08/31/2018

U.S. Department of Education/Office of Postsecondary Education FY2015 (Graduate Assistance in Areas of National Need; GAANN)

Psychometric Training in Assessment of Special Populations

Role: Co-PI \$590,556.00

Emilio Ferrer (PI UCD Subcontract) 09/01/2016 – 08/31/2020

NSF BCS – 1630296 \$984,585

The neural basis of human spatial navigation in largescale virtual spaces with vestibular input.

Role: PI UCD subcontract (Arne Ekstrom, University of Arizona)

Submitted 02/05/2016

John D. Ragland (PI) 07/01/2014 – 06/30/2019

NIH – R01MH05411-01 \$1,768,448

Neural mechanisms of memory dysfunction in schizophrenia

Role: Co-Investigator

Tony Simon (PI) 08/01/2015 – 07/31/2020

NIH – R01MH107108 \$3,800,641 Cognitive-affective psychosis proneness risk and protective factors in 22q11.2DS

Role: Co-Investigator

David Amaral (PI) 04/01/2014 – 03/31/2019

NIH – R01MH103371 3,652,552.00

Neurophenotypes of Autism Spectrum Disorder: Longitudinal imaging and behavioral outcomes

Role: Co-Investigator

Leah Krubitzer (PI) 12/18/2015 – 11/30/2020

NIH – R01 HD084362-A1 \$1,953,490

How Does Early Sensory Experience Affect Cortical Connections and Behavior?

Role: Co-Investigator

Marjorie Solomon (PI) 09/01/2014 – 08/31/2019

NIH – R01MH103284 \$2,978,101

Predictors of cognitive development in Autism Spectrum Disorder

Role: Co-Investigator

Angelina Sutin (PI) 04/01/2015 – 03/31/2018

NIH-NICHD – 1R15HD083947 \$475,452

The development of obesity in Mexican-origin youth

Role: Co-Investigator

Carter Wendelken (PI) 03/01/2016 – 02/28/2018

National Science Foundation \$162,074 Collaborative Research: The Role of Brain Connectivity in Reasoning Development

Role: Co-Investigator

David Hessl (PI) 04/01/2013 – 03/31/2018

NIH – R01MH078041 \$3,555,403

Trajectories and markers of neurodegeneration in Fragile X

Role: Co-I

Daniel Keating (PI) 04/01/2014 – 03/31/2019

NIH – 1R01HD075806-01A1 \$5,209,083

Neurodevelopmental pathways in adolescent health risk behavior

Role: Consultant

1R01 HD056031-01 Susan Rivera (PI) 07/01/2013 – 06/30/2018

NIH-NICHD \$3,301,254

Visual processing and later cognitive effects in infants with fragile X syndrome

Role: Co-Investigator

R01 HD092055 Karen Bales (PI) 04/01/2017 – 03/31/2022

NIH-NICHD \$2,500,000

The neural basis of pair-bonding in female titi monkeys (Callicebus cupreus)

This grant explores the neurobiology of social bond formation in a monogamous primate species.

Role: Co-Investigator

**CONFERENCE PRESENTATIONS** (last five years; \* = Student in Ferrer's Lab)

**Ferrer, E.** (February, 2012). *The Uncoupling of Reading and IQ in Dyslexics Compared to Typical Readers*. Research talk presented at the Learning and the Brain Conference. San Francisco, CA.

**Ferrer, E.**, & Steele, J.\* (February, 2012). *Dynamic Models for Dyadic Interactions in Developmental Research*. Research talk presented at the Biannual Meeting of the Society for Research in Child Development (SRCD). Tampa, FL.

- **Ferrer, E.** (March, 2012). *Modeling the Dynamics of Interrelated Processes*. Research talk presented at the Faculty of the Department of Psychology, University of California, Davis.
- **Ferrer, E.** (May, 2012a). *Mathematical and Exploratory Models of Affective Dynamics in Dyadic Interactions*. Research talk presented at the annual Department of Psychology Conference, University of California, Davis.
- **Ferrer, E.** (May, 2012b). *Dynamical Systems Analysis of Intensive Daily Data from Dyadic Interactions*. Research talk presented at the annual meeting of the American Psychological Society (APS), Chicago, IL.
- **Ferrer, E.** (June, 2012). *Longitudinal Models for Examining Developmental Processes*. Invited talk presented at the MIND Institute. University of California, Davis-Medical School. Sacramento, CA.
- **Ferrer, E.** (July, 2012a). *Modeling the Dynamics in Dyadic Interactions*. Invited talk for the State-of-the-Art Speaker Research presented at the Annual Meeting of the Psychometric Society (IMPS 2012), Lincoln, NE.
- **Ferrer, E.** (July, 2012b). *Dynamical Systems Analysis of Intensive Daily Data from Dyadic Interactions*. Research talk presented at the annual meeting of the European Congress of Methodology, Santiago de Compostela, Spain.
- **Ferrer, E.** (October, 2012a). *Differential Equations Models of Physiological Coregulation in Dyadic Interactions*. Paper presented at the Annual Meeting of The Society for Multivariate Experimental Psychology (SMEP). Vancouver, BC, Canada.
- **Ferrer, E.** (November, 2012). *Modeling Dynamics in Dyadic Interactions*. Invited talk presented at the UCM Psychological Sciences Colloquium. University of California, Merced, CA.
- **Ferrer, E.** (January, 2013). *Latent Growth Modeling of Children Development*. Invited talk presented at the International Research Meeting in *Analysis of Child Growth Trajectories*, Center for Advanced Studies, Ludwig-Maximilians-Universität, Munich, Germany.
- **Ferrer, E.** (March, 2013). *Dynamics of Affect in Romantic Relationships: Recent Findings and Future Challenges*. Invited talk presented at the UC Davis Residence Halls Speaker Series. University of California, Davis.
- **Ferrer, E.** (September, 2013). Longitudinal Modeling of Fluid Reasoning Development from Childhood to Adolescence. Invited talk presented at the Distinguished Lecture Series, Department of Psychology. Portland State University, Portland, OR.
- **Ferrer, E.**, Helm, J.\*, & Sbarra, D.A. (October, 2013). *Differential Equations for Examining Models of Physiological Coregulation in Dyadic Interaction*. Research talk presented at the Annual Meeting of the Society of Psychophysiological Research (SPR). Florence, Italy.
- **Ferrer, E.** (January, 2014). *Longitudinal Models for Examining Developmental Processes*. Invited talk presented at the Department of Psychology. Tufts University, Medford, MA.

- **Ferrer, E.** (February, 2014a). *Individual vs. Group-Based Models for Extracting Patterns of Dynamics and Multivariate Processes*. Invited talk presented at the Department of Psychology. Universiteit van Amsterdam, Amsterdam, The Netherlands.
- **Ferrer, E.** (February, 2014b). *Statistical and Exploratory Models for Studying Social Interactions, Dynamics, and Multivariate Processes*. Invited talk presented at the VVS, Netherlands Society of Statistics and Operations Research. Utrecht University, The Netherlands.
- **Ferrer, E.**, & Gonzales, J.E. (May, 2014). *Methodological Advances for Examining Intra- and Inter-Individual Variability Over Time*. Research talk presented at the annual meeting of the American Psychological Society (APS), San Francisco, CA.
- **Ferrer, E.** (June, 2014a). *Longitudinal Models for Examining Developmental Processes*. Invited talk presented at the Department of Methodology and Social Psychology. Universidad Autónoma de Madrid. Madrid, Spain.
- **Ferrer, E.** (June, 2014b). Statistical and Exploratory Models for Studying Social Interactions, Dynamics, and Multivariate Processes. Invited talk presented at the Department of Methodology and Social Psychology. Universidad Autónoma de Madrid. Madrid, Spain.
- **Ferrer, E.** (June, 2014c). *Methodological Issues in Longitudinal Studies*. Invited talk presented at the MIND Institute. University of California, Davis-Medical School. Sacramento, CA.
- Steele, J.S., & **Ferrer, E.** (September, 2014). *Accounting for Random Change: Fitting Linear Stochastic Differential Equations*. Research talk presented at the Developmental Methodology Conference, Society for Research in Child Development. San Diego, CA.
- Steele, J.S., & **Ferrer, E.**, & Nesselroade, J.R. (September, 2014). *Use of Continuous Time Models in Measuring Change in Romantic Relationships*. Research talk presented at the Developmental Methodology Conference, Society for Research in Child Development. San Diego, CA.
- **Ferrer, E.** (October, 2014). Statistical and Exploratory Models for Studying Social Interactions, Dynamics, and Multivariate Processes. R.B. Cattell Award address presented at the Annual Meeting of The Society for Multivariate Experimental Psychology (SMEP). Nashville, TN.
- Steele, J.S., & **Ferrer, E.**, & Sbarra, D.A. (November, 2014). *Developing Behavioral Filters: Some Extensions of State-Space Grids for Dyadic Data Analysis*. Research talk presented at the Workshop on Computationally Intensive Modeling of Social Interactions. University of Arizona, Tucson, AZ.
- **Ferrer, E.** (November, 2014a). *Discussant*. Workshop on Computationally Intensive Modeling of Social Interactions. University of Arizona, Tucson, AZ.
- **Ferrer, E.** (November, 2014b). *Longitudinal Models for Examining Developmental Processes*. Invited talk presented at the National Institute of Education. Singapore.
- **Ferrer, E.** (January, 2015a). *Developmental Dynamic Models for Examining Brain Changes and the Development of Fluid Reasoning*. Research presented at the Alpine Brain Imaging Meeting, Champéry, Switzerland.

- **Ferrer, E.** (January, 2015b). *Discrete- and Continuous-Time Structural Equation Modeling of Fluid Reasoning Development*. Invited talk presented at the Centre for Research in Epidemiology and Population Health, University Paris Sud, Paris, France.
- **Ferrer, E.** (January, 2015c). *Statistical and Exploratory Models for Studying Dynamics in Social Interactions*. Invited talk presented at the Department of Psychology. University of British Columbia, Vancouver, British Columbia, Canada.
- **Ferrer, E.** (March, 2015a). *Novel Techniques for Revealing Emotion Dynamics Within and Across Individuals*. Symposium organizer. International Convention of Psychological Science (ICPS). Amsterdam, The Netherlands.
- **Ferrer, E.** (March, 2015b). *Models for Studying Dynamics of Macro- and Micro-Processes in Dyadic Interactions*. Research talk presented at the International Convention of Psychological Science (ICPS). Amsterdam, The Netherlands.
- **Ferrer, E.** (March, 2015c). *Statistical and Exploratory Models for Studying Dynamics in Social Interactions*. Invited talk presented at the Department of Psychology. University of Southern California, Los Angeles, CA.
- Hong, M.\* & **Ferrer, E.** (2015, May). *Evaluating the Theoretical Framework of Psychological Scales*. Talk presented at the 26<sup>th</sup> Annual Undergraduate Research, Scholarship and Creative Activities Conference, Davis, CA.
- **Ferrer, E.** (November, 2015). *Statistical and Exploratory Models for Studying Dynamics in Social Interactions*. Talk presented at the Statistical Methodology in the Social Sciences, University of California, Davis, CA.
- **Ferrer, E.**, Hsieh, F., Yonelinas, A., & Ekstrom, A. (January, 2015c). *Computational Networks for Modeling the Dynamics and Brain Connectivity of Memory Retrieval*. Research presented at the Alpine Brain Imaging Meeting, Champéry, Switzerland.
- Atherton, O.E., Conger, R.D., **Ferrer, E.**, & Robins, R.W. (2016, January). *Individual Differences in Traits, Cognition, and Behavior Predict Adolescent Substance Use Initiation: A Longitudinal Study of Mexican-Origin Youth*. Poster presented at the Society for Personality and Social Psychology, San Diego, California.
- Ragland, J.D., White, S., Niendam, T.A., **Ferrer, E.**, Carter, C.S. (2016, April). *Relational and Item Specific Memory Markers of Psychosis Risk*. 5<sup>th</sup> Biennial Schizophrenia International Research Society Conference, Florence, Italy.
- Wendelken, C., Bailey, S., **Ferrer, E.**, Ghetti, S., Cutting, L., & Bunge, S. (2016, June). *Changing Patterns of Structural and Functional Connectivity Support Developmental Improvement in Reasoning Ability*. Annual Meeting of the Organization for Human Brain Mapping, Geneva, Switzerland.

- Steele, J.S.\*, & **Ferrer, E.** (2016, September). *A Dynamic Systems Approach to Relationship Affect Over Time: An Application of the Exact Discrete Model*. International Conference on Social Science Methodology, Leicester, United Kingdom.
- **Ferrer, E.** (October, 2016a). *Discrete- and Continuous-Time Latent Change Score Models of Fluid Reasoning Development from Childhood to Adolescence*. Research talk presented at the Faculty of the Department of Psychology, University of California, Davis.
- **Ferrer, E.** (October, 2016b). *Discrete- and Continuous-Time Latent Change Score Models*. Research talk presented at Advances in Longitudinal Models for Multivariate Psychology: A Festschrift for Jack McArdle, Virginia Commonwealth University, Richmond, VA.
- **Ferrer, E.** (February, 2017). Age and Brain Structure Maturation Contributions to the Development of Fluid Reasoning from Childhood to Adolescence. Research talk presented at the Annual Interdisciplinary Conference, Jackson, WY.
- Schriber, R. A., Rogers, C. R., **Ferrer, E.**, Conger, R. D., Robins, R. W., Hastings, P. D., & Guyer, A. E. (March, 2017). *Do Hostile School Environments Promote Social Deviance by Shaping Neural Response to Social Exclusion?* Poster presented at the Annual Meeting of the Social and Affective Neuroscience Society. Los Angeles, CA.
- Gonzales, J.E.\*, & **Ferrer, E.** (April, 2017). *Conceptualization and Application of Dynamic Factor Analysis in Modeling Affective Networks*. Research talk presented at the Annual Meeting of the Western Psychological Association, Sacramento, CA.
- Liu, S., Gates, K., & **Ferrer, E.** (April, 2017). *Assessing Heterogeneity in Dynamic Emotional Processes*. Research talk presented at the Annual Meeting of the Western Psychological Association, Sacramento, CA.
- Rast, P., & **Ferrer, E.** (April, 2017). A Mixed Effects Location Scale Model to Account for Within-Person Variability in Positive and Negative Affect. Research talk presented at the Annual Meeting of the Western Psychological Association, Sacramento, CA.
- **Ferrer, E.** (June, 2017). *Methods for the Analysis of Longitudinal Data*. Research talk presented at the Autism Phenome Project (APP) Retreat, University of California, Davis.
- **Ferrer, E.** (October, 2017). *Dynamical Systems Analysis of Dyadic Interactions using Differential Equations*. Paper presented at the Annual Meeting of The Society for Multivariate Experimental Psychology (SMEP). Minneapolis, MN.
- **Ferrer, E.** (November, 2017). *Developmental Dynamic Models for Examining Brain Changes and the Development of Fluid Reasoning*. Invited talk presented at the Department of Psychology. University of California, Berkeley, Berkeley, CA.
- **Ferrer, E.** (August, 2018). *Longitudinal Methods for Investigating Relations between Cognitive Factors and Academic Achievement*. Invited talk presented at the NSF 1K Kids Study, Department of Psychology. University of California, Berkeley, Berkeley, CA.

Gonzales, J.E.\* & **Ferrer, E.** (August, 2018). *The untenable assumption of interindividual homogeneity of intraindividual measurement and process*. American Psychological Association: San Francisco, CA.

Isiordia, M., Gonzales, J.E.\* & **Ferrer, E.** (August, 2018). *Factorial invariance vs. internal consistency: Avoid parameter estimates biases in mean change models*. American Psychological Association: San Francisco, CA.

**Ferrer, E.** (September, 2018). *Age and Brain Structure Maturation Contributions to the Development of Fluid Reasoning from Childhood to Adolescence*. Research talk presented at the World Congress of Psychophysiology, Lucca, Italy.

## **ADVISING**

Postdoctora	l Scholars
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Feb 2015 Vicente Cassepp-Borges (Assistant Professor, Universidade Federal Fluminense, Rio de

Janeiro, Brazil)

Feb 2017 -

Feb 2019 Eduardo Estrada

#### *Graduate Students*

2004 – 2009	Hairong Song, Doctoral student (Associate Professor, Department of Psychology, University of Oklahoma)
2007 – 2011	Joel Steele, Doctoral student (Associate Professor, Department of Psychology,
	Portland State University)
2008 – 2012	Laura Castro-Schilo, Doctoral student (SAS Institute)
2008 – 2013	Jonathan Helm, Doctoral student (Assistant Professor, Department of Psychology, San
	Diego State University)
2008 – 2013	Stephen Aichele, Doctoral student (Postdoctoral Scholar, Department of
	Psychology, Université de Genève, Switzerland)
2011 – 2016	Joseph Gonzales, Doctoral student (Assistant Professor, Department of Psychology,
	University of Massachusetts, Lowell)
2013 – 2015	Chelsea Muth, Doctoral student (Graduate student, Department of Human and Family
	Development, The Pennsylvania State University)
2013 – 2018	Marilu Isiordia, Doctoral student (Research Associate, Educational Testing Service)
2014 – present	Kristine O'Laughlin, Doctoral student (Department of Psychology)
2017 – present	Stephanie Mah, Doctoral student (Department of Psychology)
2018 – present	Michael Clark, Doctoral student (Department of Psychology)

## Co-Advising

2008 – 2012	Michael McAssey, Doctoral student (Department of Mathematics, Universiteit van Amsterdam)
	Amsterdam
2010 – 2017	Ying-Fang Wang, Doctoral student (Department of Statistics)
2010 – 2017	Sarah Kahle, Doctoral student (Department of Psychology)
2010 – 2015	Alyssa Chávez, Doctoral student (Department of Human Development)
2011 –	Hao Yan, Doctoral student (Department of Statistics)
2011 – 2015	Pega Davoudzadeh, Doctoral student (Department of Psychology)
2011 – 2015	April Sanders Masarik, Doctoral student (Department of Human Development)
2011 – 2015	Jonathan Perez, Doctoral student (Animal Behavior Graduate Group)

2011 – 2014	Carolyn McCormick, Doctoral student (Department of Psychology)	
2013 - 2014	Katerina Marcoulides, Doctoral student (Department of Psychology)	
2013 – 2015	Jehan Sparks, Doctoral student (Department of Psychology)	
2013 – 2014	Jonas Miller, Doctoral student (Department of Psychology)	
2013 –	Nathan Smith, Doctoral student (Department of Psychology)	
2013 –	Emily Rothwell, Doctoral student (Animal Behavior Graduate Group)	
2013 – 2017	Natalia Duque, Doctoral student (Animal Behavior Graduate Group)	
2013 – 2017	Adam Goldring, Doctoral student (Department of Psychology)	
2013 – 2015	Tan Teck Kiang, Doctoral student (National Institute of Education, Nanyang	
2013 – 2013	University, Singapore)	
2013 –	Hao Ji, Doctoral student (Department of Statistics)	
2014 – 2015	Nancy McIntyre, Doctoral student (School of Education)	
2014 – 2015	Erin Freed, Doctoral student (Department of Psychology)	
2014 – 2015	Brandon King, Doctoral student (Department of Psychology)	
2014 –	Mary Bonaparte-Saller, Doctoral student (Animal Behavior Graduate Group)	
2014 – 2016	Emily Sievers Halket, Doctoral student (Department of Psychology)	
2014 – 2016	Christina Hollifield, Doctoral student (Department of Human Development)	
2014 – 2016	Olivia Lee, Doctoral student (Department of Statistics)	
2014 – 2017	Amber Schedlbauer, Doctoral student (Neuroscience Graduate Program)	
2015 –	Alea Skwara, Doctoral student (Department of Psychology)	
2015 –	Lynea Witczak, Doctoral student (Department of Psychology)	
2015 –	Forrest Rogers, Doctoral student (Department of Psychology)	
2015 –	Quinn Conklin, Doctoral student (Department of Psychology)	
2016 <b>–</b> 2016	Erin Winters, Doctoral student (School of Education)	
2016 –	Tiffany Johnson, Doctoral student (School of Education)	
2016 –	Sijia Huang, Doctoral student (School of Education)	
2014 –	Matt Miller, Doctoral student (Department of Psychology)	
2014 –	Rui Jiang, Doctoral student (Department of Psychology)	
2017 –		
	Anna Wysocki, Doctoral student (Department of Psychology)	
2017 –	Cody Carroll, Doctoral student (Department of Statistics)	
2018 –	Xiaodong Wang, Doctoral student (Department of Statistics)	
Undergraduate Students		
2005 – 2006	Brittany Gentile, Honors Thesis. Highest Honors (Department of Psychology)	
2006 – 2007	Bryan Matlen, Honors Thesis. Highest Honors (Department of Psychology)	
	Ph.D. (2013), Psychology, Carnegie Mellon University	
2013 – 2015	Laura Hofen, Department of Psychology	
2014 – 2015	Maxwell Hong, Department of Psychology	
	Ph.D. (2021 expected), Psychology, Notre Dame University	
2013 – 2017	Sabrina Huang, Department of Psychology,	
	Ph.D. (2022 expected), Communication, Stanford University	
2017 –	Aileen Ayala, Department of Psychology, UC Davis	
2018 –	Asrar Alkrizy, Department of Psychology, UC Davis	
Visiting Scholars		
May-June 05	Isabel Cuadrado Guirado, Visiting scholar, Universidad Nacional de Educación a	
	Distancia, Madrid, Spain	
April-May 06	Nekane Balluerka, Visiting scholar, Universidad del Pais Vasco, San Sebastian, Spain	

Aug-Dec 07	Ana María López, Visiting scholar, Universidad de Sevilla, Sevilla, Spain
Aug-Nov 08	Fernando Molero, Visiting scholar, Universidad Nacional de Educación a Distancia,
	Madrid, Spain
Aug 10 –	
July 11	Caiping Dang, Visiting scholar, Guangzhou Medical School, Guangzhou, China
March-Apr 11	Johan Braeken, Visiting scholar, Tilburg University, The Netherlands
Jan-May 12	Rebecca Bendaya, Visiting scholar, Universidad de Málaga, Spain
Jan-May 14	Eduardo Estrada, Visiting scholar, Universidad Autónoma de Madrid, Spain
Mar-June 15	Laura Bringmann, Visiting scholar, Katholieke Universiteit Leuven, Belgium
Aug 15 –	

August 16 Fang Lu, Visiting scholar, YanCheng Teachers College, Jiangsu, China

# Faculty Mentoring

August 2018 - Haiyan Liu, Ph.D. Assistant Professor, University of California, Merced

## Research Lab Students and Alumni

Elizabeth Abinante, Nahal Agahi, Sarah Andrews, Christie Barnett, Suk Brar, Philip Cello, Christina Crosetti, Michelle DeLong\*, Roman Deveras, Lizbeth Duran\*, Neil Eligado, Erica González\*, Jessica Gould, Annie Hayes, Cindy Hing, Mary Ho, Poplar Haines, Jonathan Helm\*, Cindy Hing, Yvonne Jefferson\*, Lauren Jenkins, Charlene Lal, Ignacia López, Jennifer Macway, Kimberly Malinowski, Bryan Matlen\*, Dale Mendoza, Nicole Nelson, Anh Nguyen, Teresa Nguyen, Katherine O'Leary, Jenna Ornbaun, Sofia Reamer, Alexandra Schade\*, Alicia Semiatin, Jason Sharp, Catherine Shih, Ashika Singh\*, Catherine Tran, Monique Truchetta, Arlene Visitacion, Hanna Walicki, Lydia Werner\*, Alaina White, Heather Wilson, Lindsey Yarbrough\*, Jenny Yen, Theresa Yim, Angie Yu

Updated July, 2018

<sup>\*</sup> Currently Attending Graduate School