

# Scott D. Gronlund

Roger and Sherry Teigen Presidential Professor

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2008-present	Roger and Sherry Teigen Presidential Professor
2002-present	Professor of Psychology, University of Oklahoma
1995-2002	Associate Professor, University of Oklahoma
1989-1995	Assistant Professor, University of Oklahoma

## Academic Training

1986-1989	Postdoctoral Fellowship, Northwestern University, Supervisor, R. Ratcliff
1981-1986	Ph.D., Indiana University, Cognitive psychology, minor in mathematics <ul style="list-style-type: none"><li>➤ University Fellowship, 1981; Doctoral grant-in-aid, 1985</li><li>➤ Dissertation—<i>Multi-level storage and retrieval: An empirical investigation and theoretical analysis</i>, Advisor, R. M. Shiffrin</li></ul>
1977-1981	B. A., University of California, Irvine, Psychology, <i>cum laude</i>

## Accomplishments

- Prepared *Amicus Brief* for US Supreme Court for petitioner Kevin Keith
- Fellow of the Association for Psychological Science (APS)
- Fellow of the Psychonomic Society
- Elected to Phi Beta Kappa

## Research Interests

I conduct use-inspired, basic research on human memory. This has included work on the impact of automation on cognitive performance, situation awareness, and prospective memory (especially with air traffic controllers). My current focus is eyewitness identification, including the transformative role of decision confidence. My approach includes the application of formal computational models.

## External Funding

Showups vs. Lineups: A Comparison of Two Identification Techniques, National Science Foundation (NSF), co-PI (2011-2015), \$114,706 + \$8092 supplement

Weather Decision Making in the Cockpit, Federal Aviation Administration (FAA), co-PI (2009-2011, 2013), \$478,165, PI Rick Thomas

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Doctoral Dissertation Research: Using Mugshots to Improve Eyewitness Identification Accuracy, National Science Foundation (NSF), Principal Investigator (2009-2010), \$6055, co-PI Charlie Goodsell

Contributions of Recollection and Distinctiveness to the Sequential Lineup Advantage, National Science Foundation (NSF), Principal Investigator (2007-2010) \$204,231 + REG Supplement, \$7358

Sequential Lineups: Contributions of Recollection and Distinctiveness, National Science Foundation (NSF), Principal Investigator (2003-2005) \$155,000 + REG Supplement \$7193

Air traffic control planning and its computer interfaces: Current and future, Federal Aviation Administration (FAA), Principal Investigator (1997-1999) \$302,000

Analysis of the role of memory in air traffic control situation awareness and performance, Federal Aviation Administration (FAA), Principal Investigator (1995-1997) \$165,000

An investigation of the cognitive factors in the transition from flight strips to electronic displays, Federal Aviation Administration (FAA), co-PI (1991-1994) \$650,000

Cognitive processing of electronic flight data in air traffic control Federal Aviation Administration (FAA), co-PI (1990-1991) \$23,400

## **Publications**

Mickes, L., Seale-Carlisle, T. M., Wetmore, S. A., **Gronlund**, S. D., Clark, S. E., Carlson, C. A., Goodsell, C. A., Weatherford, D. & Wixted, J. T. (in press). ROCs in eyewitness identification: Instructions vs. confidence ratings. *Applied Cognitive Psychology*.

Wixted, J. T., Mickes, L., Wetmore, S. A., **Gronlund**, S. D. & Neuschatz, J. S. (in press). ROC analysis in theory and practice. *Journal of Applied Research in Memory and Cognition*.

Key, K. N., Wetmore, S. A., Neuschatz, J. S., **Gronlund**, S. D., Cash, D. K., & Lane, S. (in press). Lineup fairness affects postdictor validity and don't know responses. *Applied Cognitive Psychology*.

Mickes, L. & **Gronlund**, S. D. (in press). Eyewitness Identification. J. H. Byrne (Ed.) *Learning and Memory: A Comprehensive Reference 2E, Volume Cognitive Psychology of Memory*. Elsevier.

Mickes, L., Clark, S. E., & **Gronlund**, S. D. (2017). Distilling the confidence-accuracy message *Psychological Science in the Public Interest*, 18, 6-9.

Key, K. N., Wetmore, S. A., Cash, D. K., Neuschatz, J. S., & **Gronlund**, S. D. (2017). The effect of post-ID feedback on retrospective self-reports in showups. *Journal of Police and Criminal Psychology*.

Key, K., Cash, D., Neuschatz, J. S., Price, J., Wetmore, S. A., & **Gronlund**, S. D. (2016). Age differences (or lack thereof) in discriminability for lineups and showups. *Psychology, Crime, and Law*. 21, 871-889.

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- McAdoo, R. M. & **Gronlund**, S. D. (2016). Relative judgment theory and the mediation of facial recognition: Implications for theories of eyewitness identification. *Cognitive Research: Principles and Implications*, 1, 1-12.
- Neuschatz, J. S., Wetmore, S. A., Key, K., Cash, D., **Gronlund**, S. D., & Goodsell, C. A. (2016). Comprehensive evaluation of showups. In M. K. Miller & B. H. Bornstein (Eds.), *Advances in Psychology and Law (Vol. 1)*. New York: Springer.
- Clark, S. E., Benjamin, A. S., Wixted, J. T., Mickes, L., & **Gronlund**, S. D. (2015). Eyewitness identification and the accuracy of the criminal justice system. *Policy Insights from the Behavioral and Brain Sciences*, 2, 175-186.
- Neuschatz, J. S., Wetmore, S. A., & **Gronlund**, S. D., (2015). Memory gaps and memory errors: Interdisciplinary directions. R. A. Scott and S. M. Kosslyn (Eds.), *Emerging Trends in the Social and Behavioral Sciences*. Hoboken, NJ, Wiley and Sons.
- Wetmore, S. A., Neuschatz, J. S., **Gronlund**, S. D., Key, K. N., & Goodsell, C. A. (2015). Do the clothes make the criminal? The influence of clothing match on identification accuracy in showups. *Journal of Applied Research in Memory and Cognition*, 4, 36-42.
- Wixted, J. T., Mickes, L., Clark, S. E., **Gronlund**, S. D. & Roediger, H. L. (2015). Initial eyewitness confidence reliably predicts eyewitness identification accuracy. *American Psychologist*, 70, 515-526.
- Gronlund**, S. D., Mickes, L., Wixted, J. T. & Clark, S. E. (2015). Conducting an eyewitness lineup: How the research got it wrong. B. H. Ross (Ed.) *The Psychology of Learning and Motivation*, 63, (pp. 1-43), Academic Press, Waltham, MA.
- Clark, S. E., & **Gronlund**, S. D. (2015). Mathematical modeling shows that compelling stories do not make for accurate descriptions of data. J. G. W. Raaijmakers, R. Goldstone, M. Steyvers, A. Criss, and R. M. Nosofsky (Eds.). *Cognitive Modeling in Perception and Memory: A Festschrift for Richard M. Shiffrin*. Psychology Press, pp. 245-258.
- Goodsell, C. A., **Gronlund**, S. D., & Neuschatz, J. S. (2015). Investigating mugshot commitment. *Psychology, Crime, and Law*, 21, 219-233.
- Wetmore, S. A., Neuschatz, J. S., **Gronlund**, S. D., Wooten, A., Goodsell, C. A., & Carlson, C. A. (2015). Effect of retention interval on showup and lineup performance. *Journal of Applied Research in Memory and Cognition*, 4, 8-14.
- Gronlund**, S. D. & Neuschatz, J. S. (2014). Eyewitness identification discriminability: ROC analysis versus logistic regression. *Journal of Applied Research in Memory and Cognition*, 3, 54-57.
- Andersen, S. M., Carlson, C. A., Carlson, M., & **Gronlund**, S. D. (2014). Individual differences predict eyewitness identification performance. *Personality and Individual Differences*, 60, 36-40.
- Clark, S. E., Moreland, M. B., & **Gronlund**, S. D. (2014). Evolution of the empirical and theoretical foundations of eyewitness identification reform. *Psychonomic Bulletin & Review*, 21, 251-267.

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- Wixted, J. T., **Gronlund**, S. D., & Mickes, L. (2014). Policy regarding the sequential lineup is not informed by probative value but is informed by ROC analysis. *Current Directions in Psychological Science*, *23*, 17-18.
- Fife, D., Perry, C., & **Gronlund**, S. D. (2014). Revisiting absolute and relative judgments in the WITNESS model. *Psychonomic Bulletin & Review*, *21*, 479-487.
- Gronlund**, S. D., Wixted, J. T., & Mickes, L. (2014). Evaluating eyewitness identification procedures using ROC analysis. *Current Directions in Psychological Science*, *23*, 3-10.
- Wetmore, S. A., Neuschatz, J. S., & **Gronlund**, S. D. (2013). On the power of secondary confession evidence. *Psychology, Crime, and Law*, *20*, 339-357.
- Gronlund**, S. D., & Carlson, C. A. (2013). System-based research on eyewitness identification. T. Perfect and D. S. Lindsay (Eds.), *Handbook of Applied Memory*, Sage Publishing.
- Goodsell, C. A., Wetmore, S. A., Neuschatz, J. S., & **Gronlund**, S. D. (2013). Showups vs. lineups: A review of two identification techniques. B. Cutler (Ed.), *Reform of eyewitness identification procedures*, APA Publications.
- Gronlund**, S. D., Andersen, S. M., & Perry, C. (2013). Presentation methods. B. Cutler (Ed.), *Reform of eyewitness identification procedures*, APA Publications.
- Gronlund**, S. D., & Kimball, D. R. (2013). Remembering and forgetting: From the laboratory looking out. W. Arthur, E. Day, W. Bennett, & A. Portrey (Eds.), *Individual and team skill decay: State of the science and implications for practice*, New York, NY, Routledge/Psychology Press.
- Gronlund**, S. D., Carlson, C. A., Neuschatz, J. S., Goodsell, C. A., Wetmore, S. A., Wooten, A., & Graham, M. (2012). Showups versus lineups: An evaluation using ROC analysis. *Journal of Applied Research in Memory and Cognition*, *1*, 221-228.
- Carlson, C. A., **Gronlund**, S. D., Weatherford, D. R., & Carlson, M. A. (2012). Processing differences between feature-based facial composites and photos of real faces. *Applied Cognitive Psychology*, *26*, 525-540.
- Gronlund**, S. D., Goodsell, C. A., & Andersen, S. M. (2012). Lineup procedures in eyewitness identification. L. Nadel & W. Sinnott-Armstrong (Eds.), *Memory and Law*, New York: Oxford University Press.
- Carlson, C. A., & **Gronlund**, S. D. (2011). Searching for the sequential lineup advantage: A distinctiveness explanation. *Memory*, *19*(8), 916-929.
- Ozcan, M. S., **Gronlund**, S. D., Trojan, R., Khan, Q., Cure, J., & Wong, C. (2011). Does a BIS-guided maintenance of anesthetic depth prevent implicit memory? *Psychology*, *2*(3), 143-149.
- Goodsell, C. A., **Gronlund**, S. D., & Carlson, C. A. (2010). Exploring the sequential lineup advantage using WITNESS. *Law and Human Behavior*, *34*, 445-459.
- Gronlund**, S. D., Carlson, C. A., Dailey, S. B., & Goodsell, C. A. (2009). Robustness of the sequential lineup advantage. *Journal of Experimental Psychology: Applied*, *15*, 140-152.

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- Goodsell, C. A., Neuschatz, J. S., & **Gronlund**, S. D. (2009). Effects of mugshot commitment on lineup performance in young and older adults. *Applied Cognitive Psychology*, *23*, 788-803.
- Johnson, D. R., & **Gronlund**, S. D. (2009). Individuals lower in working memory capacity are particularly vulnerable to anxiety's disruptive effect on performance. *Anxiety, Stress, and Coping*, *22*, 201-213.
- Carlson, C. A., **Gronlund**, S. D., & Clark, S. E. (2008). Lineup composition, suspect position, and the sequential lineup advantage. *Journal of Experimental Psychology: Applied*, *14*, 118-128. (This research was highlighted in the *APA Monitor*, May 2008)
- Hahn, S., & **Gronlund**, S. D. (2007). Top-down guidance in visual search for facial expressions. *Psychonomic Bulletin and Review*, *14*, 159-165.
- Gronlund**, S. D., Carlson, C. A., & Tower, D. (2007). Episodic memory. F. T. Durso (Ed.), *The Handbook of Applied Cognition*, vol. 2, pp. 111-136.
- Hahn, S., Carlson, C., Singer, S., & **Gronlund**, S. D. (2006). Aging and visual search: Automatic and controlled attentional bias to threat faces. *Acta Psychologica*, *123*, 312-336.
- Gronlund**, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. M., & Mills, S. H. (2005). Planning in air traffic control: Impact of problem type. *International Journal of Aviation Psychology*, *15*, 269-293.
- Gronlund**, S. D. (2005). Sequential lineup advantage: Contributions of distinctiveness and recollection. *Applied Cognitive Psychology*, *19*, 23-37.
- Gronlund**, S. D. (2004). Sequential lineups: Shift in criterion or decision strategy? *Journal of Applied Psychology*, *89*, 362-368.
- Moertl, P. M., Canning, J. M., **Gronlund**, S. D., Dougherty, M. R. P., Johansson, J. & Mills, S. H. (2002). Aiding Planning in Air Traffic Control: An Experimental Investigation of the Effects of Perceptual Information Integration. *Human Factors*, *44*, 404-412.
- Gronlund**, S. D., Canning, J. M., Moertl, P. M., Johansson, J., Dougherty, M. R. P., & Mills, S. H. (2002). An information organization tool for planning in air traffic control. *International Journal of Aviation Psychology*, *12*, 377-390.
- Nikolic', D. & **Gronlund**, S. D. (2002). A tandem random walk model of the SAT paradigm: Response times and accumulation of evidence. *British Journal of Mathematical and Statistical Psychology*, *55*, 263-288.
- Dougherty, M. R. P, **Gronlund**, S. D., & Gettys, C. F. (2002). Memory as a fundamental heuristic for decision making. S. Schneider and J. Shanteau's (Eds.) *Emerging Perspectives in Judgment and Decision Making*, 125-164.
- Gottesman, C.V., & **Gronlund**, S. D. (2001). The distribution of attention and effects on memory for scene expanse [Abstract]. *Journal of Vision*, *1*(3):212, 212a, <http://journalofvision.org/1/3/212/>, doi:10.1167/1.3.212.
- Moertl, P. M., Canning, J. M., Johansson, J., **Gronlund**, S. D., Dougherty, M. R. P., & Mills, S. H. (2000). Workload and Performance in FOPA: A Strategic Planning Interface for Air

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Traffic Control. *Proceedings of the 44th annual meeting of the Human Factors and Ergonomics Society*, 3-65 – 3-68.

- Canning, J. M., Johansson, J., **Gronlund**, S. D., Dougherty, M. R. P., & Mills, S. H. (1999). Effects of a novel interface design on strategic planning by en route controllers. In R. S. Jensen & J. D. Callister (Eds.), *Proceedings of the 10th International Symposium on Aviation Psychology* (pp. 528–533). Columbus: Ohio State University Press.
- Dougherty, M. R. P., **Gronlund**, S. D., Durso, F. T., Canning, J. & Mills, S. H. (1999). Plan generation in air traffic control. In R. S. Jensen & J. D. Callister (Eds.), *Proceedings of the 10th International Symposium on Aviation Psychology* (pp. 534-539). Columbus: Ohio State University Press.
- Durso, F. D., & **Gronlund**, S. D. (1999). Situation awareness. F. T. Durso, R. Nickerson, R. Schvaneveldt, S. Dumais, M. Chi, & S. Lindsay (Eds.), *The Handbook of Applied Cognition*, Wiley, pp. 283-314.
- Ohr, D. D., & **Gronlund**, S. D. (1999). The list-length effect and continuous memory: Confounds and solutions, C. Izawa (Ed.), *On Human Memory: Evolution, Progress and Reflections on the 30th anniversary of the Atkinson-Shiffrin Model*, 105-125.
- Gronlund**, S. D., Ohr, D. D., Dougherty, M. R. P., Perry, J. L., & Manning, C. A. (1998). Role of memory in air traffic control. *Journal of Experimental Psychology: Applied*, 4, 263-280.
- Edwards, M. B., & **Gronlund**, S. D. (1998). Task interruption and its affect on memory. *Memory*, 6, 665-687.
- Dougherty, M. R. P., Perry, J. L., Ohr, D. D., **Gronlund**, S. D. & Manning, C. A. (1997). Use of spatial memory by air traffic controllers. In R. S. Jensen & L. A. Rakovan (Eds.), *Proceedings of the 9th International Symposium on Aviation Psychology*. (pp. 1412-1416). Columbus, OH, Ohio State University Press.
- Gronlund**, S. D., Edwards, M. B., & Ohr, D. D. (1997). Comparison of the retrieval of item versus spatial position information. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 23, 1261-1274.
- Clark, S. E., & **Gronlund**, S. D. (1996). Global matching models of recognition memory: How the models match the data. *Psychonomic Bulletin and Review*, 3, 37-60. [**9th most-cited paper in the Social Sciences among OU faculty**]
- Vortac\*\***, O. U., Barile, A. L., Albright, C. A., Truitt, T. R., Manning, C. A. & Bain, D. (1996). Automation of flight data in air traffic control. In D. Herrmann, C. McEvoy, C. Hertzog, P. Hertel, & M. Johnson (Eds.), *Basic and applied memory research: Practical aspects*. Volume 2. Hillsdale, NJ: Erlbaum, 353-366.
- \*\*O. U. Vortac** was the pseudonym of Frank Durso, Scott Gronlund, & Stephan Lewandowsky.
- Edwards, M. B., Fuller, D. K., **Vortac**, O. U., & Manning, C. A. (1995). The role of flight progress strips in en route air traffic control: A time-series analysis. *International Journal of Human-Computer Studies*, 43, 1-13.

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- Truitt, T. R., Albright, C. A., Barile, A. B., **Vortac**, O. U., & Manning, C. A. (1995). How controllers compensate for the lack of flight progress strips. *Proceedings of the 8th International symposium on Aviation Psychology*, Columbus, OH.
- Vortac**, O. U., Edwards, M. B., & Manning, C. A. (1995). Role of external cues in prospective memory. *Memory*, 3, 201-219.
- Albright, C. A., Truitt, T. R., Barile, A. B., **Vortac**, O. U., & Manning, C. A. (1994). Controlling traffic without flight progress strips: Compensation, workload, performance, and opinion. *Air Traffic Control Quarterly*, 2, 229-248. Reprinted: Koenig, R. L. (1996). Air traffic controllers operate successfully without flight progress strips in study, *Airport Operations*, 22, 1-6.
- Vortac**, O. U., & Manning, C. A. (1994). Modular automation: Automating sub-tasks without disrupting task flow. M. Mouloua & R. Parasuraman (Eds.), *Human Performance in Automated Systems: Current Research and Trends*, (pp. 325-331). Hillsdale, NJ: Erlbaum.
- Vortac**, O. U., Edwards, M. B., & Manning, C. A. (1994). Sequences of actions for individual and teams of air traffic controllers, *Human-Computer Interaction*, 9, 319-343.
- Gronlund**, S. D., & Elam, L. E. (1994). List-length effect: Recognition accuracy and the variance of underlying distributions. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 20, 1355-1369.
- Vortac**, O. U., Edwards, M. B., Jones, J. P., Manning, C. A., & Rotter, A. J. (1993). En route air traffic controller's use of flight progress strips: A graph-theoretic analysis. *International Journal of Aviation Psychology*, 3, 327-343.
- Vortac**, O. U. (1993). Should Hal open the Pod Bay Doors? An argument for modular automation. D. J. Garland & J. A. Wise (Eds.) *Human Factors and Advanced Aviation Technologies*, Embry-Riddle Aeronautical University.
- Vortac**, O. U., Edwards, M. B., Fuller, D. K., & Manning, C. A. (1993). Automation and cognition in air traffic control: An empirical investigation. *Applied Cognitive Psychology*, 7, 631-651.
- Gronlund**, S. D., & Lewandowsky, S. (1992). Making TV commercials as a teaching aid for cognitive psychology. *Teaching of Psychology*, 19, 158-160.
- Reprinted in *Handbook of Demonstrations and Activities in Teaching Psychology: Volume 2: Physiological-Comparative, Perception, Learning, Cognition, and Developmental*, 2<sup>nd</sup> edition. M. E. Ware & D. E. Johnson (Eds.), Erlbaum, 2000.
  - Reprinted in *Handbook of Demonstrations and Activities in Teaching Psychology: Volume 2: Physiological-Comparative, Perception, Learning, Cognition, and Developmental*, M. E. Ware & D. E. Johnson (Eds.), Erlbaum, 1996.
- Ratcliff, R., Sheu, C.-F., & **Gronlund**, S. D. (1992). Testing global memory models using ROC curves. *Psychological Review*, 99, 518-535.
- Gronlund**, S. D., & Ratcliff, R. (1991). Analysis of the Hockley and Murdock decision model. *Journal of Mathematical Psychology*, 35, 319-344.

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**Gronlund, S. D., Sheu, C-F., & Ratcliff, R. (1990).** Implementation of global memory models with software that does symbolic computation. *Behavioral Research Methods, Instruments, and Computers*, 22, 228-235.

Shiffrin, R. M., Murnane, K., **Gronlund, S. D., & Roth, M. (1989).** On units of storage and retrieval. C. Izawa (Ed.), *Current issues in cognitive processes: The Tulane Flowerree Symposium on Cognition*, Erlbaum.

**Gronlund, S. D., & Ratcliff, R. (1989).** The time course of item and associative information: Implications for global memory models. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 15, 846-858.

**Gronlund, S. D., & Shiffrin, R. M., (1986).** Retrieval strategies and recall of natural categories and categorized-lists. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 12, 550-561.

### **Other publications**

Wixted, J. T., Mickes, L, Clark, S. E., Gronlund, S. D., & Roediger, H. L. The changing story of eyewitness confidence and the validity of identification. *The Police Chief* 81 (November 2014): 14–15.

Gronlund, S. D. & students from Psy4263, Spring 2009. *Eyewitness identification procedures in Oklahoma*.

Gronlund, S. D. (Sept, 2001). Memory as evidence: Handle with care. *Undercurrent Newspaper*.

Clark, S. E., & Gronlund, S. D. (2000). Memory distortions: The good, the bad, and the forgotten. Review of *Memory distortions and their prevention*. M. J. Intons-Peterson, D. L. Best (Eds.), Mahwah, NJ: Lawrence Erlbaum Associates, *Applied Cognitive Psychology*.

Gronlund, S. D., Goodsell, C. A., Carlson, C. A., Dailey, S. B. (2008). Memory for people. Review of *Handbook of Eyewitness Psychology: Volume II Memory for People*. Lindsay, R. C. L., Ross, D. F., Read, J. D., & Togliani, M. P. (2007). Mahwah, NJ: Lawrence Erlbaum Associates, *Applied Cognitive Psychology*, 22, 585-586.

### **Theses Supervised**

- Shannon M. (Andersen) Toftley (human factors specialist, Pacific Science and Engineering)
  - Ph.D. 2015, *Eyewitness identification: An investigation of the feature-detection hypothesis*
  - MS 2011, *Role of recollection in the sequential lineup advantage*
- Eugenie Bertus (Senior Usability Developer, BMC Software)
  - MS 1991, *The role of higher order units and attention in recognition memory*
- Curt A. Carlson (professor, Texas A&M University, Commerce)
  - MS 2004, *Contributions of item-based and event-based distinctiveness to eyewitness identification*
  - Ph.D. 2008, *Distinctiveness in an eyewitness paradigm: Comparing simultaneous and sequential lineups*
- Jerry Crutchfield (human factors specialist, FAA)



- Ph.D. 2005, *Predicting subjective workload ratings: A comparison and synthesis of the theoretical models*
- Sarah Dailey
  - MS 2007, *Biasing memory for skin tone by manipulating a racial marker*
- Michael R. P. Dougherty (professor, University of Maryland)
  - Ph.D. 1999, *Integration of the ecological and error models of overconfidence using a multiple-trace memory model*
- Mark B. Edwards (human factors specialist, US West)
  - MS 1991, *How position and order information relate to the item/associative distinction*
  - Ph.D. 1993, *Task interruption and its effects on memory*
- Laurie E. Elam
  - BS 1991, *Variance of memory-strength distributions and the list-length effect*
- Charles A. Goodsell (professor, Canisius College)
  - Ph.D. 2010, *Contributions of memory and decision processes to lineup identifications following mugshot exposure*
- Lt. Col. Michael Kolb
  - Ph.D. 2012, *Soldier and robot interaction in a combat environment*
- Kathryn Lindsey (human factors researcher, FAA)
  - MS 1996, *Competing explanations of how people learn symptom and disease associations in base-rate neglect*
- Peter Moertl (research scientist, Titan Systems)
  - Ph.D. 2002, *Information extraction*
- Danko Nikolic' (scientist, Max Planck Institute, Frankfurt)
  - MS, 1997, *A tandem random walk model for the speed-accuracy tradeoff paradigm*
  - Ph.D. 1999, *Neurophysiological mechanisms underlying the distinction between automatic and controlled processes*
- Eve E. Ogden
  - Ph.D. 2003, *Biased probing of memory: A new explanation of hindsight bias*
- Daryl D. Ohrt (Usability Engineer, Xcelerate)
  - MS 1995, *The list-length effect: Controls and theoretical implications*
- Colton J. Perry, (Microsoft Studios User Research)
  - MS 2012, *The processing orientation technique: What processes are affected by global or local orientation prior to eyewitness lineups?*
  - Ph.D. 2015, *The interactions of wearable computers and cognitive processes: Can cognitive theory help wearables improve human performance and mitigate device distraction?*
- Jennifer L. Perry (professor, Baldwin-Wallace College)
  - MS 1998, *Effects of Interruptions on the cognitive management of complex tasks*
  - Ph.D. 2002, *Cognitive individual differences predict strategy selection in a future memory task*
- Shawn R. Singer
  - MS 2005, *A cognitive and psychometric analysis of the Implicit Association Test*
- Gary L. Thomson
  - MS 1996, *Effect of interruptions on routine, modified, and novel task sequences*

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- Debra Tower (post-doc, University of Oklahoma)
  - MS 2006, *Postdictors of accuracy and the role of recollection in correct lineup identifications*
  - Ph.D. 2012, *Greebles and Broncos: A test of expertise in the cross-race effect*
- Stacy A. Wetmore (post-doc, Royal Holloway, University of London)
  - Ph.D. 2015, *Exploration of the other-race recognition deficit*

## **Presentations at National and International Meetings**

- Shiffrin, R. M., & Gronlund, S. D. Retrieval strategies. Presented at the 16th annual Mathematical Psychology meetings, Boulder, CO, August, 1983.
- Gronlund, S. D. & Shiffrin, R. M. Retrieval strategies in human memory. Presented at the 24th annual Psychonomic Society meetings, San Diego, CA, November, 1983.
- Gronlund, S. D. & Shiffrin, R. M. A model of sentence memory. Presented at the 19th annual Mathematical Psychology meetings, Cambridge, MA, August, 1986.
- Ratcliff, R., McKoon, G., & Gronlund, S. D. Nonmonotonic response signal functions for item and relational information. Presented at the 28th annual Psychonomic Society meetings, Seattle, WA, November, 1987.
- Gronlund, S. D., & Ratcliff, R. Examination of the Hockley and Murdock decision model. Presented at the 21st annual Mathematical Psychology meetings, Evanston, IL, July, 1988.
- Gronlund, S. D., Sheu, C-F., Ratcliff, R. Implementation of global memory models with software that does symbolic computation. Presented at the Society for Computers in Psychology Conference, Atlanta, GA, November, 1989.
- Ratcliff, R., Sheu, C-F., Gronlund, S. D. Using ROC data to test variance assumptions of memory models. Presented at the 31st Annual Psychonomic Society meetings, New Orleans, LA, November, 1990.
- Gronlund, S. D., & Elam, L. Variance of memory-strength distributions and the list-length effect. Presented at the 24th annual Mathematical Psychology meetings, Bloomington, IN, August, 1991.
- Gronlund, S. D. Mathematica Workshop. Presented at the Society for Computers in Psychology Conference, San Francisco, CA, November, 1991.
- Gronlund, S. D., Edwards, M. B., and Bertus, E. L. Time course of retrieval: Implications for models of memory. Presented at the 32nd Annual Psychonomic Society meetings, San Francisco, CA, November, 1991.
- Gronlund, S. D., & Edwards, M. B. Time course of retrieval: Implications for models of memory. Presented at the 25th International Congress of Psychology, Brussels, Belgium, July, 1992.
- Gronlund, S. D., Durso, F. T., Lewandowsky, S., Edwards, M. B., Jones, J., Manning, C., & Rotter, A. J. Air traffic control: Description of time-linked behaviors. Presented at the 25th International Congress of Psychology, Brussels, Belgium, July, 1992.
- Li, S.-C., Lewandowsky, S., & Gronlund, S. D. Parameter sensitivity in models of recognition memory. Presented at the 25th annual Mathematical Psychology meetings, Stanford, CA, August, 1992.
- Edwards, M. B., Vortac, O. U., Shehab, R. L., & Manning, C. A. Automation in air traffic control: Memory implications. Presented at the 36th annual Human Factors Society meetings, Atlanta, GA, October, 1992.
- Lewandowsky, S., Durso, F. T., Gronlund, S. D., & Manning, C. A. Modular automation in air traffic control. Presented at the International Symposium on Aviation Conference, Columbus, OH, April, 1993.
- Gronlund, S. D., Edwards, M. B., & Ohrt, D. D. Item information precedes position information in recognition. Presented at the American Psychological Society meetings, Chicago, IL, June, 1993.
- Durso, F. T., Manning, C. A., Lewandowsky, S., Gronlund, S. D., & Albright, C. Presentation and representation of flight data in air traffic control. Presented at the International Conference on Human-Computer Interaction, Orlando, FL, June, 1993.
- Lewandowsky, S., Li, S.-C., Gronlund, S. D., & DeBrunner, V. Parameter sensitivity in models of recognition memory. Presented at the meeting of the European Mathematical Psychology Group, Moscow, Russia, September, 1993.
- Edwards, M. B., & Gronlund, S. D. Task interruptions and its effects on memory. Presented at the 32nd Annual Psychonomic Society meetings, Washington DC, November, 1993.
- Lewandowsky, S., Durso, F. T., Gronlund, S. D., & Manning, C. A. Modular automation: Automating sub-tasks without disrupting task flow. Presented at the First Automation Technology and Human Performance conference, Washington, DC, April, 1994.
- Manning, C. A., McMillin, W., & Vortac, O. U. Impact of air traffic control automation on operational errors involving flight progress strips. Presented at the 65th annual meeting of the Aerospace Medical Association, San Antonio, TX, May, 1994.
- Edwards, M. B., & Gronlund, S. D. Task interruptions and its effects on memory. Presented at the 3rd Practical Aspects of Memory conference, Washington DC, August, 1994.
- Durso, F. T., Lewandowsky, S., Gronlund, S. D., & Manning, C. A. Automation of flight data in air traffic control. Presented at the 3rd Practical Aspects of Memory conference, Washington DC, August, 1994.
- Gronlund, S. D., & Ohrt, D. D. List-length effect: Controls and theoretical implications. Presented at the 35th Annual Psychonomics Society meetings, St. Louis, MO, November, 1994.

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- Truitt, T. R., Albright, C. A., Barile, A. B., Vortac, O. U., & Manning, C. A. How controllers compensate for the lack of flight progress strips. Presented at the 8th International symposium on Aviation Psychology, Columbus, OH, April, 1995.
- Ohrt, D. D., & Gronlund, S. D. List-length effect: Controls and theoretical implications. Presented at the 28th annual Mathematical Psychology meetings, Irvine, CA, August, 1995.
- Gronlund, S. D., & Thomson, G. L. Effects of interruptions on familiar and modified tasks. Presented at the 36th Annual Psychonomics Society meetings, Los Angeles, CA, November, 1995.
- Gronlund, S. D., Thomson, G. L., & Perry, J. L. Recovery from interruptions of task sequences. Presented at the International conference on memory, Abano Terme, Italy, July, 1996.
- Nikolic, D., & Gronlund, S. D. A tandem random walk model for the speed-accuracy trade-off paradigm. Presented at the 29<sup>th</sup> annual Mathematical Psychology meetings, Chapel Hill, NC, August, 1996.
- Gronlund, S. D., & Perry, J. L. The effect of type and placement of interruptions. Presented at the 37th Annual Psychonomics Society meetings, Chicago, IL, November, 1996.
- Gronlund, S. D., Dougherty, M. R. P., Ohrt, D. D., Perry, J. L., & Manning, C. A. Role of memory in air traffic control. Ninth International Symposium on Aviation Psychology, Columbus, OH, April, 1997
- Perry, J. L., & Gronlund, S. D. The effects of interruptions on the cognitive management of complex tasks. Presented at the American Psychological Society meetings, Washington, DC, May, 1997.
- Nikolic, D., & Gronlund, S. D. Psychological Refractory Period in the SAT Paradigm: Implications for Tandem Random Walk Model. Presented at the 30<sup>th</sup> annual Mathematical Psychology meetings, Bloomington, IN, August, 1997.
- Ohrt, D. D., & Gronlund, S. D. Testing effects in recognition memory. Presented at the 38th Annual Psychonomics Society meetings, Philadelphia, November, 1997.
- Dougherty, M. R. P., Gronlund, S. D., Canning, J., Durso, F. T., and Mills, S. H. Strategic Planning in Air Traffic Control. Presented at the 4<sup>th</sup> Naturalistic Decision Making Conference, Washington, DC, May, 1998.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. & Mills, S. H. Strategic planning in air traffic control. Presented at the 39th annual Psychonomics Society meeting, Dallas, TX, November, 1998.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. & Mills, S. H. Strategic planning in air traffic control. Presented at the 10th International symposium on Aviation Psychology, Columbus, OH, May, 1999.
- Canning, J. M., Johansson, J., Gronlund, S. D., Dougherty, M. R. P., & Mills, S. H. Effects of a novel interface design on strategic planning by en route controllers. Presented at the 10th International symposium on Aviation Psychology, Columbus, OH, May, 1999.
- Gronlund, S. D. Memory distortions and the perturbation model. Presented at the 40<sup>th</sup> annual Psychonomics Society meetings, Los Angeles, November, 1999.
- Gronlund, S. D., Dougherty, M. R. P., Canning, J. M., & Mills, S. H. Strategic planning in a complex environment. Presented at SARMAC, Miami, FL, June, 2000.
- Moertl, P. M., Canning, J. M., Johansson, J., Gronlund, S. D., Dougherty, M. R. P. & Mills, S. H. Workload and performance in FOPA: A strategic planning interface for air traffic control, Presented at the Human Factors Society meeting, San Diego, CA, July, 2000.
- Gottesman, C. V., & Gronlund, S. D. The distribution of attention and effects on memory for scene expanse, Vision Sciences Society, Sarasota, FL May 4-8, 2001.
- Durso, F. T., Devito, J., & Gronlund, S. D. False memories while DRMin: Self-generated memories attributed to others. Presented at the 42<sup>th</sup> annual Psychonomics Society meetings, Orlando, November, 2001.
- Gronlund, S. D. Encoding and retrieval effects in lineups. Presented at the 42<sup>th</sup> annual Psychonomics Society meetings, Orlando, November, 2001.
- Gottesman, C. V., & Gronlund, S. D. The effects of attention distribution on memory for spatial layout. Presented at the 42<sup>th</sup> annual Psychonomics Society meetings, Orlando, November, 2001.
- Bard, D. E., & Gronlund, S. D. Pseudo-diagnosticsity in client-therapist interactions: Could faulty Bayesian inference be responsible for false memories? Judgment and Decision Making Conference, Kansas City, MO, November, 2002..
- Gronlund, S. D. Model for memory errors in a lineup study. Presented at the 43<sup>rd</sup> annual Psychonomics Society meetings, Kansas City, November, 2002.
- Gronlund, S. D., Singer, S., & Carlson, C. Contributions of distinctiveness and recollection to lineup performance, Presented at the Interdisciplinary Conference on Human Performance, Orange County, FL, April, 2003.
- Gronlund, S. D., Carlson, C., & Singer, S. Model of the Sequential Lineup Advantage. Presented at the Society for Applied Research in Memory and Cognition, Aberdeen, Scotland, July, 2003.
- Gronlund, S. D., Singer, S., & Carlson, C. Contributions of distinctiveness and recollection to lineup performance, Invited presentation at the Psychology & Law International, Interdisciplinary Conference, Edinburgh, Scotland, July, 2003.
- Bard, D. E., & Gronlund, S. D. Induced Pseudodiagnosisity in Client-Therapist Interraactions: Could Faulty Bayesian Inference Be Responsible for False Memories? Presented at the 25<sup>th</sup> annual meeting for the Society for Medical Decision Making, Chicago, IL, Oct., 2003.
- Gronlund, S. D., Carlson, C., & Singer, S. Sequential Lineup Advantage: Contributions of distinctiveness and recollection. Presented at the 44<sup>th</sup> annual Psychonomics Society meetings, Vancouver, Canada, Nov. 2003.
- Gronlund, S. D., Carlson, C., & Singer, S. SUSPECTS: Framework for understanding the sequential lineup advantage. Presented at the AP-LS meetings, Scottsdale, March, 2004.

- Carlson, C., & Gronlund, S. D. The Role of Distinctive Information in Eyewitness Identification. Presented at the AP-LS meetings, Scottsdale, March, 2004.
- Terry, R. A., Singer, S. R., & Gronlund, S. D. The Implicit Association Test (IAT): Statistical and psychometric considerations. Presented at the SMEP meetings, Naples, FL, October, 2004.
- Gronlund, S. D., Carlson, C., Singer, S. & Tower, D. Tests of the SUSPECTS framework.. Presented at the 45<sup>th</sup> annual meetings, Minneapolis, MN, Nov. 2004.
- Singer, S. R., Gronlund, S. D. & Terry, R. A. The Implicit Association Test (IAT): Cognitive and psychometric considerations. Presented at the Psychonomics Society meetings, Minneapolis, MN November, 2004.
- Singer, S. R., Gronlund, S. D. & Terry, R. A. A Cognitive and Psychometric Analysis of the Implicit Association Test. Presented at the American Psychological Society meetings, Los Angeles, CA June, 2005.
- Tower, D., Gronlund, S. D., Carlson, C., & Singer, S. Multiple Culprits and Eyewitness Identification: A Test of Automaticity. Presented at the American Psychological Society meetings, Los Angeles, CA June, 2005.
- Johnson, D. R., & Gronlund, Scott D. (2005, July). *Individual differences in working memory capacity: A dual-efficiency hypothesis*. Poster session presented at the biennial meeting of the International Society for the Study of Individual Differences, Adelaide, Australia.
- Tower, D., & Gronlund, S. D., The eyewitness and the lineup: The role of recollection. Presented at the Psychonomics Society meetings, Toronto, November, 2005.
- Tower, D., & Gronlund, S. D., The eyewitness and the lineup: The role of recollection. Presented at the AP-LS meetings, St. Petersburg, FL, March, 2006.
- Johnson, D. R., & Gronlund, Scott D. (2006, May). *Determinants of working memory capacity: The relative contributions of anxiety and executive function*. Poster presented at the Association for Psychological Science conference.
- Dailey, S., & Gronlund, S. D. Application of the Perturbation Model in a Face Space Framework. Presented at the Psychonomics Society meetings, Houston, TX, November, 2006.
- Carlson, C. A., Gronlund, S. D., & Clark, S. E. Lineup Composition and the Sequential Lineup Advantage. Presented at the Psychonomics Society meetings, Houston, TX, November, 2006.
- Gronlund, S. D., Carlson, C. A., & Clark, S. E. Lineup Composition and the Sequential Lineup Advantage. Presented at the Munsterberg Conference, New York, NY, March, 2007.
- Goodsell, C., Neuschatz, J., & Gronlund, S. Mugshot Exposure Prior to Lineup Identification: Commitment, Familiarity, and Age Effects. SARMAC, Lewiston, ME, July, 2007.
- Topp, C. Meissner, C. & Gronlund, S. An evaluation of decision making strategies for sequential lineups. SARMAC, Lewiston, ME, July, 2007.
- Dailey, S., & Gronlund, S. An application of the perturbation model in face space. SARMAC, Lewiston, ME, July 2007.
- Carlson, C. Gronlund, S. & Clark, S. Lineup composition and the sequential lineup advantage. SARMAC, Lewiston, ME, July, 2007. [Awarded First Place in the poster competition]
- Carlson, C. A., & Gronlund, S. D. Computer-generated faces are not processed like real faces. Presented at the Psychonomics Society meetings, Long Beach, CA, November, 2007.
- Carlson, C. A., & Gronlund, S. D. FACES are not real faces. Presented at the AP-LS meetings, Jacksonville, FL, March, 2008.
- Carlson, C. A., & Gronlund, S. D. Distinctiveness in an Eyewitness Identification Paradigm: Comparing Simultaneous and Sequential Lineups. Presented at the AP-LS meetings, Jacksonville, FL, March, 2008.
- Carlson, C. A., Gronlund, S. D., Clark, S. E., & Dailey, S. B. Sequential lineup advantage: Lineup fairness and suspect position. Presented at the AP-LS meetings, Jacksonville, FL, March, 2008.
- Gronlund, S. D., Carlson, C. A., Dailey, S. B. & Goodsell, C. Sequential lineup advantage. Presented at the Interdisciplinary Conference on Human Performance, Orlando, FL March, 2008.
- Ozcan, M. S., Gronlund, S. D., Cure, J., Araki, M., and Wong, C. Effect of depth of anesthesia on implicit memory during a standard surgical stimulus: A pilot study, Presented at the Anesthesia Society of America conference, Oct., 2008.
- Gronlund, S. D., Carlson, C. A., Dailey, S. B., & Goodsell, C. A. Is the sequential lineup advantage robust? Presented at the Psychonomics Society meetings, Chicago, IL, November, 2008.
- Gronlund, S. D., & Goodsell, C. A. (2009). Exploring the sequential lineup advantage using WITNESS. Paper presented at the Interdisciplinary Conference on Human Performance, Houston, TX.
- Goodsell, C. A., Gronlund, S. D., Dailey, S. B., & Carlson, C. A. (2009). Exploring the sequential lineup advantage using WITNESS. Paper presented at the 20th annual convention of the American Psychology-Law Society (AP-LS), San Antonio, TX.
- Gronlund, S. D., Carlson, C. A., Dailey, S. B., & Goodsell, C. A. (2009). Robustness of the sequential lineup advantage. Paper presented at the 20th annual convention of the American Psychology-Law Society (AP-LS), San Antonio, TX.
- Dailey, S. B., Gronlund, S. D., Carlson, C. A. & Goodsell, C. A. (2009). A new measure of lineup fairness and choice: 100 point estimate of effective size and identification accuracy. Paper presented at the 20th annual convention of the American Psychology-Law Society (AP-LS), San Antonio, TX.
- Ozcan, M. S., Gronlund, S. D., Cure, J., Araki, M., and Wong, C. No Evidence of Implicit Memory During BIS Targeted General Anesthesia for Orthopedic Surgery, Presented at the American Society of Anesthesiologists conference, Oct., 2009.
- Gronlund, S. D., Goodsell, C. A. & Carlson, C. A. Exploring the Sequential Lineup Advantage Using WITNESS. Presented at the Psychonomics Society meetings, Boston, MA, November, 2009.

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- Carlson, C. A. & Gronlund, S. D. Differences in the processing of FACES 4.0 compared to real faces. Presented at the Psychonomics Society meetings, Boston, MA, November, 2009.
- Carlson, C. A. & Gronlund, S. D. Differences in the processing of FACES 4.0 compared to real faces. Presented at the AP-LS meetings, Vancouver, March, 2010.
- Goodsell, C. A., Gronlund, S. D., & Buttaccio, D. A test of the better memory probe hypothesis: Improving eyewitness identification accuracy. Presented at the AP-LS meetings, Vancouver, March, 2010.
- Carlson, C. A., & Gronlund, S. D. A Distinctiveness Explanation of the Sequential Lineup Advantage. Presented at the Psychonomics Society meetings, St. Louis, November, 2010.
- Goodsell, C. A., & Gronlund, S. D. Contributions of Memory and Decision Processes to Lineup Identifications Following Mugshot Exposure. Presented at the Psychonomics Society meetings, St. Louis, November, 2010.
- Hourihan, K. L., Benjamin, A. S., & Gronlund, S. D. An Own-Age Bias in Metamnemonic Accuracy for Faces. Presented at the Psychonomics Society meetings, St. Louis, November, 2010.
- Carlson, C. A., & Gronlund, S. D. Searching for the sequential lineup advantage: A distinctiveness explanation. Presented at the AP-LS meetings, Miami, March, 2011.
- Carlson, C. A., & Gronlund, S. D. Processing differences between feature-based facial composites and real faces. Presented at the AP-LS meetings, Miami, March, 2011.
- Goodsell, C. A., Gronlund, S. D., Neuschatz, J. S., & Dobos, R. Contributions of Memory and Decision Processes to Lineup Identifications Following Mugshot Exposure. Presented at the AP-LS meetings, Miami, March, 2011.
- Gronlund, S. D., Goodsell, C. A., & Buttaccio, D. R. A Technique to Improve Eyewitness Identification Accuracy. Paper presented at the Interdisciplinary Conference on Human Performance, Primm Valley, NV, March, 2011.
- Gronlund, S. D. Clark, S. E., Carlson, C. A., & Goodsell, C. A. Deconstructing the simultaneous and sequential lineup meta-analysis. Presented at the Psychonomics Society meetings, Seattle, November, 2011.
- Wetmore, S., Neuschatz, J., Goodsell, C. A., & Gronlund, S. D. Primary or secondary confessions: What do jurors believe? Presented at the AP-LS meetings, Puerto Rico, March, 2012.
- Andersen, S. M., Carlson, C. A., Carlson, M., & Gronlund, S. D. Individual Differences Predict Eyewitness Identification Performance. Presented at the Psychonomics Society meetings, Minneapolis, November, 2012.
- Fife, D., Perry, C. & Gronlund, S. D. Revisiting Absolute and Relative Judgments in the WITNESS Model. Presented at the Psychonomics Society meetings, Minneapolis, November, 2012.
- Carlson, C. A., Goodsell, C. A., Wetmore, S., Gronlund, S. D., Neuschatz, J., Wooten, A., & Graham, M. Showups Versus Lineups: An Evaluation Using ROC Analysis. Presented at the Psychonomics Society meetings, Minneapolis, November, 2012.
- Goodsell, C. A., Gronlund, S. D., Neuschatz, J., & Wetmore, S. Contributions of Commitment and Familiarity to Lineup Identifications Following Mugshot Exposure. Presented at the Psychonomics Society meetings, Minneapolis, November, 2012.
- Clark, S. E., Moreland, M. B., & Gronlund, S. D. Evolution and Decline Effects in Eyewitness Identification Reforms. Presented at the Psychonomics Society meetings, Minneapolis, November, 2012.
- Wooten, A, J. Neuschatz, C. A. Carlson, S. Gronlund, S. Wetmore, C. A Goodsell. Showups vs. lineups: Can showups be reliable? Presented at the AP-LS meetings, Portland, OR, March, 2013.
- Andersen, S. M., C. A. Carlson, M. Carlson, S. Gronlund, Individual differences predict eyewitness identification performance. Presented at the AP-LS meetings, Portland, OR, March, 2013.
- Gronlund, S. D., C. A. Carlson, J. Neuschatz, C. A Goodsell, S. Wetmore, A. Wooten, M. Graham, Showups Versus Lineups: An Evaluation Using ROC Analysis. Presented at the AP-LS meetings, Portland, OR, March, 2013.
- Wetmore, S., J. Neuschatz, S. Gronlund, The influential jailhouse informant. Presented at the AP-LS meetings, Portland, OR, March, 2013.
- Gronlund, S. D., Memory as evidence: Handle with care. Interdisciplinary Conference on Human Performance, St. George, UT, March 2013.
- Goodsell, C. A., Wetmore, S., J. Neuschatz, Gronlund, S. D. Are Showups Ever Better than Lineups? Presented at the Psychonomics Society meetings, Toronto, November 2013.
- Gronlund, Scott D., Neuschatz, Jeffrey, S., Goodsell, Charles A., & Wetmore, Stacy A. ROC Analyses of Lineups and Showups. Presented at the 25<sup>th</sup> annual APS meetings, May 2014, San Francisco, CA.
- Goodsell, C. A., McAdoo, R. M., Gronlund, S. D., Neuschatz, J. S. & Wetmore, S. A. (2014). Showups vs. lineups: An exploration using the WITNESS model. 24<sup>th</sup> annual convention of the American Psychology-Law Society (AP-LS), New Orleans, LA.
- Gronlund, S. D., Conducting an eyewitness lineup: How did we get it wrong? Interdisciplinary Conference on Human Performance, Orlando, FL, March 2014.
- Perry, C. & Gronlund, S. D. Test homogeneity effects in multi-item arrays. Psychonomics Society, Long Beach, CA, November, 2014.
- Gronlund, S. D., Key, K., Cash, D., Neuschatz, J., Price, J., Wetmore, S. A. Showups versus lineups with older adults. Psychonomics Society, Long Beach, CA, November 2014.
- Neuschatz, J. S., Wetmore, S. A., Key, K. N., Gronlund, S. D., Cash, D., & Goodsell, C. A. (November, 2014). Showups vs. lineups: Are showups more suggestive. Poster presented at the Psychonomic Society Annual Meeting, Long Beach, CA.

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- Goodsell, C. A., McAdoo, R. M., Gronlund, S. D., Neuschatz, J. S. & Wetmore, S. A. (2014). Showups vs. lineups: An exploration using the WITNESS model. Psychonomics Society, Long Beach, CA, November, 2014.
- Key, K., Cash, D., Neuschatz, J., Price, J., Wetmore, S. A. Gronlund, S. D., Showups versus lineups with older adults. American Psychology-Law Society (AP-LS), San Diego, CA, March 2015.
- Neuschatz, J. S., Wetmore, S. A., Key, K. N., Gronlund, S. D., Cash, D., & Goodsell, C. A. Showups vs. lineups: Are showups more suggestive. American Psychology-Law Society (AP-LS), San Diego, CA, March 2015.
- Cash, D., Neuschatz, J., Key, K., Wetmore, S. A., & Gronlund, S. D., A comprehensive evaluation of showups. American Psychology-Law Society (AP-LS), San Diego, CA, March 2015.
- Wetmore, S. A., Mickes, L. Seale-Carlisle, T. M., Goodsell, C. A., Carlson, C. A., Weatherford, D., McAdoo, R. M., Morgan, D. P., Clark, S., Gronlund, S. D., & Wixted, J. T. (2015). More than one kind of ROC: Biasing ROCs and confidence-based ROCs in eyewitness identification. Paper presented at the Annual European Society for Cognitive Psychology Conference, Paphos, Cyprus.
- Wetmore, S. A., Mickes, L., Seale-Carlisle, T. M., Morgan, D. P., Clark, S., Gronlund, S. D., & Wixted, J. T. (2015). More than one kind of ROC: Biasing ROCs and confidence-based ROCs in eyewitness identification. Paper presented at the Annual European Association of Psychology and Law, Nuremberg, Germany.
- S. E. Rhoten, L. A. De Stefano, K. A. Curran, S. M. Toftely, S. A. Wetmore, S. D. Gronlund, M. J. Wenger. The Components of Episodic Memory: Connecting Human Behavior and Electrophysiology to a Rodent Model. Poster presented at the Psychonomic Society Annual Meeting, Chicago, IL, November, 2015.
- Goodsell, C. A., Gronlund, S. D., McAdoo, R. M., Neuschatz, J. S. & Wetmore, S. A. (2014). Showups and Lineups: Exploring (and Improving) Identification Performance with WITNESS. Psychonomics Society, Chicago, IL, November, 2015.
- Wetmore, S. A., & Gronlund, S. D. Examining Underlying Processes of the Other Race Bias With the EZ Diffusion Model, Psychonomics Society, Chicago, IL, November, 2015.
- McAdoo, R., & Gronlund, S. D. Evidence of Signal Detection in Facial Recognition. Psychonomics Society, Chicago, IL, November, 2015.
- Key, K. N., Wetmore, S. A., Neuschatz, J. S., Gronlund, S. D., Cash, D. K., & Lane, S. (2015) Response Latency and Confidence as Postdictors of Witness Accuracy in Lineups and Showups. Poster presented at Psychonomics (Chicago, Illinois).
- Mickes, L., Gronlund, S. D., Clark, S., Roediger, H. L. & Wixted, J. T. (2015). Eyewitnesses: Not So Unreliable After All. ICOM 2016.
- McAdoo, R. M. & Gronlund, S. D. Effect of Between-Subject Decision Noise on Eyewitness ROC Analysis: A Theory Space Exploration Using the WITNESS Model. Poster presented at the AP-LS meetings, Atlanta, March, 2016.
- Wetmore, S. A., Gronlund, S. D., Neuschatz, J. S., & McAdoo, R. M. Lineups are Better than Showups but Filler Siphoning is Rarely the Reason. Talk presented at the AP-LS meetings, Atlanta, March, 2016.
- Key, K. et al. The Effect of Post-Identification Feedback on Showup Identifications. Talk presented at the AP-LS meetings, Atlanta, March, 2016.
- Key, K. et al. Confidence and Response Latency as Postdictors of Witness Accuracy in Lineups and Showups. Talk presented at the AP-LS meetings, Atlanta, March, 2016.
- Key, K. N., Wetmore, S. A., Cash, D. K., Neuschatz, J. S., Gronlund, S. D. The Effect of Post-Identification Feedback on Showup Identifications. International Meeting of the Psychonomic Society, Granada, Spain, May, 2016.
- Gronlund, S. D. (2016). ROC Denialism and the changing narrative surrounding eyewitness identification. Talk presented at ICHP (Palm Spring, CA).
- Wetmore, S. A., Gronlund, S. D., Neuschatz, J. S., & McAdoo, R. M. Lineups are Better than Showups but Filler Siphoning is Rarely the Reason. Poster presented at the Psychonomics meetings, Boston, November, 2016.
- McAdoo, R. M. & Gronlund, S. D. Effect of Between-Subject Decision Noise on Eyewitness ROC Analysis: A Theory Space Exploration Using the WITNESS Model. Talk presented at the Psychonomics meetings, Boston, November, 2016.
- McAdoo, R., & Gronlund, S. D. Relative Judgment Theory and the Mediation of Recognition Memory: Implications for Theories of Eyewitness Identification. AP-LS, March, 2017.

## **Presentations at Regional and Local Meetings**

- Gronlund, S. D., & Shiffrin, R. M. An investigation of retrieval strategies. Presented at the Midwestern Psychological Association meetings, Chicago, IL, May, 1985.
- Gronlund, S. D. The time-course of item and associative information: Implications for global memory models. Presented at the mini-conference on memory models, Evanston, IL, July, 1988.
- Gronlund, S. D. Workshop-Mathematica software: A tool for mathematical modeling. Presented at the 36th annual Southwestern Psychological Association meetings, Dallas, TX, April, 1990.
- Bertus, E. L., & Gronlund, S. D. The effect of distraction on associative recognition. Presented at the 37th annual southwestern Psychological Association meetings, New Orleans, LA, April, 1991.
- Elam, L. E., & Gronlund, S. D. Observing underlying distributions of familiarity: Implications for memory models. Presented at the 9th annual Spring Conference to Encourage and Develop Psychological Research, Oklahoma City, OK, April, 1991.
- Edwards, M. B., & Gronlund, S. D. How position and order relate to item and relational. Presented at the 37th annual Southwestern Psychological Association meetings, New Orleans, LA, April, 1991.

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- Gronlund, S. D., Durso, F. T. & Lewandowsky, S., Edwards, M. B., Jones, J., Manning, C., & Rotter, A. J. Automation of air traffic control: Implications for cognitive processes. Presented at the 38th annual Southwestern Psychological Association meetings, Austin, TX, April, 1992.
- Ohr, D. D., & Gronlund, S. D. Automatic and strategic priming in picture recognition. Presented at the Midwestern Psychological Association meetings, Chicago, IL, May, 1994.
- Thomson, G., & Gronlund, S. D. Complexity and interruptions. Presented at the 12th annual Spring Conference to Encourage and Develop Psychological Research, Stillwater, OK, April, 1994.
- Ohr, D. D., Dougherty, M. R. P., Thomson, G. L., & Gronlund, S. D. The role of memory in air traffic control. Presented at the Southwest Cognition Conference, Austin, TX, May, 1996.
- Gronlund, S. D., Thomson, G. L., & Perry, J. L. Recovery from interruptions. Presented at the Southwest Cognition Conference, Austin, TX, May, 1996.
- Nikolic, D. & Gronlund, S. D. A tandem random walk model of the speed-accuracy trade-off paradigm. Presented at the Southwest Cognition Conference, Austin, TX, May, 1996.
- Perry, J. L. & Gronlund, S. D. Now I see it!: Historical instruments as tools in teaching sensation and perception. Presented at the Southwest Regional Conference for Teachers of Psychology. Fort Worth, TX, October, 1997.
- Perry, J. L., & Gronlund, S. D. Effects of interruptions on the cognitive management of multi-task situations. Presented at the 44th annual Southwestern Psychological Association meetings, New Orleans, LA, April, 1998.
- Bourne, E. D., & Gronlund, S. D. Towards a model for memory distortions. Presented at the 44th annual Southwestern Psychological Association meetings, New Orleans, LA, April, 1998.
- Gronlund, S. D. Memory distortions and the perturbation model. Presented at the 45<sup>th</sup> annual Southwestern Psychological Association meetings, Albuquerque, NM, April, 1999.
- Gronlund, S. D. Memory distortions and the role of expectations. Presented at the Southwest Cognition Conference, San Antonio, TX, Oct., 1999.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. & Mills, S. H. Strategic planning in air traffic control. Presented at the OKJDM Workshop, Oklahoma City, OK, April, 1999.
- Dougherty, M. R. P., & Gronlund, S. D. Strategic planning in certain and uncertain environments. Presented at the OKJDM Workshop, Oklahoma City, OK, April, 1999.
- Gronlund, S. D. How expectations bias memory. Presented at the 47th annual Southwestern Psychological Association meetings, Dallas, TX, May, 2000.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. M., & Mills, S. H. Strategic planning in a complex environment. Presented at the Missouri Cognition Conference, St. Louis, MO, May, 2000.
- Gronlund, S. D. Memory distortions and the affect of encoding. Presented at the Southwest Cognition Conference, College Station, TX, Oct., 2000.
- Gronlund, S. D. Planning in a complex environment. Presented at the Southwest Cognition Conference, College Station, TX, Oct., 2000.
- Gronlund, S. D., Dougherty, M. R. P., Durso, F. T., Canning, J. M., & Mills, S. H. Evolution of strategic planning in a complex environment. Presented at the OKJDM Workshop, Oklahoma City, OK, April, 2000.
- Chrisman, J., & Gronlund, S. D. Predicting eyewitness accuracy with transfer appropriate processing, Presented at the Undergraduate Research Day, OU Honors College, April, 2001.
- Chrisman, J., & Gronlund, S. D. Predicting eyewitness accuracy with transfer appropriate processing, Presented at the Oklahoma Psychological Society Meetings, Oklahoma City, OK, April, 2001.
- Huffman, A., Gottesman, C. V., & Gronlund, S. D. The effects of attention distribution on memory for spatial layout. Presented at the Oklahoma Psychological Society Meetings, Oklahoma City, OK, April, 2002.
- Singer, S.R., Gronlund, S.D., & Carlson, C. Contribution of distinctive information in eyewitness identification, Presented at the Show Me Mental State Conference on Cognition, Columbia, MO, May, 2003.
- Singer, S.R., Gronlund, S.D. & Terry, R. Analysis of Greenwald et al.'s Implicit Association Test, Presented at ARMADILLO, College Station, TX, October, 2003.
- Carlson, C. A. & Gronlund, S. D. Event-based and item-based distinctiveness in eyewitness identification, Presented at ARMADILLO, College Station, TX, October, 2003.
- Gronlund, S. D., Carlson, C. A., & Singer, S. R. Sequential lineup advantage: Contributions of distinctiveness and recollection, Presented at ARMADILLO, College Station, TX, October, 2003.
- Carlson, C. A., & Gronlund, S. D., Contributions of item-based and event-based distinctiveness to eyewitness identification, Presented at ARMADILLO, Arlington, TX, October, 2004.
- Singer, S.R., Gronlund, S.D. & Terry, R. Analysis of Greenwald et al.'s Implicit Association Test, Presented at ARMADILLO, Arlington, TX, October, 2004.
- Gronlund, S. D., Singer, S. R., Tower, D., & Carlson, C. A., Tests of the SUSPECTS framework, Presented at ARMADILLO, Arlington, TX, October, 2004.
- Singer, S., & Gronlund, S. D. Sequential and simultaneous lineups. Presented at the Undergraduate Research Day, OU Honors College, April, 2002.
- Stice, B., & Gronlund, S. D. State-dependent memory and trauma. Presented at the Undergraduate Research Day, OU Honors College, April, 2002.

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- Carlson, C. A., Gronlund, S. D., Singer, S. R., & Tower, D. Tests of the SUSPECTS framework, Presented at OKJDM, Oklahoma City, OK, April 30, 2005.
- Tower, D. & Gronlund, S. D. The eyewitness and the lineup: Recognition vs. recollection, Presented at OKJDM, Oklahoma City, OK, April 30, 2005.
- Carlson, C. A., Gronlund, S. D., & Clark, S. E. Eyewitness decision-making: Effects of lineup fairness and presentation type on accuracy and response time. Presented at OKJDM, Oklahoma City, OK, April 30, 2006.
- Tower, D. & Gronlund, S. D. All pop-out and no recollection make Jack a dull eyewitness./ Presented at OKJDM, Oklahoma City, OK, April 30, 2006.
- Dailey, S., & Gronlund, S. D. Application of the Perturbation Model in a Face Space Framework. Presented at the Armadillo meetings, Lubbock, TX, October, 2006.
- Gronlund, S. D., Carlson, C. A., & Clark, S. E. Lineup Composition and the Sequential Lineup Advantage. Presented at the Armadillo meetings, Lubbock, TX, October, 2006.
- Carlson, C. A., & Gronlund, S. D. Distinctive Faces and Eyewitness Accuracy: Simultaneous versus Sequential Lineups. Presented at the Armadillo meetings, Lubbock, TX, October 2006.
- Gronlund, S. D., Carlson, C. A., & Clark, S. E. Lineup Composition and the Sequential Lineup Advantage. Presented at the 5<sup>th</sup> Invitational Conference on Eyewitness Identification, El Paso, TX, April, 2007.
- Carlson, C. A., & Gronlund, S. D. (2007). Computer-generated faces are not processed like real faces. ARMADILLO: The Southwest Cognition Conference at Trinity University, San Antonio, TX.
- Carlson, C. A., & Gronlund, S. D. (2008). Explaining the Sequential Lineup Advantage: Lineup Fairness, Choosing Rate, and Distinctiveness. ARMADILLO: The Southwest Cognition Conference at UTEP, El Paso, TX.
- Gronlund, S. D., Carlson, C. A., Dailey, S. B., & Goodsell, C. A. The legend of the sequential lineup advantage. Presented at ARMADILLO: The Southwest Cognition Conference at UTEP, El Paso, TX.
- Dailey, S. B., Gronlund, S. D., Carlson, C. A., & Goodsell, C. A. A New Measure of Lineup Fairness: 100-point Estimate of Effective Size. Presented at ARMADILLO: The Southwest Cognition Conference at UTEP, El Paso, TX.
- Carlson, C. A. & Gronlund, S. D. Differences in the processing of FACES 4.0 compared to real faces. Presented at the ARMADILLO meetings, Houston, October, 2009.
- Carlson, C. A., & Gronlund, S. D. (2010). Searching for the Sequential Lineup Advantage: A Distinctiveness Advantage. ARMADILLO: The Southwest Cognition Conference at Texas A&M, College Station, TX.
- Gronlund, S. D. Sequential lineups protect the innocent: Can we do better? Presented at ARMADILLO: The Southwest Cognition Conference at Texas A&M, College Station, TX.
- Carlson, C. A., & Gronlund, S. D. (2010). Searching for the Sequential Lineup Advantage: A Distinctiveness Explanation, Presented at the 2011 SWPA Convention, San Antonio, TX, April, 2011.
- Gronlund, S. D. Clark, S. E., Carlson, C. A., & Goodsell, C. A. Deconstructing the simultaneous and sequential lineup meta-analysis. Presented at ARMADILLO: The Southwest Cognition Conference, Commerce, TX, October, 2011.
- Wetmore, S., Neuschatz, J., Goodsell, C. A., & Gronlund, S. D. On the Power of Secondary Confessions. Presented at ARMADILLO: The Southwest Cognition Conference, Commerce, TX, October, 2011.
- Gronlund, S. D., Carlson, C. A., & Goodsell, C. A. The vagaries of lineup performance: The sequential shift, "optimal" criterion placement, and ROC curves. Presented at the 6<sup>th</sup> Invitational Conference on Eyewitness Identification, El Paso, TX, November, 2011.
- Anderson, S. M., & Gronlund, S. D. Role of Recollection in the Sequential Lineup Advantage, SWPA, Oklahoma City, April 2012.
- Andersen, S. M., Carlson, C. A., Carlson, M., & Gronlund, S. D. Individual differences predict eyewitness identification performance, SWPA, April, 2013, Fort Worth, TX.
- Key, K. N., Wetmore, S. A., Neuschatz, J. S., Gronlund, S. D., Cash, D. K., & Lane, S. (2015) Confidence and Response Latency as Postdictors of Witness Accuracy. Poster presented at ARMADILLO (Waco, Texas)
- McAdoo, R., & Gronlund, S. D. (2016). Evidence of Signal Detection in Facial Recognition. Poster presented at ARMADILLO (Waco, Texas)
- Gronlund, S. D. (2016). ROC Denialism. Talk presented at ARMADILLO (Waco, Texas)
- Markman, D., & Gronlund, S. D. (April, 2016). A Test of the Relative Judgment Theory: A Dual Process Explanation. Poster presented at the OKJDM meeting, Oklahoma City, OK.
- Key, K., & Gronlund, S. D. (April, 2016). An Exploration of Showups and Lineups in Eyewitness Identification. Talk presented at the OKJDM meeting, Oklahoma City, OK.
- McAdoo, R. M., & Gronlund, S. D., (April, 2016). Evidence of Continuous Mediation in Facial Recognition: Implications for Theories of Eyewitness Identification. Talk presented at the OKJDM meeting, Oklahoma City, OK.

## Invited Lectures

Cognitive factors in air traffic control. FAA Symposium on human factors. Washington, DC, October, 8, 1991.

Are we related or just familiar?: Research on human memory. Northeast Missouri State University, Kirksville, MO, January, 1992.



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- Memory models can't explain 80-year old data. Invited colloquium at UT Arlington, Arlington, TX, January, 1995.
- Role of memory in air traffic control. UC Riverside, Riverside, CA, April, 1997.
- Role of memory in air traffic control. University at Albany, SUNY, May, 1997.
- Strategic planning in a complex environment. Kansas State Univ., Manhattan, KS, May, 2000.
- Eyewitness identification and the sequential lineup advantage. Texas Tech University, April, 2004.
- Eyewitness identification and the sequential lineup advantage, University of Illinois, April, 2004.
- How Memory Works. OU AP Summer Institute, June, 2005.
- Is the sequential lineup advantage an artifact of a biased lineup? OU AP Summer Institute, June, 2006.
- Lineup composition and the sequential lineup advantage. Invited colloquia at UC Riverside, April 2007.
- Lineup composition and the sequential lineup advantage. Invited colloquia at the University of Nebraska, April 2007.
- Puzzle of the sequential lineup. Invited colloquium at Texas A&M University, Commerce, Sept. 2009.
- Improving Faulty Eyewitness Identification: Case Studies, Empirical Studies, and Controversies. Invited colloquium at Bowdoin College, Brunswick, ME, April, 2011.
- Applications of psychology to the law. Invited guest lecture at Bowdoin College, Brunswick, ME, April 2011.
- Presentation to the Oklahoma Justice Commission, Oct. 2011
- Improving eyewitness identification: Saga of the sequential lineup. Invited colloquium at the University of Arkansas, Feb. 2012.
- Improving eyewitness identification: Saga of the sequential lineup. Invited talk to the University of Oklahoma Sociology/Criminology Club, Mar. 2012.
- Presentation to the Oklahoma Criminal Defense Institute, June, 2012
- Memory as evidence: Handle with care. Invited address to SWPA 2013, Fort Worth, TX.
- Relative and absolute judgments in eyewitness decision making. University of Illinois, October, 2013.
- Relative and absolute judgments in eyewitness decision making. Nashville University, November, 2013.
- Conducting and eyewitness lineup: How did we get it wrong? Indiana University Alumni Recognition, October, 2014.
- Cost and benefits of eyewitness reforms. University of Alabama-Huntsville, Nov. 2014.
- Perils of Intuitive Theorizing in Eyewitness Identification. Washington University, St. Louis, March, 2016.
- When can you trust an eyewitness? Oklahoma County Public Defender Office, Oklahoma City, OK, May, 2016.

### **Departmental Service**

- Graduate Coordinator, 1994-1997, 1999-2001
- Human Participants Pool Coordinator, 1994-1997, 2000-2001, 2006
- Committee A, 1997-1999, 2002-2006
- Graduate Studies Committee, chair 2001-2004, 2011-2013
- Graduate Admissions 2007, co-chair 2008-2011, 2014-2016

- Associate Chair, 2009-2014, 2017-

### **Competitive Internal Funding**

2017	Individual Investigator Distinguished Research award (UAH, co-PI)
2015	Presidential International Travel Fellowship
2013	Faculty Investment Program
2006	College of Arts and Sciences IT grant
2006	Brain Function Reorganization from Tumor Invasion (consultant)
2005	Psychology and Law—Presidential Dream Course
2002	Faculty Technology Workshop
1999	Instructional Computing Grant
1999	Big 12 Faculty Fellowship
1997	Research/Creative Activity Equipment/Facilities Program (co-PI)
1996	Associates' Lecture Series, <i>People, Information and Machines</i> (co-PI)
1990	Junior Faculty Summer Research Fellowship
1989	Associates Research Funds (co-PI)

### **University and Professional Service**

- 26th annual meeting of the Society for Mathematical Psychology, co-organizer
- Research Council, 1995-1996, 1998-2001
- University Speakers Bureau, 1996-2005
- 2 appearances on OU Today
- Phi Beta Kappa Members- in-Course Committee, 1998-1999, Dept. rep since 1998
- Consultant, *Power of Ideas* television program, March, 2001
- Course and Curriculum Committee, 2000-2001
- Campus Departmental Review Program, 2003-2004
- Campus Tenure Committee, 2005-2006
- CAS Tenure Committee 2007-2008, chair 2008-2009
- Academic Misconduct Panel 2008-
- NSF Perception, Action and Cognition panel, fall 2009
- Conference Organizer, Interdisciplinary Conference on Human Performance (ICHP), 2012
- Editorial Board, *Journal of Experimental Psychology: Applied* 2009-2012
- Member of the NSF College of Reviewers for the Perception, Action and Cognition (PAC) program, 2013-
- Southwest Cognition Conference (aka ARMADILLO) 2014 Conference Organizer
- Editorial Board for *Psychology, Crime, and Law*, 2015-
- Committee member on Evaluation Team for University Strategic Organization Program, 2015-2016
- Consulting Editor for *Cognitive Research: Principles and Implications*, 2017-

### **Memberships**

- Fellow—Association for Psychological Society
- Fellow—Psychonomic Society
- Member—American Psychology-Law Society (AP-LS)

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### **Offices**

- SWPA Executive Council, 1990-1992; 1997-2001
- Convention Manager for Oklahoma Psychological Society Conference, 1990, 1991
- Human Technology Interactions Center (HTIC) Steering Committee, 1998-1999

### **References**

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