# Curriculum Vitae Mario Fifić

Mario Fifić, Ph.D. Grand Valley State University One Campus Drive 2224 Au Sable Hall Allendale, MI 49401 616-331-5061 fificm@gvsu.edu Research: http://faculty.gvsu.edu/Fificm/index.html

# **Positions Held**

2017- Present	Associate Professor Psychology Department Grand Valley State University
2011-2017	Assistant Professor Psychology Department Grand Valley State University
2008-2011	Research scientist, Max Planck Institute for Human Development Center for Adaptive Behavior and Cognition, Berlin
2006-2008	Post-Doctoral Research, Robert Nosofsky's Lab Indiana University

# Grants awards and fellowships

- 2019 CSCE: Grant-In-Aid Center for Scholarly and Creative Excellence, 2012, \$3000
- 2019 NSF (SES-1854762 & 1854763) **PI: Mario Fifić**, Co-PI: Joseph W. Houpt, Title: Collaborative Research: "Determining the Fundamental Cognitive Properties of Decision Making, 2019-2022 [\$366,880]
- 2014 NCKU (National Cheng Kung University, Taiwan) 2014 top-notch project proposal: "Modeling cultural differences in face processing" PI: Yang Cheng-Ta, Co-PI: Mario Fifić, James Townsend, Hu Jon-Fan, and Tseng Yuan-Chi, [\$325,000]
- 2013 NSF (REU Supplement SES-1353989) **PI: Mario Fifić**, Research Experience for Undergraduates: 2014-2015, \$12,000

- 2012 NSF (SES-1156681) **PI: Mario Fifić**, Title "Stopping Rule Selection Theory, 2012-2016, \$111,743
- 2012 CSCE: Grant-In-Aid Center for Scholarly and Creative Excellence, 2012, \$3000
- 2000, 2001, 2002, 2003, 2004, Indiana University Cognitive Science Program Summer research Fellowship \$5000 each

### Awards

2018 R. Duncan Luce Outstanding Paper Award from the Society for Mathematical Psychology, Authors: Daniel R Little, Ami Eidels, Mario Fific, Tony Wang

# **Investigator on following grants**

NIMH (RO1 MH57717-04A1) to Dr. James Townsend MH48494 from the National Institute of Mental Health to Dr. Robert Nosofsky

# Education

Ph.D.	Joint Ph.D. in Cognitive Psychology and Cognitive Science, with Certificate in Mathematical Modeling 2000-2005 A member of James Townsend's laboratory; Doctoral candidate for joint Ph.D. in Cognitive Psychology and Cognitive Science, with Certificate in Mathematical Modeling, Indiana University; Bloomington, Indiana
ΜΑ	Psychology 1994 Finished all relevant courses, did not defend MA work Later published in LEP reports (1999) Department of Psychology Faculty of Philosophy University of Belgrade, Serbia and Montenegro
BA	Psychology 1991 - 1994 Department of Psychology Faculty of Philosophy University of Belgrade, Serbia and Montenegro

# **Professional Societies**

Society for Mathematical Psychology Association for Psychological Science Society for Judgment and Decision Making The Psychonomic Society American Psychological Association The Cognitive Science Society Configural Processing Consortium (CPC)

### **Professional Service**

#### Referee (ad hoc)

Perception and Psychophysics, Journal of Mathematical Psychology Journal of Experimental Psychology: Human Perception and Performance Journal of Experimental Psychology: Learning, Memory, and Cognition **Psychological Review** Acta Psychologica Journal of Business Research on Decision Making Psychonomic Bulletin & Review Frontiers **Psychological Bulletin** Decision Plos One **Cognitive Research Principles and Implications Computational Brain & Behavior Behavior Research Methods** Journal of Cognition The Quantitative Methods for Psychology

#### Grant reviewer (ad hoc)

U.S. National Science Foundation; NSF Merit Review

#### **Organizational committee**

2015 – Present	Cognitive Neuroscience Club of Grand Valley State University,
	Faculty Advisor
2018- Present	A member of the organizing committee of Configural Processing
	Consortium CPC

2019- Present A treasurer of the organizing committee of Configural Processing Consortium CPC

## **Publications**

- Fifić, M., Houpt, J. W., & Rieskamp, J. (2019). Response times as identification tools for cognitive Processes underlying decisions. In Schulte-Mecklenbeck, M. (Ed.), Kuehberger, A. (Ed.), Johnson, J. (Ed.). A Handbook of Process Tracing Methods. New York: Routledge, 2nd Edition.
- Yang, C. T., Hsieh, S., Hsieh, C. J., Fifić, M., Yu, Y. T., & Wang, C. H. (2019). An examination of age-related differences in attentional control by systems factorial technology. *Journal of Mathematical Psychology*, 92, [102280].
- Glavan, J. J., Fox, E. L., Fifić, M., & Houpt, J. W. (2019). Adaptive design for systems factorial technology experiments. *Journal of Mathematical Psychology*, 102278.
- Little, D. R., Eidels, A., Fifić, M., & Wang, T. S. L. (2018). How do information processing systems deal with conflicting information? Differential predictions for serial, parallel and coactive processing models. *Computational Brain & Behavior*, 1, 1–21.
- Yang, C., Fifić, M., Chang, T., & Little, D. R. (2018). Systems factorial technology provides new insights on the other-race effect. Psychonomic Bulletin & Review, 25(2), 596-604. doi:10.3758/s13423-017-1305-9
- Houpt, J. W. & Fifić, M. (2017). A hierarchical Bayesian approach to distinguishing serial and parallel processing. *Journal of Mathematical Psychology*, 79, 13-22.
- Fifić, M., Little, D. R. (2017). Stretching Mental Processes: An Overview of and Guide for SFT Applications. To appear in D. R. Little, N. Altieri, M. Fifić & C-T. Yang (Eds.). Systems Factorial Technology: A Theory Driven Methodology for the Identification of Perceptual and Cognitive Mechanisms. Elsevier.
- Altieri, N., Fifić, M., Little, D. R. & Yang, C-T. (2017). Historical foundations and a tutorial introduction to Systems Factorial Technology. To appear in D. R. Little, N. Altieri, M. Fifić & C-T. Yang (Eds.). Systems Factorial Technology: A Theory Driven Methodology for the Identification of Perceptual and Cognitive Mechanisms. Elsevier.
- Fifić, M. (2016) Simple Factorial Tweezers for detecting delicate serial and parallel processes. In "Mathematical Models of Perception and Cognition: Essays in Honor of James T. Townsend" (J. W. Houpt & L. M. Blaha, Eds), p. 77-152. New York: *Psychology Press*.
- Little, D. R., Eidels, A., Fifić, M., & Wang, T. (2015). Understanding the influence of distractors on workload capacity. Journal of Mathematical Psychology, 68-69, 25-36. doi:10.1016/j.jmp.2015.08.005 [R. Duncan Luce Outstanding Paper Award, 2018]

- Fifić, M. (2014) Double jeopardy in inferring cognitive processes. *Frontiers Psychology*. 5:1130. doi: 10.3389/fpsyg.2014.01130
- Fifić, M. & Gigerenzer, G. (2014). Are two interviewers better than one? *Journal of Business Research*, 67(8), 1771-1779. doi:10.1016/j.jbusres.2014.03.003
- Yang, H., Fifić, M., Townsend, J. T. (2014). Survivor Interaction Contrast Wiggle Predictions of Parallel and Serial Models for an Arbitrary Number of Processes. *Journal of mathematical psychology*. (59). p.82 – 94.
- Fifić M., & Buckmann M. (2013). Stopping Rule Selection (SRS) Theory Applied to Deferred Decision Making. In M. Knauff, M., Pauen, N., Sebanz, & I. Wachsmuth (Eds.) *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 2273- 2278). Austin TX: Cognitive Science Society.
- Nosofsky, R.M., Little, D.R., Donkin, C., & Fifić, M. (2011). Short-term memory scanning viewed as exemplar-based categorization. *Psychological Review*.
- Fifić, M., & Townsend, J. T. (2010). Information-processing alternatives to holistic perception: Identifying the mechanisms of secondary-level holism within a categorization paradigm. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 36, 1290-1313.
- Gaissmaier, W., Fifić, M., & Rieskamp, J. (2011). Analyzing response times to understand decision processes. In M. Schulte-Mecklenbeck, A. Kühberger & R. Ranyard (Eds.), A Handbook of Process Tracing Methods for Decision Making. (pp. 141-163) New York: Taylor & Francis.
- Fifić, M., Little, D. R., & Nosofsky, R. M. (2010). Logical-rule models of classification response times: A synthesis of mental-architecture, random-walk, and decisionbound approaches. *Psychological Review*, 117, 309-348.
- Fifić, M., Nosofsky, R. M., & Townsend, J. T. (2008). Information-processing architectures in multidimensional classification: A validation test of the systems factorial technology. *Journal of Experimental Psychology: Human Perception* and Performance, 34(2), 356-375.
- Fifić, M., Townsend J. T. & Eidels A. (2008). Studying visual search using systems factorial methodology with target-distractor similarity as the factor. *Perception & Psychophysics*.
- Townsend, J. T., Fifić, M., & Neufeld, R. W. J. (2007). Assessment of mental architecture in clinical/cognitive research. In T. A. Treat, R. R. Bootzin & T. B. Baker (Eds.), *Psychological clinical science: Papers in honor of richard M. McFall.* (pp. 223-258). New York, NY, US: Psychology Press.
- Fifić, M., (2006). Emerging holistic properties at face value: Assessing characteristics of face perception. *Unpublished Ph.D. thesis*.
- Townsend, J. T., Fifić M. (2004). Parallel versus serial processing and individual differences in high-speed search in human memory. *Perception & Psychophysics*. Vol 66(6), pp. 953-962.
- Fifić M., (2004). Temporal factors in short-term memory search, *Psihološka istraživanja*, 14, 233-300.
- Townsend, J. T., Fifić M., Assadi, A. (2003). *General recognition theory and probabilistic perceptual separability on simple cognitive surfaces*. Paper presented at the Fechner Day 2003, Larnaca, Cyprus.

- Fifić M., (2002). Dynamics of serial position change in probe-recognition task. *Psihologija*, 2002, Vol. 35 (3-4) 261-285.
- Townsend, J. T., Fifić M. (2001). *Representation and process in defining holisms partism: contributions from general recognition theory and stochastic cognitive process theory*. Paper presented at the Fechner Day 2001, Leipzig, Germany.
- Fifić M., (1999). Temporal factors in short-term memory search, part I: An introduction. *LEP report*, 72.
- Fifić M., (1999). Temporal factors in short-term memory search, part II: Organization of memory and memory search. *LEP report*, 73.
- Fifić M., (1999). Temporal factors in short-term memory search, part III: Recognition and reproduction. *LEP report*, 74.
- Fifić M., (1998). Selective attention and information processing in short-term memory. Paper presented at the symposium of Ergonomics, Belgrade 1998, 19-23.
- Duzdevic N. & Fifić M. and Brakus R., (1998). Education of mentally preserved children with cerebral palsy based on the level of their achievements. In monograph: Cerebral palsy, Belgrade 1998, 209-212.
- Fifić M., (1998). Dynamics of serial position change in probe-recognition task. *LEP report*, 64.
- Fifić M., (1997). Determination of stimulus-pair order in short-term memory. *LEP report*, 34.
- Fifić M., (1996). Modification of binary response and short-term memory processing. *Psihologija*, 29, 2-3, 311-331.
- Fifić M., (1996). Modification of pre-probe delay in the short-term memory recognition task. *Psihologija*, 29, 2-3, 331-353.

### **Recent Presentations**

- Olsen K., Van Til M., Erfourth L., Kistler T., & Fifić M. (2019) Diagnosing Short-Term Memory Scanning Using Systems Factorial Technology: A Conceptual Replication. A poster presented at the 60th, annual meeting of Psychonomics, Montreal, Canada.
- Fifić M., (2019). A poster presented: Neural circuits for stopping rules in human decision making., the annual meeting Federation of European Neuroscience Societies FENS, July. 2019 Belgrade, Serbia.
- Fifić M., Yang C., Little D., (2019). A talk presented at: Systems factorial technology provides new insights on the other-race effect. Configural Processing Consortium, Nov. 2019 Montreal, Canada.
- Fifić M., Yang C., Little D., (2019) Systems factorial technology provides new insights on the other-race effect. A talk presented at the The 52th Annual Meeting of the Society for Mathematical Psychology, Montreal, Canada.
- Fifić M. (2019 June), Perspectives (forward/backward) in the analysis of mental processes using factorial designs., Invited talk, 2019 Indiana University Bloomington.

- Fifić M., (2019, June). Systems factorial technology provides new insights on the otherrace effect . Oral presentation at 8th Annual Midwest Cognitive Science Conference, May, 2019 Columbus, Ohio.
- Fifić M. (2019, March), Are Two Heads Better Than One? A Cognitive Process Analysis Provides New Insights on the Group Decision Making Process. Grand Valley Sabbatical showcase.
- Huang C. & Yang C. & Fifić M. (2018) Studying Hybrid Search Using System Factorial Technology. A poster presented at the 59th, annual meeting of Psychonomics, Louisiana, New Orleans.
- Fifić M., Yang C., Little D., (2018). A talk presented at: Systems factorial technology provides new insights on the other-race effect. *Configural Processing Consortium, Nov 14. 2018 New Orleans*
- Goralski T., Hansen A. & Fifić M. (2018) Interactive Effects of Stopping Rules and Personality on Decision Making. A poster presented at the 59th, annual meeting of Psychonomics, Louisiana, New Orleans.
- Fifić, M. (2018) A Race Model for Multiple Stopping Rules in Decision Making. A Symposium organized at Tainan, April, 2018, National Cheng Kung University (NCKU), Taiwan.
- Fifić, M. Houpt, J. Rieskamp, J. (2018) A response time methodology for testing between compensatory or non-compensatory decision strategies using hierarchical Bayesian SFT approach. A talk presented at the The 51th Annual Meeting of the Society for Mathematical Psychology, Madison, Wisconsin.
- Fifić, M. (2018) A Race Model for Multiple Stopping Rules in Decision Making. An invited talk presented 2018 Feb, Wright State University, Ohio.
- Fifić, M. (2017) A Race Model for Multiple Stopping Rules in Decision Making. A talk presented at the 58th, annual meeting of Psychonomics, Vancouver, CA.
- Roth, Goralski & Fifić (2017) The Effects of Personality-Driven Decision Strategies and Decisiveness in Stopping Rule Evidence Collection. A poster presented at the 58th, annual meeting of Psychonomics, Vancouver, CA.
- Fifić, M. (2017) A Race Model for Multiple Stopping Rules in Decision Making. A talk presented at the The 50th Annual Meeting of the Society for Mathematical Psychology, Warwick, UK.
- Fifić, M. (2016) Determination of Decision Making Stopping Rules Using the Pattern Analysis. Presented at The 57th Annual Meeting of the Psychonomic Society, Boston MA.[Accepted]
- Bunker, C., Fifić, M., Pham, N., & Bulthuis, K. (2016) The Influence of Self-Esteem on Stopping Rule Decision-Making. Presented at The 57th Annual Meeting of the Psychonomic Society, Boston MA.[Accepted]
- Fifić M. (2016 July). The Triple-Stopping System For a Sequential Decision Task: The Cast-Net Stopping Rule Model. Invited talk, 2014 Max Planck Center for Adaptive Behavior and Cognition (ABC). Berlin, Germany
- Fifić M. (2016 March), The Triple-Stopping System For a Sequential Decision Task: The Cast-Net Stopping Rule Model., Invited talk, 2016 Indiana University Bloomington.

- Bunker, C., Fifić, M., Anasara, A., & Pham, N. (2015) Personality-Driven Decision Strategies and Decisiveness in Stopping Evidence Collection. Presented at The 56th Annual Meeting of the Psychonomic Society, Chicago IL.
- Bunker, C., Fifić, M. (2015) Personality-Driven Decision Strategies and Decisiveness in Stopping Evidence Collection. Presented at Grand Valley State University Student Psychology Colloquia Series, Allendale MI.
- Fifić M., & Buckmann M. (2015). A Triple-Stopping Threshold System For a Sequential Decision Task: A Cast-Net Stopping Rule Model. A talk presented at the 37th Subjective Probability, Utility and Decision Making Conference (SPUDM). Budapest, Hungary, Europe.
- Fifić M., (2015). A Triple-Stopping Threshold System For a Sequential Decision Task: A Cast-Net Stopping Rule Model. Presentation at The Psychology Research Colloquium Series, Grand Valley State University.
- Fifić M., & Buckmann M. (2015). A Triple-Stopping Threshold System For a Sequential Decision Task: A Cast-Net Stopping Rule Model. A poster presented at the 37th Annual Conference of the Cognitive Science Society. Pasadena, California.
- Fifić M. (2015). *Simple Factorial Tweezers for detecting delicate serial and parallel processes*. Presentation at 48<sup>th</sup> Annual Meeting of the Society of Mathematical Psychology, Newport Beach, California.
- Fifić M., (2015). A Triple-Stopping Threshold System For a Sequential Decision Task: A Cast-Net Stopping Rule Model. Presentation at Midwest Cognitive Science Conference, Mackinac Island, Michigan.
- Fifić M., (2014). *How do we make decision to stop? Stopping Rule Selection (SRS) Theory*, Poster presented at Society for Judgment and Decision Long Beach, California, November 21-24.
- Fifić M., M. (2014). *The double jeopardy to infer cognitive processes*. Talk presented at the 2014 Annual Meeting Psychonomic Society, November 20-23, 2014, Long Beach, California November 14-17.
- Fifić M. (2014 September) Keynote talk 2: The Modal Research Design for SFT Application in Face Perception: Conjunctive/Disjunctive-rule Stimulus Structures (AND/OR) and a Novel Signature of Holistic Face Perception: "Snake Wiggle", presented at 2014 meeting of Theory and Methodology in Configural Perception (TMCP) September 26-28, Tainan, Taiwan.
- Fifić M. (2014 September) Keynote talk 1: Identification of Mental Architectures in Face Perception Using the Systems Factorial Technology, presented at 2014 meeting of Theory and Methodology in Configural Perception (TMCP) September 26-28, Tainan, Taiwan.
- Fifić M., (2014 August). A snake wiggle of reaction time functions to indicate holistic perception. 37<sup>th</sup> European Conference on Visual Perception, Belgrade 24-28. August, Serbia, 2014.Poster.
- Fifić M., & Buckmann M. (2014 July). How do we make decision to stop? Stopping Rule Selection (SRS) Theory. Invited talk, 2014 Max Planck Center for Adaptive Rationality (ARC). Berlin, Germany.
- Fifić M., (2014, May). A processing ghost in a tank machine perception. Presentation at Midwest Cognitive Science Conference, Wright State University, Dayton, Ohio.

- Fifić M., (2013). A Processing Ghost in a Tank Machine, Invited Talk, Air Force Research Laboratory, Cognitive Lunch Brown Bag, November, 2013, Dayton Ohio.
- Fifić M., & Buckmann M. (2013). *Stopping Rule Selection (SRS) Theory Applied to Deferred Decision Making*. Talk presented at the 2013 Psychonomic Society Annual Meeting, Toronto Canada, November 14-17.
- Fifić M., & Little D. (2013). A snake wiggle of reaction time functions to indicate holistic perception. Presentation at 46<sup>th</sup> Annual Meeting of the Society of Mathematical Psychology, Potsdam, Germany.
- Fifić M., & Buckmann M. (2013). Stopping Rule Selection (SRS) Theory Applied to Deferred Decision Making. Poster presented at the 35th Annual Conference of the Cognitive Science Society. Berlin Germany.
- Fifić M., (2013). A snake wiggle of reaction time functions to indicate holistic perception. Presentation at Midwest Cognitive Science Conference, Ohio State University.
- Fifić M., (2013). A snake wiggle of reaction time functions to indicate holistic perception. Presentation at Midwest Cognitive Science Conference, Ohio State University.
- Fifić M., & Rieskamp J., (2012). Society for Judgment and Decision Making The 2012 33th Annual Conference Minneapolis, MN, *The Rosetta stone for cognitive and decision strategies*.
- Fifić M., (2012). CPC 2012 University in Minneapolis. A snake wiggle of reaction time functions to indicate holistic perception.
- Fifić M., & Rieskamp J., (2012). Max Planck Workshop on testing theories of choice, Max Planck Institute, Berlin, Germany *"The Rosetta Stone for Cognitive and Decision Strategies"*, poster.
- Fifić M., & Rieskamp J., (2012) Midwest Cognitive Science Conference, Bloomington Indiana, "A Response Time Methodology For Testing Compensatory and Non-Compensatory Decision Strategies".
- Fifić M., (2012) April, Invited talk Michigan State University "The Stopping-Rule Selection Theory (SRST) For Evidence Collection: How To Throw a Cast Net".
- Fifić M., (2011). A snake wiggle of reaction time functions to indicate holistic *perception*, Poster 53th Annual Meeting of the Psychonomic Society, Minneapolis, MN.

### Employment, teaching experience and assistantships

#### University of Belgrade, Serbia

- 1992 Tutor, summer session, in Petnica Science Center (center for advanced science and technology education), Petnica, Serbia
- 1994 99Teaching and Research Assistant, Laboratory for Experimental<br/>Psychology, Faculty of Philosophy, University of Belgrade, Serbia.
- A member of technical staff on project of Corpus of Serbian Language Laboratory for Experimental Psychology, Faculty of Philosophy and Institute for Experimental Phonetics and Speech Pathology, Belgrade, Serbia and Montenegro

# Indiana University Bloomington, Indiana, USA

1999 Fall	Statistical Techniques for undergrads majoring in Psychology
2000 Spring	Introductory Psychology for undergrads majoring in Psychology
2001 Fall	Mathematical psychology
2003 Fall	Mathematical psychology
2002 Fall	Advanced Statistical Analysis I
2003 Spring	Advanced Statistical Analysis II
2004 Fall	Advanced Statistical Analysis I
2005 Fall	Advanced Statistical Analysis II

# Instructor

# **Grand Valley State University, Michigan, USA Undergraduate** PSY 300: Research Methods

PSY 400: Advanced Research Methods PSY 361: Perception