

## VITA

David M. Lane  
Department of Psychology  
MS-25  
Rice University  
6100 Main Street  
Houston, TX 77005  
713-348-3412

### Education

Tulane University	1973 - 1977	Ph.D.	Psychology, 1977
Tufts University	1972 - 1973	M.A.	Child Study, 1973
Clark University	1967 - 1971	B.A.	Psychology, 1971

### Professional areas of interest

Human-Computer Interaction, Educational Technology, Statistics and Experimental Design

### Professional employment

Associate Professor, Psychology and Statistics	Rice University, 1982 - present
Assistant Professor, Psychology	Rice University, 1977 - 1982

### Scientific review

Associate Editor, *Numeracy*

Ad hoc reviewer

*American Journal of Psychology*  
*Behavior Research Methods, Instruments, and Computers*  
*Chi Conference*  
*Child Development*  
*Child Psychiatry and Human Development*  
*Computational Statistics*  
*Data*  
*Developmental Psychology*  
*Educational Computing Research*  
*Educational Measurement: Issues and Practice*  
*Educational Psychology Reviews*  
*Frontiers*  
*Human Factors*  
*International Conference on the Teaching of Statistics*  
*International Journal of Electronic Marketing and Retailing*  
*International Journal of Human-Computer Interaction*  
*International Journal of Human-Computer Studies*  
*International Journal of Man-Machine Studies*  
*International Journal of Surgery*  
*Journal of Biomedical Informatics*

*Journal of Educational Computing Research*  
*Journal of Experimental Child Psychology*  
*Journal of Experimental Psychology: Applied*  
*Journal of Experimental Psychology: Learning, Memory, and Cognition*  
*Journal of Expertise (JoE)*  
*Journal of Biomedical Informatics*  
*Journal of Statistics Education*  
*Journal of the American Statistical Association*  
*Journal of Undergraduate Neurosciences*  
*Numeracy*  
*Physiological Psychology*  
*Physiology and Behavior*  
*PLOS Biology*  
*Psychological Bulletin (Quantitative Methods section)*  
*Psychological Methods*  
*Psychological Science*  
*Statistics Education Research Journal*  
*Technology Innovations in Statistics Education.*  
*Transactions on Human-Computer Interaction*

### **Teaching experience**

Introduction to Psychological Statistics  
Advanced Statistics I  
Advanced Statistics II  
Advanced Statistics for Undergraduates  
Multivariate Statistics  
Human-Computer Interaction  
Methods in Human-Computer Interaction  
Computer Applications in Psychology  
Developmental Psychology  
Evolutionary Psychology  
Research Methods

### **Online projects**

Rice Virtual Lab in Statistics <http://onlinestatbook.com/rvls/>  
Multimedia Textbook in Behavioral Neuroscience <http://psyc-experiments.com/mmtbn/>  
Online Statistics: A Multimedia Course of Study <http://onlinestatbook.com/>

## Publications

- Lane, D. M. (2018) On the Ecological Validity of Memory Research: Generalization to Memory for Chess Positions, *American Journal of Psychology*, 131, 451-460.
- Lane, D. M. & Chang, Y. A. (2018). Chess Knowledge Predicts Chess Memory Even After Controlling for Chess Experience: Evidence for the Role of High-Level Processes. *Memory & Cognition*, 46, 337-348
- Nittrouer, C. L., Hebl, M., Trump-Steele, R, Lane, D. M. & Valian, V. (2018). Gender Disparities in Colloquium Speakers at Top Universities, *Proceedings of the National Academy of Sciences*, 115, 104-108.
- Mansour, R., Dovi, A. T., Lane, D. M., Loveland, K. A., & Pearson, D. A. (2017). ADHD severity as it relates to comorbid psychiatric symptomatology in children with Autism Spectrum Disorders (ASD). *Research in Developmental Disabilities*, 60, 52-64.
- Chang, Y. A. & Lane, D. M. (2016) Generalizing across stimuli as well as subjects: A non-mathematical tutorial on mixed-effects models. *The Quantitative Methods for Psychology*, 12, 201-219. <http://www.tqmp.org/RegularArticles/vol12-3/p201/p201.pdf>
- Lane, D. M. & Oswald, F. L. (2016) Do 45% of College Students Lack Critical Thinking Skills? Revisiting a Central Conclusion of Academically Adrift. *Educational Measurement: Issues and Practice*, 35, 23–25.
- Lane, D. M. (2016) The Assumption of sphericity in repeated-measures designs: What it means and what to do when it is violated. *The Quantitative Methods for Psychology*, 12, 114-122. <http://www.tqmp.org/RegularArticles/vol12-2/p114/p114.pdf>
- Chang, Y. A., & Lane, D. M. (2016) There is time for calculation in speed chess and calculation accuracy increases with expertise. *American Journal of Psychology*, 129, 1-9.
- Lane, D. M. (2015) Simulations of the sampling Distribution of the mean do not necessarily mislead and can facilitate learning, *Journal of Statistics Education*, 23, [www.amstat.org/publications/jse/v23n2/lane.pdf](http://www.amstat.org/publications/jse/v23n2/lane.pdf)
- Lane, D. M. (2015) Guidelines for Making Graphs Easy to Perceive, Easy to Understand, and Information Rich. In M. McCrudden, G. Schraw, and C Buckendahl (Eds.) *Use of Visual Displays in Research and Testing: Coding, Interpreting, and Reporting Data.*, 47-81, Information Age Publishing, Charlotte, NC.
- Lane, D. M. (2013) Introduction to Statistics: An Interactive eBook. <https://itunes.apple.com/us/book/introduction-to-statistics/id684001500?mt=11>

- Lane, D. M. (2013) The problem of too many statistical tests: Subgroup analyses in a study comparing the effectiveness of online and live lectures, *Numeracy*, 6, 1, Article 7.  
DOI: <http://dx.doi.org/10.5038/1936-4660.6.1.7>  
Available at: <http://scholarcommons.usf.edu/numeracy/vol6/iss1/art7>
- Pearson, D.A., Santos, C.W., Aman, M.G., Arnold, L.E., Casat, C.D., Mansour, R., Lane, D.M., Loveland, K.A., Bukstein, O.G., Jerger, S.W., Factor, P., Vanwoerden, S., Perez, E., & Cleveland, L.A. (2013). Effects of extended release methylphenidate treatment on ratings of ADHD and associated behavior in children with autism spectrum disorders and ADHD symptoms. *Journal of Child and Adolescent Psychopharmacology*, 5, 337-351
- Pearson, D. A., Aman, M. G., Arnold, L. E., Lane, D. M., Loveland, K. A., Santos, C. W., Casat, C. D., Mansour, R., Jerger, S. W., Ezzell, S., Factor, P., Vanwoerden, B. A., Ye, E., Narain, P., & Cleveland, L. A. (2012). High concordance of parent and teacher ADHD ratings in medicated and unmedicated children with autism spectrum disorders. *Journal of Child and Adolescent Psychopharmacology*, 22, 284-291.
- Lane, D. (2011). Online Statistics Education. In M. Lovric (Ed.), *International Encyclopedia of Statistical Science*. New York, NY: Springer.
- Peres, C., Lane, D., & Griggs, K. R. (2010). Using simulations for active learning: The query-first method in practice. *Proceedings of the 8th International Conference on Teaching Statistics (ICOTS8)*, Slovenia.
- Lane, D. M. (2010). Tukey's Honestly Significant Difference (HSD). In N. J. Salkind (Ed.), *Encyclopedia of Research Design*. Thousand Oaks, CA: Sage Publications.
- Lane, D. M. & Sandor, A. (2009). Designing Better Graphs by Including Distributional Information and Integrating Words, Numbers, and Images. *Psychological Methods*, 14, 239-257.
- Loveland, K. A., Bachevalier, J., Pearson, D. A., & Lane, D. M. (2008). Fronto-limbic functioning in children and adolescents with and without autism. *Neuropsychologia*, 46, 49-62.
- Hull, R., Martin, R. C., Beier, M. E., Lane, D., & Hamilton, A. C. (2008). Executive function in older adults: A structural equation modeling approach. *Neuropsychology*, 22, 508-522.
- Tomanik, S., Pearson, D. A., Loveland, K. A., Lane, D. M., & Shaw, J. B. (2007). Increasing the reliability of autism diagnoses: Examining the utility of adaptive functioning. *Journal of Autism and Developmental Disabilities*, 37, 921-928.

- Lane, D. M. (2006). Chi square. In N. J. Salkind (Ed.), *Encyclopedia of Measurement and Statistics*. Thousand Oaks, CA: Sage Publications.
- Pearson, D. A., Loveland, K. A., Lachar, D., Lane, D. M., Reddoch, S. L., Mansour, R., & Cleveland, S. L. (2006). A comparison of behavioral and emotional functioning in children and adolescents with Autistic Disorder and PDD-NOS. *Child Neuropsychology*, *12*, 321-333.
- Skorinko, J. L., Kemmer, S., Hebl, M. R., & Lane, D. M. (2006). A rose by any other name: Color naming influences on decision making. *Psychology & Marketing*, *23*, 975-993.
- Lane, D. M. & Peres, S. C. (2006). Interactive simulations in the teaching of statistics: Promise and pitfalls. *Proceedings of the Seventh Annual Meeting of the International Conference on the Teaching of Statistics*.
- Lane, D. M. (2006). Book review of "Statistics without Math". *American Statistician*, *60*, 205-206.
- Lane, D. M., Peres, S. C., Sandor, A., & Napier, H. A. (2005). A process for anticipating and executing icon selection in graphical user interfaces. *International Journal of Human Computer Interaction*, *19*, 243-254.
- Peres, S. C. & Lane, D. M. (2005). Auditory Graphs: The effects of redundant dimensions and divided attention. *Proceedings of the 11th Annual International Conference on Auditory Displays*.
- Lane, D., Napier, H., Peres, C., & Sandor, A. (2005). The hidden costs of graphical user interfaces: The failure to make the transition from menus and icon tool bars to keyboard shortcuts. *International Journal of Human-Computer Interaction*, *18*, 133-144.
- Lane, D. M. (2004). WYSIWYG. In W. S. Bainbridge (Ed.), *Berkshire Encyclopedia of Human-Computer Interaction*. Great Barrington, MA: Berkshire Publishing.
- Lane, D. M., Sandor, A., & Peres, S. C. (2004). Sonification. In W. S. Bainbridge (Ed.), *Berkshire Encyclopedia of Human-Computer Interaction*. Great Barrington, MA: Berkshire Publishing.
- Taber, K. H., Shaw, J. B., Loveland, K. A., Pearson, D. A., Lane, D. M., & Hayman, L. A. (2004). Accentuated Virchow-Robin spaces in the centrum semiovale in children with autistic spectrum disorders. *Journal of Computer Assisted Tomography*, *28*, 263-268.
- Pearson, D. A., Lane, D. M., Santos, C. W., Casat, C. D., Jerger, S. W., Loveland, K. A., Faria, L. P., Mansour, R., Henderson, B. A., Payne, C. D., Roache, J., Lachar, D., & Cleveland, L. A. (2004). Effects of methylphenidate treatment in children with mental

- retardation and ADHD: Individual variation in medication response. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 686-698.
- Pearson, D. A., Santos, C. W., Casat, C. D., Lane, D. M., Jerger, S. W., Roache, J. D., Loveland, K. A., Lachar, D., Faria, L. P., Payne, C. D., & Cleveland, L. A. (2004). Treatment effects of methylphenidate on cognitive functioning in children with mental retardation and ADHD. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 677-685.
- Miller, L., Moreno, J., Estrera, V., & Lane, D. (2004). Efficacy of MedMyst: An Internet Teaching Tool for Middle School Microbiology. *Microbiology Education*, 13-20.
- Lane, D. (2003). Online Statistics Education: A Multimedia Course of Study. In D. Lassner & C. McNaught (Eds.), *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications 2003*, 1317-1320. Chesapeake, VA: AACE.
- Lane, D. & Tang, Z. (2003). An Online Multimedia Resource in Neuropsychology. *The Journal of Undergraduate Neuroscience Education*, 2, A8-A15.
- Peres, C. & Lane, D. (2003). Sonification of Statistical Graphs. *Proceedings of the Ninth International Conference on Auditory Display*, 9, 157-160.
- Sandor, A. & Lane, D. (2003). Sonification of Absolute Values with Single and Multiple Dimensions. *Proceedings of the Ninth International Conference on Auditory Display*, 9, 243-247.
- Ro, T., Breitmeyer, B., Burton, P., Singhal, S., & Lane, D. (2003). Feedback contributions to visual awareness in human occipital cortex. *Current Biology*, 11, 1038-1041.
- Pearson, D.A., Santos, C.W., Roache, J.D., Casat, C.D., Loveland, K.A., Lachar, D., Lane, D.M., Faria, L.P., & Cleveland, L.A. (2003). Treatment effects of methylphenidate on behavioral adjustment in children with mental retardation and ADHD. *Journal of the Academy of Child & Adolescent Psychiatry*, 42, 209-216.
- Lane, D. & Tang, Z. (2002). Effectiveness of statistical training with computer simulation. *Proceedings of the Society for Information Technology and Teacher Education*, 2049-2053.
- Osherson, D., Lane, D., Hartley, P., & Batsell, R. (2001). Coherent probabilities from incoherent judgment. *Journal of Experimental Psychology: Applied*, 3 - 12.
- Walker, B. & Lane, D. (2001). Sonification mappings database on the Web. *Proceedings of*

- the Seventh International Conference on Auditory Display*, 7, 281.
- Walker, B. & Lane, D. (2001). Psychophysical scaling of sonification mappings: A comparison of sighted and visually impaired listeners. *Proceedings of the Seventh International Conference on Auditory Display*, 7, 90-94.
- Lane, D. M. & Tang, Z. (2000). Effectiveness of a simulation on transfer of statistical concepts. *Educational Computing Research*, 22, 383-396.
- Lane, D. M. & Scott, D.W. (2000). Simulations, Case Studies, and an Online Text: A Web-Based Resource for Teaching Statistics. *Metrika*, 51, 67-90.
- Lane, D. M. (1999). The Rice Virtual Lab in Statistics. *Behavior Research Methods, Instruments, & Computers*, 31, 24-33.
- Benway, J. & Lane, D. M. (1998). Banner blindness: Web searchers often miss "obvious" links. *Internetworking*, 3
- Panero, J., Lane, D., & Napier, H. A. (1997). The computer use scale: Four dimensions of how people use computers. *Journal of Educational Computing*, 16, 297-315.
- Lane, D. M. (1997). HyperStat: Hypermedia for Learning Statistics and Analyzing Data. *American Statistical Association 1996 Proceedings of the Section on Statistical Education*, 68-72.
- Atlas, R., Cornett, L., Lane, D. M., & Napier, H. A. (1996). The use of animation in software training: Pitfalls and benefits. In M. Quinoñes and A. Dutta (Eds.), *Training for a Rapidly Changing Workplace: Applications of Psychological Research*. Washington, DC: American Psychological Society.
- Martel, R., Lane, D. M., & Willis, C. (1996). Male-female differences: A computer simulation. *American Psychologist*, 51, 157-158.
- Lane, D. M., Napier, H. A., Batsell, R. R., & Naman, J. (1993). Predicting the skilled use of hierarchical menus with the keystroke-level model. *Human-Computer Interaction*, 8, 185-192.
- Lane, D. M. & Jensen, D. (1993). Einstellung: Knowledge of the phenomenon facilitates problem solving. *Proceedings of the Human Factors Society 37th Annual Meeting*, 1277-1280.
- Lane, D. M. (1993). *Hyperstat: Macintosh Hypermedia for Analyzing Data and Learning Statistics*. New York, NY: Academic Press.
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- Proceedings of the Human Factors Society 37th Annual Meeting*, 1272-1276.
- Cooke, N. J., Atlas, R. S., Lane, D. M., & Berger, R. C. (1993). Role of high-level knowledge in memory for chess positions. *American Journal of Psychology*, *106*, 321-351.
- Lowry, T. N. & Lane, D. (1993). Publically expressed confidence ratings in computer-mediated communications systems. *HCI International 1993 Proceedings*.
- Napier, A., Batsell, R., Lane, D. M., & Guadagno, N. (1992). Knowledge of command usage in a spreadsheet program: Impact on user interface design and training. *Data BASE*, *23*, 13-21.
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- Pearson, D. A., Lane, D. M., & Swanson, J. M. (1991). Auditory attention switching in hyperactive children. *Journal of Abnormal Child Psychology*, *19*, 479-492.
- Pearson, D. A. & Lane, D. M. (1990). Reorientation in hyperactive and non-hyperactive children: Evidence for developmentally immature attention. In J. Ennis (Ed.), *The Development of Attention: Research and Theory*. Amsterdam: Elsevier Science Publishers.
- Pearson, D. A. & Lane, D. M. (1990). Visual attention movements: A developmental study. *Child Development*, *61*, 1779-1795.
- Guadagno, N., Lane, D. M., Batsell, R., & Napier, A. (1990). The predictability of commands in a spreadsheet program. *Interacting with Computers*, *2*, 75-82.
- Waggett, J. & Lane, D. M. (1990). Sex differences in the personality and cognitive correlates of spatial ability. *Journal of Personality and Social Psychology*, *58*, 1037-1039.
- Napier, A., Lane, D. M., Batsell, R., & Guadagno, N. (1989). The impact of a natural language interface on ease of learning and productivity: A comparison of Lotus 1-2-3 and Lotus HAL. *Communications of the ACM*, *32*, 1190-1198.
- Lane, D. M. & Ashby, B. (1987). PsychLib: A library of machine-language routines for controlling psychology experiments on the Apple Macintosh Computer. *Behavior Research Methods, Instrumentation, & Computers*, *19*, 246-248.
- Lane, D. M. (1987). Effects of availability of microcomputers on student and faculty research. *Behavior Research Methods, Instrumentation, & Computers*, *19*, 135.



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- Kleiss, J. & Lane, D. M. (1986). The locus and persistence of capacity limitations in visual information processing. *Journal of Experimental Psychology: Human Perception and Performance*, *12*, 200-210.
- Anderson, C. A. & Lane, D. M. (1986). Functional relationships are not theories: A note on covariation detection. *Journal of Experimental Psychology: Human Perception and Performance*, *12*, 110-111.
- Lane, D. M., Anderson, C. A., & Kellam, K. L. (1986). Judging the relationship between variables: The psychophysics of covariation detection. *Journal of Experimental Psychology: Human Perception and Performance*, 24-34.
- Fontenelle, G. A., Phillips, A. P., & Lane, D. M. (1985). Generalizing across stimuli as well as subjects: A neglected aspect of external validity. *Journal of Applied Psychology*, *70*, 101-107.
- Laux, L. & Lane, D. M. (1985). Information processing components of the symbol digit test. *Intelligence*, *9*, 111-136.
- Watkins, M. J., Schwartz, D., & Lane, D. M. (1984). Does part-set cueing test for memory organization: Evidence from reconstruction of chess positions. *Canadian Journal of Psychology*, *38*, 498-503.
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- Pearson, D. P. & Lane, D. M. (1984). The effect of noise on selective attention. *American Journal of Psychology*, *97*, 583-592.
- Anderson, L., Lane, D. M., & Kleiss, J. (1984). Does location cueing increase the efficiency of the early stage of perceptual processing? *Proceedings of the Human Factors Society 28th Annual Meeting*, 393-397.
- Kleiss, J. & Lane, D. M. (1984). Do automatic attention responses transfer to stimuli that differ in shape but share the same name? *Proceedings of the Human Factors Society 28th Annual Meeting*, 379.
- Lane, D. M. & Pearson, D. A. (1983). Attending to spatial locations: A developmental study. *Child Development*, *54*, 98-104.
- Lane, D. M. & Pearson, D. A. (1983). Can stimulus differentiation and salience explain developmental changes in attention? A reply to Hagen and Wilson, Jeffrey, and

- Odom. *Merrill-Palmer Quarterly*, 29, 227-233.
- Lane, D. M. & Pearson, D. A. (1982). The development of selective attention. *Merrill-Palmer Quarterly*, 28, 317-337.
- Lane, D. M. (1982). Limited capacity, attention allocation, and productivity. In W. C. Howell and E. A. Fleishman (Eds.), *Human Performance and Productivity: Information Processing and Decision Making*. Hillsdale, NJ: Lawrence Erlbaum Associates.
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- Lane, D. M., Murphy, K. R., & Marques, T. E. (1982). Measuring the importance of cues in policy capturing. *Organizational Behavior and Human Performance*, 30, 231-240.
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- Lane, D. M. (1981). Testing main effects of continuous variables in nonadditive models. *Multivariate Behavioral Research*, 16, 499-510.
- Lane, D. M. (1981). A general analysis of variance program for microcomputers. *Behavior Research Methods & Instrumentation*, 13, 694.
- Lane, D. M. (1980). Incidental learning and the development of selective attention. *Psychological Review*, 87, 316-319.
- Burnett, S. A. & Lane, D. M. (1980). Effects of academic instruction on spatial visualization. *Intelligence*, 4, 233-242.
- Lincoln, C. E. & Lane, D. M. (1980). Reaction time measurement error resulting from the use of CRT displays. *Behavior Research Methods & Instrumentation*, 12, 55-57.
- Lane, D. M. (1979). Developmental changes in attention deployment skills. *Journal of Experimental Child Psychology*, 28, 16-29.
- Lane, D. M. & Robertson, L. (1979). The generality of the levels of processing hypothesis: An application to memory for chess positions. *Memory and Cognition*, 2, 253-256.
- Burnett, S. A., Lane, D. M., & Dratt, L. (1979). Spatial visualization and sex differences in quantitative ability. *Intelligence*, 3, 345-354.
- Marques, T. E., Lane, D. M., & Dorfman, P. (1979). Toward the development of a system for instructional evaluation: Is there consensus regarding what constitutes effective

- teaching? *Journal of Educational Psychology*, 71, 840-849.
- Powell, R. S. & Lane, D. M. (1979). CANCOR: A general least squares program for univariate and multivariate analysis of variance and covariance. *Behavior Research Methods & Instrumentation*, 11, 87-89.
- Haertel, R. J. & Lane, D. M. (1979). A Fortran IV program for testing differences in variance using a jackknife procedure. *Behavior Research Methods & Instrumentation*, 11, 74.
- Lane, D. M. & Dunlap, W. P. (1978). Estimating effect size: Bias resulting from the significance criterion in editorial decisions. *British Journal of Mathematical and Statistical Psychology*, 31, 107-112.
- Lane, D. M. & Bechtel, L. R. (1978). A Fortran IV program for profile analysis. *Behavior Research Methods & Instrumentation*, 10, 49-50.
- Wright, J. & Lane, D. M. (1978). A Fortran IV program for linear contrasts in designs with repeated measurements. *Behavior Research Methods & Instrumentation*, 10, 433-434.
- Komenich, P. K., Lane, D. M., Dickey, R. P., & Stone, S. C. (1978). Gonadal hormones and cognitive performance. *Physiological Psychology*, 6, 115-120.
- Lane, D. M. (1977). Attention allocation and the relationship between primary and secondary task difficulty: A reply to Kantowitz and Knight. *Acta Psychologica*, 41, 493-495.
- Lane, D. M. & Rabinowitz, F. M. (1977). A rule-based theory of intermediate size transposition. *Child Development*, 48, 412-426.
- Werner, J., Lane, D., & Mohanty, A. (1977). IQ, race, and adoption. *American Psychologist*, 32, 677-678.
- Lane, D. M., McDaniel, J. R., Bleichfeld, B. E., & Rabinowitz, F. M. (1976). Toward the specification of hypothesis domains and einstellung. *Journal of Experimental Psychology: Human Learning and Memory*, 2, 489-496.
- Lane, D. M. & Powell, R. S. (1976). N-way MANOVA: A basic program for minicomputers. *Behavior Research Methods & Instrumentation*, 8, 382-383.

## **Talks This Century Plus One That is Still Important**

- Lane, D. M. (2013) Combining the Benefits of the Web and E-Books: An Interactive e-Book in Statistics, *E-LEARN 2013 - World Conference on E-Learning*. Association for the Advancement of Computing in Education, Las Vegas, CA, October 2013.
- Pearson, D.A., Loveland, K.A., Aman, M.G., Lane, D.M., Santos, C.W., Mansour, R., Nadeau, M., Shum, E., Elledge, D., Mitaro, E., Shields, A., & Cleveland, L.A. (2014). "Relationships Between the Web-Based SNAP-IV and Commercial Measures of Core ADHD Symptoms in Children with ASD" Paper presented at the 2014 International Meeting for Autism Research (IMFAR), Atlanta, May 17, 2014.
- Pearson, D. A., Santos, C. W., Aman, M. G., Arnold, L. E., Casat, C. D., Loveland, K. A., Schachar, R. J., Jerger, S. W., Mansour, M., Lane, D. M., Vanwoerden, S., Ye, E., Narain, P., & Cleveland, L. A. Extended release methylphenidate is associated with cognitive improvement in children with ASD and significant ADHD symptomatology. Paper presented at the International Meeting for Autism Research (IMFAR), Toronto, Ontario, May 2012.
- Pearson, D. A., Santos, C. W., Casat, C. D., Aman, M. G., Arnold, L. E., Schachar, R. J., Mansour, M., Loveland, K. A., Lane, D. M., Garner, F. I., Ly, P. D., Nguyen, T. D., Parrott, J. J., Atri, A., Reeder, D. J., Roberts, K. C., Jerger, S. W., Factor, P. I., Ezzell, S., Ye, E., Cavasos, R., Lo, Y., Narain, P., Resendez, W., Vanwoerden, S., & Cleveland, L. A. Effects of an extended release methylphenidate treatment regimen on cognitive task performance in children with autism spectrum disorders (ASD) and symptoms of ADHD. Paper presented at the 58th Annual Meeting of the American Academy of Child & Adolescent Psychiatry (AACAP), Toronto, Ontario, October 2011.
- Pearson, D. A., Cynthia W. Santos, C. W., Aman, M. G., Arnold, L. E., Casat, C. D., Loveland, K. A., Mansour, M., Lane, D. M., & Ezzell, S. Stimulant treatment is associated with improvements in ADHD symptoms—and not with increased irritability or social problems—in children with ASD with significant ADHD symptomatology. Paper presented as part of the “Interventions: Psychopharmacology, Predictors, and Other Outcome and Related Factors” session at the International Meeting for Autism Research (IMFAR), San Diego, CA, May 2011.
- Pearson, D. A., Santos, C. W., Casat, C. D., Aman, M. G., Arnold, L. E., Mansour, R., Loveland, K. A., Lane, D. M., Kazimi, I. F., Hess, P. A., Warren, J., Lallande, B. J., Nelson, J. A., Peixoto, M. B., Jerger, S. W., Factor, P. I., Ezzell, S., & Cleveland, L. A. Effects of An Extended Release Methylphenidate Treatment Regimen on Behavioral Adjustment In Children with Autism Spectrum Disorders (ASD) and Symptoms of ADHD. Poster presented at the Annual Meeting of the American Academy of Child and Adolescent Psychiatry (AACAP), New York, NY, October 2010.

- Peres, C., Lane, D., & Griggs, K. R. Using simulations for active learning: The query-first method in practice. Paper presented at the 8th International Conference on Teaching Statistics (ICOTS8), Ljubljana, Slovenia, July 2010.
- Thomas, S. & Lane, D. Gender Differences in the Effect of Politeness in a Computerized Learning Task. Paper presented at the 56th Annual Meeting of the Southwestern Psychological Association, Dallas, TX, April 2010.
- Glaser, S. & Lane, D. Optimizing the Presentation of Visual and Auditory Information: Utilizing Echoic Memory. Paper presented at the 56th Annual Meeting of the Southwestern Psychological Association, Dallas, TX, April 2010.
- Loveland, K. A., Santos, C. W., Casat, C. D., Aman, M. G., Lane, D. M., Jerger, S., Chen, C., Dhatt, A., Drake-McLin, Y., Kazimi, I., Mansour, R., Khowaja, M., Factor, P., Gonzales, C., & Cleveland, L. A. Executive Dysfunction in Autism Associated with ADHD—not Autistic—Symptomatology. Paper presented at the 55th Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, IL, October 2008.
- Pearson, D. A., Santos, C. W., Loveland, K. A., Casat, C. D., Aman, M. G., Lane, D. M., Jerger, S., Chen, C., Dhatt, A., Drake-McLin, Y., Kazimi, I., Mansour, R., Khowaja, M., Factor, P., Gonzales, C., & Cleveland, L. A. Relationship Between Global and Component Aspects of ADHD and Autism. Paper presented at the 55th Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Chicago, IL, October 2008.
- Lane, D. M. Rice Virtual Lab in Statistics: Sampling Distribution Simulation (Classics Award Winner). Paper presented at the 7th International Conference of MERLOT: Multimedia Educational Resource for Learning and Online Teaching, New Orleans, LA, August 2007.
- Pearson, D. A., Loveland, K. A., Santos, C. W., Lane, D. M., Mansour, R., Khowaja, M., Factor, P. I., & Cleveland, L. A. Impact of intellectual disability on adaptive functioning in autism and ADHD. Paper presented to the 41st Annual Gatlinburg Conference on Research and Theory in Intellectual and Developmental Disabilities, San Diego, CA, March 2008.
- Pearson, D. A., Loveland, K. A., Lane, D. M., Mansour, R., Reddoch, S. L., & Parks, J. Adaptive behavior associated with ADHD symptomatology in children with autism. Paper presented to the International Meeting for Autism Research (IMFAR), Seattle, WA, May 2007.
- Loveland, K. A., Lane, D. M., & Pearson, D. A. CPEA/STAART Girls with Autism Phenotype Study. Paper presented to the International Meeting for Autism Research (IMFAR), Seattle, WA, May 2007.

- Lane, D. M. Online statistics education: An interactive multimedia course of study. Poster presented at the American Mathematical Society/Mathematical Association of America joint meeting, San Antonio, TX, January 2006.
- Loveland, K. A., Bachevalier, J., Pearson, D. A., Lane, D. M., & Reddoch, S. L. Prefrontal- limbic dysfunction and social-emotional performance in children and adolescents with autism. Paper presented at the International Meeting for Autism Research, Toronto, Canada, June 2006.
- Pearson, D. A., Loveland, K. A., Santos, C. W., Casat, C. D., Lachar, D., Lane, D. M., Mansour, R., Reddoch, S. L., Kelly J. L., & Cleveland, L. A. Adaptive behavior in children with autism and ADHD symptoms. Paper presented at the 53rd Annual Meeting of the American Academy of Child & Adolescent Psychiatry, San Diego, CA, October 2006.
- Pearson, D. A., Loveland, K. A., Santos, C. W., Casat, C. D., Lane, D. M., Mansour, R., Reddoch, S. L., Kelly, J. L., & Cleveland, L. A. ADHD symptomatology in autism: Concordance of diagnostic instruments. Paper presented at the 53rd Annual Meeting of the American Academy of Child & Adolescent Psychiatry, San Diego, CA, October 2006.
- Yang, M. & Lane, D. Perception of randomness: Bias, learning and transfer. Poster session presented at the annual meeting of the American Psychological Association, Washington, DC, August 2005.
- Loveland, K. A., Bachevalier, J., Pearson, D. A., Lane, D. M., Reddoch, J., Shaw, J. B., Welsh, K. L., & Mansour, R. Fronto-limbic dysfunction in children and adolescents with autism. Paper presented at the 38th Annual Gatlinburg Conference on Research and Theory in Mental Retardation and Developmental Disabilities, Annapolis, MD, March 2005.
- Pearson, D. A., Loveland, K. A., Lachar, D., Lane, D. M., Handen, B. L., Johnson, C. R., Reddoch, S. L., Mansour, R., & Cleveland, S. L. A Comparison of Behavioral and Emotional Functioning in Children with Autistic Disorder and PDD-NOS. Paper presented at the International Meeting for Autism Research, Boston, MA, May 2005.
- Ferguson, L. E., Shaw, J. B., Loveland, K. A., Pearson, D. A., Lane, D. M., & Reddoch, S. L. Psychological and behavioral correlates of sedation outcome in autistic children undergoing research magnetic resonance imaging. *Abstracts of the Pediatric Academic Societies Annual Meeting*, abstract number 2956, page 57. Washington, DC, May 2005.
- Loveland, K. A., Bachevalier, J., Pearson, D. A., Lane, D. M., & Reddoch, S. L. Prefrontal- limbic dysfunction and social-emotional performance in children and adolescents with autism. Paper presented at the CPEA/STAART Annual Meeting, Bethesda, MD,

November 2005.

- Pearson, D. A., Loveland, K. A., Lachar, D., Lane, D. M., Handen, B. L., Johnson, C. R., Reddoch, S. L., Mansour, R., & Cleveland, S. L. A Comparison of Behavioral and Emotional Functioning in Children with Autistic Disorder and PDD-NOS. Paper presented at the CPEA/STAART Annual Meeting, Bethesda, MD, November 2005.
- Pearson, D. A., Lane, D. M., Santos, C. W., Casat, C. D., Jerger, S. W., Loveland, K. A., Mansour, R., Faria, L. P., Henderson, J. A., Roache, J. D., & Cleveland, L. A. Methylphenidate treatment in ADHD/MR: Independent Cognitive and Behavioral Response? Paper presented at the 51st Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Washington, DC, October 2004.
- Taber, K. H., Shaw, J. B., Loveland, K. A., Pearson, D. A., Lane, D. M., & Hayman, L. A. Dilated Virchow-Robin spaces in the centrum semiovale in children with autism. Paper presented at the 37th Annual Gatlinburg Conference on Research and Theory in Mental Retardation and Developmental Disabilities, San Diego, CA, March 2004.
- Loveland, K. A., Bachevalier, J., Pearson, D. A., Shaw, J. B., Lane, D. M., Reddoch, S. L., & Welsh, K. D., Orbitofrontal Dysfunction in Autism. Paper presented at the 37th Annual Gatlinburg Conference on Research and Theory in Mental Retardation and Developmental Disabilities, San Diego, CA, March 2004.
- Pearson, D. A., Santos, C. W., Casat, C. D., Jerger, S. W., Lane, D. M., Loveland, K. A., Faria, L. P., Mansour, R., Roache, J., Henderson, J. A., & Cleveland, L. A. Treatment effects of methylphenidate on cognitive performance in children with mental retardation and ADHD: Dose response characteristics. Paper presented at the 37th Annual Gatlinburg Conference on Research and Theory in Mental Retardation and Developmental Disabilities, San Diego, CA, March 2004.
- Peres, C. & Lane, D. Sonification of statistical graphs. Ninth International Conference on Auditory Display, Boston, MA, July 2003.
- Sandor, A. & Lane, D. Sonification of Absolute Values with Single and Multiple Dimensions. Ninth International Conference on Auditory Display, Boston, MA, July 2003.
- Lane, D. M. An Online statistical education: A multimedia course of study. ED-MEDIA World Conference on Educational Multimedia, Hypermedia & Telecommunications, Honolulu, HI, June 2003.
- Lane, D. M. A multimedia textbook in behavioral neuroscience 2003. ED-MEDIA World Conference on Educational Multimedia, Hypermedia & Telecommunications, Honolulu, HI, June 2003.

- Lane, D. M. Online statistical education: A multimedia course of study. International Biometrics Society: Eastern North American Region, Tampa, FL, March 2003.
- Pearson, D. A., Santos, C. W., Casat, C. D., Roache, J., Jerger, S. W., Lane, D. M., Loveland, K. A., Lachar, D., Faria, L. P., Getchell, C., & Cleveland, L. A. Treatment effects of methylphenidate on cognitive functioning in children with mental retardation and ADHD. Paper presented at the 50th Annual Meeting of the American Academy of Child & Adolescent Psychiatry, Miami Beach, FL, October 2003.
- Loveland, K. A., Bachevalier, J., Pearson, D. A., Lane, D., Nagy, E., Shaw, J. B., Reddoch, S., & Dodds, K. Orbitofrontal dysfunction in autism. Paper presented at the International Meeting for Autism Research, Orlando, FL, November 2002.
- Lane, D. & Tang, Z. Effectiveness of statistical training with computer simulation. The Society for Informational Technology and Teacher Education, Nashville, TN, March 2002.
- Lane, D. M. The quality issue: Have we degraded statistics education? Joint Statistical Meetings (many organizations, including American Statistical Association), Atlanta, GA, August 2001.
- Lane, D. M. Distance Learning in Statistics Courses. Joint Statistical Meetings (many organizations, including American Statistical Association), Indianapolis, IN, August 2000.
- Lane, D. M. & Quinones, M. (1997). Toward resolving the significance testing debate: Electronic publishing and editorial decision making. Paper presented at the 12th Annual Conference of the Society for Industrial and Organizational Psychology, April, 1997. St. Louis, MO.

## **Grants**

- Lane, D. M. (PI) with Scott, D. Collaborative Research: Online Statistics Education: An Interactive Multimedia Course of Study II (Rice is the lead institution in collaboration with University of Houston - Clear Lake and Tufts University). Total Award: \$475,414. Rice Portion: \$204,716.
- Lane, D. M. (PI subcontract). ADHD Symptoms in Autism: Cognition, Behavior, Treatment. NIH, \$61,495 (2006-2010).
- Lane, D. M. (PI) with Osherson, D., Hebl, M., & Guerra, R. (Co-PIs). Online statistics education: A multimedia course or study. NSF Department of Undergraduate Education, \$400,000 (2001-2005).
- Lane, D.M. Development of sonification design theory: Metaphors, mappings, holistic sound design, and data-specific sonification. NSF, \$402,781 (1999-2002).



- Lane, D., Pomerantz, J., Martin, R., Osherson, D., & Potts, G. A Web-Based Multimedia Textbook in Behavioral Neuroscience. NSF, \$74,931 (2000-2001).
- Lane, D. M. (Co-PI) Orbitofrontal-limbic dysfunction in autism. NIH. (5 years) The amount for my module is \$174,904.
- Lane, D. M. (PI) with Scott, Austin, Baggerly, & Quinones (Co-PIs). The Rice Virtual Lab in Statistics. NSF-Department of Undergraduate Education: Leadership in Laboratory Development. Grant #9751307, \$200,000 (1997-1999).
- Lane, D. (Co-PI) with Napier, A. & Batsell, R. (Co-PIs). Frequency of Command Use in Lotus 1-2-3. Lotus Development Corporation, \$29,708 (1988).
- Howell, W. C. (PI), Lane, D. M. (Co-PI), & Harvey, R. J. (Co-PI). Development of Display Principles for C<sup>3</sup>I Judgment and Decision Tasks. Research contract, Army Research Institute, \$225,170 (1985-1988).
- Napier, A. (PI), Lane, D. (Co-PI), & Batsell, R. (Co-PI). Impact of Software User Interface on Individual Productivity. Lotus Development Corporation, \$38,320 (1987).
- Lane, D. (PI). On-line help systems and hypertext. Ashton Tate, \$5,000 (1989).
- Lane, D. (Co-PI) with Napier, A. & Batsell, R. (Co-PIs). Lotus 1-2-3/G User Interface Study. Lotus Development Corporation, \$53,000 (1988).
- Lane, D. M. Cognitive components underlying the Digit Symbol Test. NIH, \$13,703 (1981-1982).
- Burnett, S. (PI) & Lane, D. M. (Co-PI). Improving spatial visualization through relevant academic and non-academic training. Exxon Foundation, \$50,000 (1978-1980).

#### **Direction of doctoral research**

- Tullis, T. – PhD 1984 (He won the George Briggs award for the best dissertation of the year in engineering psychology)
- Kleiss, J. – PhD 1986
- Laux, L. – PhD 1986
- Pearson, D. – PhD 1986
- Anderson, L. – PhD 1988 (She won the award for the best dissertation in the social sciences at Rice University for 1988)
- Jensen, D. – PhD 1989
- Holden, K. – PhD 1990
- Waggett, J. – PhD 1992
- Atlas, R. A. – PhD 1996

Cornett, L. – PhD 1997  
Schneider, D. – PhD 1997  
Benway, J. PhD 1999  
Walker, B. – PhD 2001  
Tang, Z. – PhD 2003  
Peres, C. – PhD 2005  
Sandor, A. – PhD 2007  
Yang, M. – PhD 2008  
Glaser, D. – PhD 2012  
Thomas, S. – PhD 2013  
Chang, Y. -PhD 2016