

Vanessa R. Simmering

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EDUCATIONAL AND PROFESSIONAL HISTORY

Education

- 2008 Ph.D., University of Iowa
Psychology, Developmental Science training area
- 2001 B.S., University of Iowa
Psychology, with Honors

Professional Appointments

- 2017- Senior Research Scientist, ACTNext, ACT, Inc.
- 2008-18 Assistant Professor, Department of Psychology, University of Wisconsin – Madison (*on leave 2017-18 academic year*)
- 2002-08 Presidential Fellow / Graduate Research Assistant, Spatial Perception, Action, and Memory Laboratory, University of Iowa (Supervisor: John P. Spencer, Ph.D.)
- 2001-02 Laboratory Coordinator, Spatial Perception, Action, and Memory Laboratory, University of Iowa (Supervisor: John P. Spencer, Ph.D.)

RESEARCH

Grant Support

External

- “Strengthening the Validity of the National Assessment of Educational Progress through Increased Student Engagement in Technology-Enhanced Assessments”, National Center for Education Statistics through American Institute of Research (R&D Contract), **co-PI** (PI: Yigal Rosen), 2018-2019, \$200,000 (total)
- “Understanding Visual Memory Capacity using Neural Field Modeling over Development”, National Institute of Child Health & Human Development (1 R03 HD067481), **PI**, 2011-2013 (NCE to 2015), \$100,000 (direct)

Internal (University of Wisconsin - Madison)

- “Linking Behavior across Multiple Tasks and Cognitive Skills during Early Childhood”, Wisconsin Alumni Research Foundation Research Award (184458), **PI**, 2015-2016, \$46,688 (direct)
- “Typical Development of Visuospatial Cognition as a Piece in the Autism Puzzle”, Wisconsin Alumni Research Foundation Research Award (154776), **PI**, 2012-2014, \$40,112 (direct)
- “Developmental Changes in the Use of Spatial Reference Frames”, Wisconsin Alumni Research Foundation Research Award (136236), **PI**, 2010-2011, \$24,317 (direct)
- “Development of What and Where Systems in Visuo-Spatial Cognition”, Wisconsin Alumni Research Foundation Research Award (126736), **PI**, 2009-2010, \$30,301 (direct)

Publications

* Joint lead authors

° Lab manager

† Graduate trainee

‡ Undergraduate trainee

Refereed Journal Articles

- Arieli-Attali, M., Ou, L., & Simmering, V.R. (2019). Understanding test takers' choices in a self-adapted test: Hidden Markov modelling of process data. *Frontiers in Psychology: Quantitative Psychology and Measurement*, 10, 83. (Research Topic: Process Data in Educational and Psychological Measurement; H. Jiao, Q. He & B. Veldkamp, Eds.) doi: 10.3389/fpsyg.2019.00083

- †Miller, H.E. & **Simmering, V.R.** (2018). Children's attention to task-relevant information accounts for relations between language and spatial cognition. *Journal of Experimental Child Psychology*, *172*, 107-129. doi: 10.1016/j.jecp.2018.02.006
- †Miller, H.E., Vlach, H.A., & **Simmering, V.R.** (2017). Producing spatial words is not enough: Understanding the relation between language and spatial cognition. *Child Development*, *88*, 1966-1982. doi: 10.1111/cdev.12664
- Simmering, V.R.** & ‡Wood, C.M. (2017). The importance of real-time stability for visual working memory performance: Young children's feature binding can be improved through perceptual structure. *Developmental Psychology*, *53*, 1474-1493. doi: 10.1037/dev0000358
- †Miller, H.E., °Patterson, R., & **Simmering, V.R.** (2016). Language supports young children's use of spatial relations to remember locations. *Cognition*, *150*, 170-180. doi: 10.1016/j.cognition.2016.02.006
- Simmering, V.R.** (2016). Working memory capacity in context: Modeling dynamic processes of behavior, memory, and development. *Monographs of the Society for Research in Child Development*, *81*(3), 7-148. doi: 10.1111/mono.12202
- Simmering, V.R.** & †Miller, H.E. (2016). Developmental improvements in visual working memory resolution and capacity share a common source. *Attention, Perception, & Psychophysics*, *78*, 1538-1555. doi: 10.3758/s13414-016-1163-y
- Horst, J.S. & **Simmering, V.R.** (2015). Category learning in a dynamic world. *Frontiers in Psychology: Cognition*, *6*, 46. (Research Topic: *The Impact of Context on Category Learning*, R. Hammer & V. Sloutsky, Eds.) doi: 10.3389/fpsyg.2015.00046
- Simmering, V.R.**, †Miller, H.E., & Bohache, K. (2015). Different developmental trajectories across visual feature types support a dynamic field model of visual working memory development. *Attention, Perception, & Psychophysics*, *77*, 1170-1188. doi: 10.3758/s13414-015-0832-6
- *Johnson, J.S., ***Simmering, V.R.**, & Buss, A.T. (2014). Beyond slots and resources: Grounding cognitive concepts in neural dynamics. *Attention, Perception, & Psychophysics*, *76*, 1630-1654. (Special Issue: *The Structure of Visual Working Memory*, J. Wolfe, Ed.) doi: 10.3758/s13414-013-0596-9
- Simmering, V.R.** & Perone, S. (2013). Working memory capacity as a dynamic process. *Frontiers in Psychology: Developmental Psychology*, *3*:567, doi: 10.3389/fpsyg.2012.00567
- Simmering, V.R.** (2012). The development of visual working memory capacity in early childhood. *Journal of Experimental Child Psychology*, *111*, 695-707. doi: 10.1016/j.jecp.2011.10.007
- Simmering, V.R.** & °Patterson, R. (2012). Models provide specificity: Testing a proposed mechanism of visual working memory capacity development. *Cognitive Development*, *27*, 419-439. (Special Issue: *The Potential Contribution of Computational Modeling to the Study of Cognitive Development: When, and for What Topics?* S. Marcovitch & P.D. Zelazo, Eds.) doi: 10.1016/j.cogdev.2012.08.001
- Perone, S., **Simmering, V.R.**, & Spencer, J.P. (2011). Stronger neural dynamics capture changes in infants' visual working memory capacity over development. *Developmental Science*, *14*, 1379-1392. doi: 10.1111/j.1467-7687.2011.01083.x
- Schutte, A.R., **Simmering, V.R.**, & Ortmann, M.R. (2011). Keeping behavior in context: A dynamic systems account of a transition in spatial recall biases. *Spatial Cognition and Computation*, *11*, 313-342. doi: 10.1080/13875868.2011.579212
- Lipinski, J., **Simmering, V.R.**, Johnson, J.S., & Spencer, J.P. (2010). The role of experience in location estimation: Target distributions shift location memory biases. *Cognition*, *115*, 147-153. doi: 10.1016/j.cognition.2009.12.008

- Simmering, V.R.**, Triesch, J., Deák, G.O., & Spencer, J.P. (2010). A dialogue on the role of computational modeling in developmental science. *Child Development Perspectives*, 4, 152-158. doi: 10.1111/j.1750-8606.2010.00134.x
- Simmering, V.R.**, Peterson, C., Darling, W., & Spencer, J.P. (2008). Location memory biases reveal the challenges of coordinating visual and kinesthetic reference frames. *Experimental Brain Research*, 184, 165-178. doi: 10.1007/s00221-007-1089-7
- Simmering, V.R.**, Schutte, A.R., & Spencer, J.P. (2008). Generalizing the dynamic field theory of spatial cognition across real and developmental time scales. *Brain Research*, 1202, 68-86. (Special Issue: *Computational Cognitive Neuroscience*, S. Becker, Ed.) doi: 10.1016/j.brainres.2007.06.081
- Simmering, V.R.** & Spencer, J.P. (2008). Generality with specificity: The dynamic field theory generalizes across tasks and time scales. *Developmental Science*, 11, 541-555. doi: 10.1111/j.1467-7687.2008.00700.x
- Simmering, V.R.** & Spencer, J.P. (2007). Carving up space at imaginary joints: Can people mentally impose spatial category boundaries? *Journal of Experimental Psychology: Human Perception and Performance*, 33, 871-894. doi: 10.1037/0096-1523.33.4.871
- Simmering, V.R.**, Spencer, J.P., & Schöner, G. (2006). Reference-related inhibition produces enhanced position discrimination and fast repulsion near axes of symmetry. *Perception and Psychophysics*, 68, 1027-1046. doi: 10.3758/BF03193363
- Spencer, J.P., **Simmering, V.R.**, & Schutte, A.R. (2006). Toward a formal theory of flexible spatial behavior: Geometric category biases generalize across pointing and verbal response types. *Journal of Experimental Psychology: Human Perception and Performance*, 32, 473-490. doi: 10.1037/0096-1523.32.2.473

Book Chapters (Invited)

- *Perone, S. & ***Simmering, V.R.** (2017). Applications of dynamic systems theory to cognition and development: New frontiers. In J. Benson (Ed.) *Advances in Child Development and Behavior* (Vol. 52, pp. 43-80). Elsevier. doi: 10.1016/bs.acdb.2016.10.002
- Johnson, J.S. & **Simmering, V.R.** (2015). Integrating perception and working memory in a three-layer dynamic field model. In G. Schöner, J.P. Spencer, & **the DFT Research Group** (Eds.) *Dynamic Thinking: A Primer on Dynamic Field Theory* (pp. 151-168). New York: Oxford University Press.
- Simmering, V.R.** & Schutte, A.R. (2015). Developmental dynamics: The spatial precision hypothesis. In G. Schöner, J.P. Spencer, & **the DFT Research Group** (Eds.) *Dynamic Thinking: A Primer on Dynamic Field Theory* (pp. 251-270). New York: Oxford University Press.
- Spencer, J.P., **Simmering, V.R.**, Schutte, A. R., & Schöner, G. (2007). What does theoretical neuroscience have to offer the study of behavioral development? Insights from Dynamic Field Theory. In J.M. Plumert & J.P. Spencer (Eds.) *The Emerging Spatial Mind* (pp. 320-361). New York: Oxford University Press.

Presentations

Invited Addresses and Colloquia

- Research in assessment and student evaluation. (2019, February). Global Educators Forum, Beijing, China.
- New trends in educational competencies, assessment, and college admissions. (2019, February). Panel discussion, Global Educators Forum, Beijing, China.
- In-the-moment influences on visual working memory capacity and development. (2018, June) In *Making Working Memory Work*. Expanding the Field Workshop, University of East Anglia.
- Developing new ways to measure attention in young children. (2016, December). *Brown Bag Seminar*, Ripon College, Ripon, WI.

- Bridging visual working memory research from infancy through adulthood using dynamic systems models. (2016, July). In V. Camos (Chair) *Working Memory Development*. Invited symposium at the 31st International Congress of Psychology, Yokohama, Japan.
- Taking a dynamic systems perspective on cognitive development. (2016, May). *Cognition and Development Brown Bag Seminar*, University of Oregon, Eugene, OR.
- Understanding visual working memory capacity limits across tasks and development through a dynamic systems model. (2016, May). *Cognitive Neuroscience of Learning and Memory Seminar*, University of Oregon, Eugene, OR.
- Taking a dynamic systems perspective on working memory and development. (2016, March). *Institute of Child Development Brown Bag Seminar*, University of Minnesota, Minneapolis, MN.
- Investigating how and when language relates to spatial skills. (2015, October). *Development of Spatial Thinking, Cognitive Development Society Preconference*, Columbus, OH.
- Exploring the link between language and spatial skills (2015, September). *Cognitive and Behavioral Sciences Proseminar*, Illinois State University, Bloomington, IL.
- Young children's failure to use intrinsic reference frames: Problems with selection or updating? (2013, May). *Spatial Memory: Bayes and Beyond Conference*, Richmond, VA.
- Capacity in context: Dynamic processes of behavior, memory, and development. (2012, June). In J.P. Spencer (Chair) *From Complex Insights to Complex Systems: Rethinking How Development Happens*. Invited symposium at the 42nd Annual Meeting of the Jean Piaget Society, Toronto, Ontario.
- What does capacity measure? The Dynamic Field Theory explains why visual working memory capacity estimates differ across tasks and development. (2009, March). *Spence Award Colloquium*, University of Iowa, Iowa City, IA.

Conference Papers and Symposia (past 10 years only)

- Ou, L., †Hofman, A., **Simmering, V.R.**, Bechger, T., Maris, G., & van der Maas, H. (2018, July). Modeling person-specific development of math skills in continuous time: New evidence for mutualism. Paper to be presented at the 12th International Conference on Educational Data Mining, Montreal, QC.
- †Miller, H.E., Kirkorian, H., & **Simmering, V.R.** (2019, March). Using head-mounted eye-tracking to understand effects of language on children's spatial skills. In H.E. Miller (Chair) *Process-Based Approaches to Understanding Spatial Development: The Role of Attention, Language, And Gesture*. Paper presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Baltimore, MD.
- Young, A.G., Ou, L., & **Simmering, V.R.** (2018, November). Young children's collaboration in an active category learning task. Paper to be presented at the 59th Annual Meeting of the Psychonomic Society, New Orleans, LA.
- †Cochrane, A., Austerweil, J.L., **Simmering, V.R.**, & Green, C.S. (2018, July). Rapid learning in early attentional processing: Bayesian estimation of trial-by-trial updating. In *Learning Models*. Paper presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.
- Ou, L., Hofman, A., **Simmering, V.R.**, Maris, G., van der Maas, H. (2018, July). Continuous-time mutualism model of intelligence development. Paper presented the joint 51st Annual Meeting of the Society for Mathematical Psychology and 16th Annual Meeting of the International Conference on Cognitive Modelling, Madison, WI.
- Simmering, V.R.**, Ou, L., & Maris, G. (2018, July). A cross-disciplinary look at non-cognitive assessments. In G. Maris (Chair) *Non-cognitive Psychometric Theory and Assessment*. Paper presented at the 83rd Annual Meeting of the Psychometric Society, New York, NY.

- †Andrews, C.M., ‡Leuenberger, R., Kovack-Lesh, K.A., & **Simmering, V.R.** (2018, June). How does attention influence looking versus pointing? Eye-tracking in a novel touchscreen paradigm. In L. Colosimo (Chair) *Action, Perception, and Learning*. Paper presented at the 48th Annual Meeting of the Jean Piaget Society, Amsterdam, Netherlands.
- †Miller, H.E., & **Simmering, V.R.** (2018, May). Using eye-tracking to understand the complex relations between attention and language in children's spatial skill development. In L.K. Perry (Chair) *Kids in Space: The Dynamic Coupling between Space and Language Development*. Paper presented at the 48th Annual Meeting of the Jean Piaget Society, Amsterdam, Netherlands.
- †Miller, H.E., & **Simmering, V.R.** (2016, November). Examining language and gesture in spatial reasoning. In J. Sutton (Chair) *Spatial Cognition*. Paper presented at the 57th Annual Meeting of the Psychonomic Society, Boston, MA.
- †Miller, H.E. & **Simmering, V.R.** (2016, August). General mechanisms underlying language and spatial cognitive development. In *Space and Language*. Paper presented at the 38th Annual Meeting of the Cognitive Science Society, Philadelphia, PA.
- †Miller, H.E. & **Simmering, V.R.** (2016, August). Multiple factors contributing to children's use of the intrinsic reference frame during recall. In H. Tabor (Chair) *Development and Education*. Paper presented at the Spatial Cognition Conference, Philadelphia, PA.
- †Andrews, C.M. & **Simmering, V.R.** (2016, June). Testing a proposed account of visual working memory development through the effect of similarity. In D. Uttal (Chair) *Executive Function and Working Memory*. Paper presented at the 46th Annual Meeting of the Jean Piaget Society, Chicago, IL.
- †Cochrane, A.K., Green, C.S., & **Simmering, V.R.** (2016, June). Mapping the links between working memory and fluid reasoning in school-aged children. In D. Uttal (Chair) *Executive Function and Working Memory*. Paper presented at the 46th Annual Meeting of the Jean Piaget Society, Chicago, IL.
- †Jensen, C.A., **Simmering, V.R.**, & Rogers, T.T. (2016, June). The touch of knowledge: A developmental exploration of the impact of conceptual knowledge on visual recognition in a touchscreen change-detection paradigm. In *Conceptual Development*. Paper presented at the 46th Annual Meeting of the Jean Piaget Society, Chicago, IL.
- †Miller, H.E. & **Simmering, V.R.** (2016, June). Processes involved in the development of the intrinsic reference frame. In H.E. Miller (Chair) *Understanding Mechanisms Supporting Spatial Cognition Early in Development*. Paper presented at the 46th Annual Meeting of the Jean Piaget Society, Chicago, IL.
- Simmering, V.R.** & Perone, S. (2016, June). Connecting the dots: Developmental continuity in working memory processes from infancy through later childhood. In **V.R. Simmering** (Chair) *New Insights from Systems Approaches to Cognition and Development*. Paper presented at the 46th Annual Meeting of the Jean Piaget Society, Chicago, IL.
- †Miller, H.E., Vlach, H.A., & **Simmering, V.R.** (2015, November). The role of selection in the relation between language and spatial cognition. In V. Camos (Chair) *Working Memory III*. Paper presented at the 56th Annual Meeting of the Psychonomic Society, Chicago, IL.
- †Jensen, C., **Simmering, V.R.**, & Rogers, T.T. (2015, June). From general to specific: A developmental exploration of the influence of conceptual knowledge on visual recognition. In U. Müller (Chair) *Cognitive Development II*. Paper presented at the 45th Annual Meeting of the Jean Piaget Society, Toronto, Ontario.
- Simmering, V.R.** (2015, June). Feature binding in visual working memory is impaired during early childhood and can be improved through adding spatial structure. In E. Amsel (Chair) *Cognitive Development I*. Paper presented at the 45th Annual Meeting of the Jean Piaget Society, Toronto, Ontario.
- Simmering, V.R.** (2015, June). Re-conceptualizing working memory development as increasing dynamic stability: A dynamic systems model. In **V.R. Simmering** (Chair) *Bringing Together Research*

using Different Approaches and Age Groups to Understand the Development of Visuospatial Working Memory. Paper presented at the 45th Annual Meeting of the Jean Piaget Society, Toronto, Ontario.

- †Miller, H.E., **Simmering, V.R.**, & Vlach, H.A. (2015, March). Evaluating relations between spatial language and spatial skills across tasks. In *Spatial Reasoning in Early and Middle Childhood*. Paper presented at the 71st Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.
- †Miller, H.E., Vlach, H.A., & **Simmering, V.R.** (2015, March). Quality of children's spatial language use predicts spatial skills. In H.E. Miller (Chair) *Understanding the Development of Spatial Language Use and Spatial Skills*. Paper presented at the 71st Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.
- Simmering, V.R.** (2015, March). Effects of task context can shed light onto cognitive self-organization: Taking a dynamic view of visual memory development. In S. Perone (Chair) *Thinking beyond the Lab: Understanding Cognition across Contexts can Advance the Application of Developmental Research*. Paper presented at the 71st Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.
- †Miller, H.E., Vlach, H.A., & **Simmering, V.R.** (2014, May). The role of selection and flexibility in language use in developing spatial skills. In H.E. Miller (Chair) *Putting the Pieces Together: The Role of Spatial Language in Spatial Cognition*. Paper presented at the 44th Annual Meeting of the Jean Piaget Society, San Francisco, CA.
- Simmering, V.R.** (2013, October). (Chair) *Development of Visual Attention: Implications across Contexts and Populations*. Symposium presented at the 8th Biennial Meeting of the Cognitive Development Society, Memphis, TN.
- Simmering, V.R.** & Perone, S. (2011, March). (Chairs) *New Insights from Dynamic Systems Approaches to Development*. Symposium presented at the 69th Biennial Meeting of the Society for Research in Child Development, Montreal, Quebec.
- Simmering, V.R.**, Johnson, J.S., ‡Patterson, C.M., & Spencer, J.P. (2009, July). When objects disintegrate: Young children do not bind features in visual working memory. In L. Gresham (Chair) *Development and Representation*. Paper presented at the 31st Annual Meeting of the Cognitive Science Society, Amsterdam, Netherlands.

Conference Posters (past 10 years only)

- †Andrews, C.M., ‡Leuenberger, R., Kovack-Lesh, K.A., & **Simmering, V.R.** (2019, March). *Attention across action systems: Bridging the gap in attention measurement techniques across development*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development.
- ‡Leuenberger, R., †Andrews, C.M., **Simmering, V.R.**, & Kovack-Lesh, K.A. (2019, March). *Bridging the gap in attentional task design and developing age-appropriate measurements: A cross-task examination*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development.
- †Miller, H.E. & Simmering, V.R. (2019, March). *Adult-provided versus children's spontaneous use of spatial words on spatial performance*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development.
- Ou, L., Hofman, A., **Simmering, V.R.**, Arieli-Attali, M., Maris, G., van der Maas, H., von Davier, A.A. (2018, October) *Learning as a complex system: A dynamic modeling approach*. Poster presented at CresstCon 2018, Los Angeles, CA.
- Arieli-Attali, M., Ou, L., & **Simmering, V.R.** (2018, July). *Predicting choices of item difficulty in self-adapted testing using hidden Markov models*. Poster presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.

- †Jensen, C.A., Rogers, T.T., & **Simmering, V.R.** (2018, July). *Children regularize object shape but not object color in visual recognition tasks*. Poster presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.
- ‡Leuenberger, R.E., †Andrews, C.M., Kovack-Lesh, K.A., & **Simmering, V.R.** (2018, July). *Comparing flanker effects in direction and color over development*. Poster presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.
- †Miller, H.E., ‡Weber, J.M., & **Simmering, V.R.** (2018, July). *Differentiation by domain in young children's analogical reasoning*. Poster presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.
- ‡Weber, J.M., †Miller, H.E., Ou, L., & **Simmering, V.R.** (2018, July). *Children's representations of five spatial terms*. Poster presented at the 40th Annual Meeting of the Cognitive Science Society, Madison, WI.
- Arieli-Attali, M., Ou, L., & **Simmering, V.R.** (2018, June). *Modelling the dynamics of choice in self-adapted testing under learning versus performance goals*. Poster presented at the Expanding the Field Workshop, University of East Anglia.
- Simmering, V.R.**, †Cochrane, A.K., & Green, C.S. (2017, November). *Identifying targets for cognitive training to improve fluid reasoning in children and young adults*. Poster presented at the Educational Technology & Computational Psychometrics Symposium, Iowa City, IA.
- †Miller, H.E., †Andrews, C.M., & **Simmering, V.R.** (2017, October). *How language and gesture use during spatial tasks provide novel insights into spatial processing*. Poster presented at the 10th Biennial Meeting of the Cognitive Development Society, Portland, OR.
- †Miller, H.E., †Jensen, C., Austerweil, J. & **Simmering, V.R.** (2017, October). *Investigating flexibility in young children's spatial recall strategies through probabilistic modeling*. Poster presented at the 10th Biennial Meeting of the Cognitive Development Society, Portland, OR.
- †Andrews, C.M., ‡Coates, E., Kovack-Lesh, K.A., & **Simmering, V.R.** (2017, July). *Predicting preschool-aged children's behavior regulation from attention tasks in the lab*. Poster presented at the 39th Annual Meeting of the Cognitive Science Society, London, UK.
- Simmering, V.R.** & Perone, S. (2017, July) *Bridging visual working memory research from infancy through adulthood with dynamic neural field modeling*. Poster presented at the 39th Annual Meeting of the Cognitive Science Society, London, UK.
- †Andrews, C.M., ‡Coates, E., Kovack-Lesh, K.A., & **Simmering, V.R.** (2017, April). *Comparing multiple measures of attention in preschool-aged children*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Austin, TX.
- †Cochrane, A.K., Green, C.S., & **Simmering, V.R.** (2017, April). *Attentional capacity and selection: Comparing middle childhood to adulthood*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Austin, TX.
- †Cochrane, A.K., Green, C.S., & **Simmering, V.R.** (2017, April). *Visual cognitive subprocesses predicting reasoning in middle childhood and adulthood*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Austin, TX.
- †Jensen, C., **Simmering, V.R.**, & Rogers, T.T. (2017, April). *A developmental exploration of the role of knowledge and perception on visual object recognition*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Austin, TX.
- †Miller, H.E., & **Simmering, V.R.** (2017, April). *During the spatial task: Children's quality of language use predicts spatial performance*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Austin, TX.

- †Miller, H.E., & **Simmering, V.R.** (2017, April). *Individual differences in 4-year-olds' attention to relevant cues across language, memory, and spatial tasks*. Poster presented at the 72nd Biennial Meeting of the Society for Research in Child Development, Austin, TX.
- †Jensen, C., **Simmering, V.R.**, & Rogers, T.T. (2016, August). *A computational consideration of object recognition across development*. Poster presented at the 15th Neural Computation and Psychology Workshop, Philadelphia, PA.
- †Jensen, C., **Simmering, V.R.**, & Rogers, T.T. (2016, August). *Modeling the influence of knowledge on recognition: Connecting visual recognition behavior across development to PDP computational models of semantic knowledge*. Poster presented at the 38th Annual Meeting of the Cognitive Science Society, Philadelphia, PA.
- †Cochrane, A.K., Green, C.S., & **Simmering, V.R.** (2015, October). *Developmental contributions of attention and working memory to higher cognition*. Poster presented at the 9th Biennial Meeting of the Cognitive Development Society, Columbus, OH.
- †Jensen, C., **Simmering, V.R.**, & Rogers, T.T. (2015, October). *Is a hump-less camel real? The role of knowledge in visual recognition*. Poster presented at the 9th Biennial Meeting of the Cognitive Development Society, Columbus, OH.
- †Miller, H.E., Vlach, H.A., & **Simmering, V.R.** (2015, October). *Relation between language and spatial cognition: Uncovering mechanisms*. Poster presented at the 9th Biennial Meeting of the Cognitive Development Society, Columbus, OH.
- ‡Grahn, C., ‡Cooper, T.L., †Miller, H.E., & **Simmering, V.R.** (2015, March). *Developmental changes in the effects of similarity on visual working memory*. Poster presented at the 71st Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.
- †Jensen, C., †Miller, H.E., & **Simmering, V.R.** (2015, March). *Developmental changes in how children weight spatial information*. Poster presented at the 71st Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA.
- †Miller, H.E., Vlach, H.A., & **Simmering, V.R.** (2014, July). *Language use and spatial development*. Poster presented at the 36th Annual Conference of the Cognitive Science Society, Quebec City.
- †Miller, H.E., & **Simmering, V.R.** (2013, October). *Language facilitates 4-year-olds' use of intrinsic reference frame during recall*. Poster presented at the 8th Biennial Meeting of the Cognitive Development Society, Memphis, TN.
- Simmering, V.R.** (2013, April). *Do children represent integrated objects in visual working memory?* Poster presented at the 70th Biennial Meeting of the Society for Research in Child Development, Seattle, WA.
- Simmering, V.R.** (2013, April). *Precision of visual working memory predicts capacity development*. Poster presented at the 70th Biennial Meeting of the Society for Research in Child Development, Seattle, WA.
- ‡Miller, H.E., **Simmering, V.R.**, & °Patterson, R. (2012, November). *The role of spatial language in reference frame selection over development*. Poster presented at the 53rd Annual Meeting of the Psychonomic Society, Minneapolis, MN.
- Simmering, V.R.**, ‡Miller, H.E., & °Patterson, R. (2011, April). *The role of landmarks in children's use of local spatial reference frames*. Poster presented at the 69th Biennial Meeting of the Society for Research in Child Development, Montreal, Quebec.
- Simmering, V.R.** & °Patterson, R. (2011, March). *A neural field model of visual working memory development: Insights into capacity limitations*. Poster presented at the 69th Biennial Meeting of the Society for Research in Child Development, Montreal, Quebec.

Spencer, J.P., **Simmering, V.R.**, & Johnson, J.S. (2009, May). *What is capacity? Grounding cognitive concepts in neural dynamics with a dynamic neural field model of visual working memory*. Poster presented at the 9th Annual Meeting of the Vision Sciences Society, Naples, FL.

Campus Talks (while at University of Wisconsin - Madison, excluding Psychology Department)

Shared processes underlying spatial skills and language development. (2016, December). *Waisman Center Early Childhood seminar series*.

Re-conceptualizing visuospatial memory development as an increase in dynamic stability. (2015, February). *UW Chaos and Complex Systems seminar series*.

How young children remember what they saw where. (2014, January). *McPherson Eye Research Institute seminar series*.

Linking brain development to behavioral change using computational models of cognition. (2013, February). *Waisman Center Early Childhood seminar series*.

Using neural models to understand developmental improvements in working memory capacity. (2012, November). *Frontiers in Education: Education and Neuroscience Initiative*.

Cognition in the context of perception and action. (2010, December). *McPherson Eye Research Institute seminar series*.

Professional Organization Memberships and Affiliations

Cognitive Development Society

Society for Research in Child Development

Cognitive Science Society

Spatial Intelligence and Learning Center
(Spatial Network Member)

Delta Center (Affiliate)

McPherson Eye Research Institute

Vision Sciences Society

Psychonomic Society (Fellow)

TEACHING

University of Wisconsin - Madison

Undergraduate Courses

Cognitive Development (lecture course)

Development of Perception, Action, and Cognition (capstone seminar)

Topics in Psychology for Honors Students (co-taught informational seminar)

Graduate Courses

Basics of Human Memory

Development of Perception, Action, and Cognition

Dynamic Systems Approaches to Cognition and Development

SERVICE

Professional Service

Review Service: Grants

Ad hoc reviewer

Society for Research in Child Development Small Grants (2019)

Swiss National Science Foundation (2014)

University of Lethbridge, Insight Development Grants (2015)

College of Reviewers (2014-16), National Science Foundation, Developmental and Learning Sciences program

Review Service: Journals

Editorial board

2017- *Journal of Cognition & Development*
 2013-17 *Journal of Experimental Child Psychology*
 2013-15 *Developmental Psychology*

Ad hoc reviewer

<i>Attention, Perception, & Psychophysics</i>	<i>Infancy</i>
<i>British Journal of Developmental Psychology</i>	<i>Journal of Experimental Psychology: Human Perception & Performance</i>
<i>Child Development</i>	<i>Journal of Experimental Psychology: Learning, Memory, & Cognition</i>
<i>Child Development Research</i>	<i>Memory & Cognition</i>
<i>Child Neuropsychology</i>	<i>Psychological Bulletin</i>
<i>Cognition</i>	<i>Psychology & Neuroscience</i>
<i>Cognitive Development</i>	<i>Psychology of Sport & Exercise</i>
<i>Cognitive Processes</i>	<i>Psychometrika</i>
<i>Cognitive Psychology</i>	<i>Quarterly Journal of Experimental Psychology</i>
<i>Cognitive Science</i>	<i>Spatial Cognition & Computation</i>
<i>Cognitive Systems Research</i>	
<i>Educational Psychology</i>	
<i>Frontiers in Psychology</i>	

Review Service: Conference Submissions

Annual Meeting of the Cognitive Science Society
 Biennial Meeting of the Society for Research in Child Development
 International Conference on Development and Learning and on Epigenetic Robotics

Institutional Service**ACT, Inc.**

Intellectual Property Committee member (2018-)
 Learning Solutions Interest Group co-chair (2018-)

University Service (University of Wisconsin - Madison)

McPherson Eye Research Institute Education Subcommittee chair (2013-16) and member (2011-13, 2016-17)
 McPherson Eye Research Institute Leadership Committee member (2010-16)

Departmental Service (University of Wisconsin - Madison Psychology Department)

Area Chair, Cognitive (2009-11, 2015-17), Developmental (2009-10, 2012-13, 2016-17)
 Graduate Committee member (2009-10, 2011-12, 2013-14, 2015-17)
 Undergraduate Committee member (2010-11, 2012-13, 2014-15)