Nathan Tintle

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Education

December 2004, Ph.D. Statistics, State University of New York, Stony Brook
Dissertation: Reclassification as a Cost-Effective Sample Design for Testing Association when Misclassification Errors are Present

May 2003, M.S. Statistics, State University of New York, Stony Brook

December 2000, B.S. Mathematics, Summa Cum Laude, State University of New York, Albany

Awards

Daniel Solow Author's Award from the Mathematical Association of America. 2018. For the impact of the "Introduction to Statistical Investigations" textbook on undergraduate education in mathematics and statistics.

Fellow of the American Statistical Association. 2018. For outstanding and important contributions in statistical education and statistical genetics.

Textbook and Academic Authors Association. 2017 Most Promising New Textbook of the year award for "Introduction to Statistical Investigations."

Mathematical Association of America. Robert V. Hogg award for Excellence in Teaching Introductory Statistics. 2017 award recipient.

Dordt College Annual Award for Noteworthy Scholarship. 2013 award recipient.

American Statistical Association. Waller Education Award. 2013 award recipient.

Journal of Statistics Education, 2012 best paper award for "Development and assessment of a preliminary randomization-based introductory statistics curriculum"

Dean's Science Division 2011 Mentoring, Advising and Teaching Award at Hope College. Recipient of annual award.

James N. Boelkins Natural and Applied Sciences Division Promise for Excellence in Faculty Research Award at Hope College. 2010 recipient of biennial award.

Towsley Research Scholar's Award, January 2008. "Developing and sustaining a research program in statistical genetics with undergraduates at Hope College"

Department of Applied Mathematics and Statistics, State University of New York, Stony Brook
Woo Jong Kim Dissertation Prize, Spring 2005
Annual award for the best dissertation in Applied Mathematics and Statistics

Funded Grants

Collaborative Research: RUI: Modeling Transcriptome Inferred Gene Activity States for the Investigation of Metabolic and Regulatory Diversity of Sequenced Microbes. NSF-MCB program. National Science Foundation. $280,000. PI.

RCN-UBE: Statistical Thinking in Undergraduate Biology (STUB) Network: A network for coordinating the teaching and assessment of statistical thinking in introductory biology. $500,000. PI.

Recruiting and Preparing STEM Majors to be Highly-Qualified, K-12 STEM Teachers Serving High-Need, Rural, Local Educational Agencies: DC-Noyce Scholars Program. Robert Noyce Scholar's grant program. National Science Foundation. $1.2 million. Co-PI.

"Finding meaning in multivariable statistics: A conceptual approach to an algebra-based second course in statistics" National Science Foundation. $300,000. PI: Nathan Tintle

"Analyzing the behavior and interpreting the results of gene based tests of rare variant association" National Institutes of Health. National Human Genome Research Institute. 2R15HG006915. $389,000. PI: Nathan Tintle.

"REU Site: Effects of political upheaval and ethnic discord on the mental health of a population" National Science Foundation. $355,298. PI: Nathan Tintle.

"Expanding interdisciplinary and problem-based learning opportunities through a motion biomechanics laboratory" Roy G. Carver Foundation. $130,800. For Dordt College, with Kayt Frisch and Leah Zuidema.

"Implementation of a randomization-based curriculum for introductory statistics at UPH and across Indonesia" PI: Kie Saputra (Universitas Pelitas Harapan). International collaborator: Nathan Tintle. $148,630. August 2015.

Silicon Mechanics. Research cluster grant. Parallel computing cluster with intel processers and NVIDIA GPUs. $93,000. March 2015.

Undergraduate mathematics conference. MAA-RUMC. $2000. For "Math on the great plains" annual undergraduate research conference. To be hosted at Dordt College in April 2015. Received August 2014.

American Statistical Association. Member Initiative. $8560. Undergraduate statistics poster competition and e-conference. April 2014-September 2015.

"Broadening the impact and evaluating the effectiveness of randomization-based curricula for introductory statistics" NSF/TUES/DUE- Phase II. $550,000. Jan 1, 2014-Dec 31, 2016. PI: Tintle.

"Collaborative Research: RUI: Developing integrated metabolic regulatory models (iMRMs) for the investigation of metabolic and regulatory diversity of sequenced microbes" NSF/MCB. Total

requested $650,000. Sep 1, 2013-Aug 31, 2016. PI: Tintle

MAA-PREP workshop grant to host workshop for 24 faculty on campus of Dordt College in June 2013 re: randomization based methods in introductory statistics. Presenters: Allan Rossman and Beth Chance, Organizer: Nathan Tintle. $16,840.

"Analyzing the behavior and interpreting the results of gene based tests of rare variant association" National Institutes of Health. National Human Genome Research Institute. R15HG006915. August 2012. $392,000. PI: Nathan Tintle.

"Use of randomization methods and other innovations in the introductory and post-introductory undergraduate statistics curriculum." National Science Foundation. Transforming Undergraduate Education in Science, Technology, Engineering and Mathematics Program. Awarded 1/1/2012. $180,000. PI: Nathan Tintle, co-PIs: Beth Chance, Allan Rossman, Soma Roy and Todd Swanson.

"Developing a knowledge-base for systems biology" Department of Energy. $500,000 Subcontract to Hope College/Dordt College. Matt DeJongh, Aaron Best and Nathan Tintle, PIs. September 2011-August 2016.

"Evaluating the Cost-Effectiveness of Alternative Sample Designs for Genetic Association Studies" Supplement to National Institutes of Health. National Human Genome Research Institute. 3R15-HG004543-01S2. Nathan Tintle, PI. Airat Bekmetjev, co-PI. $74,830 May 2009-July 2011

"Home Exercise, Cardiac Rehabilitation Exercise, and No Exercise and Their Relationship with Hopelessness and Depression in Individuals with Coronary Heart Disease" Howard Hughes Medical Institute/Great Lakes College Association. Susan Dunn, PI. Nathan Tintle, co-PI. Funded April 2010. $18,500.

"Extending the RAST server to support reconstruction and modeling of cellular networks." Advances in Biological Informatics program. National Science Foundation. PI: Matt DeJongh. Co-PI's: Aaron Best, Dmitry Rodionov, Ross Overbeek, and Nathan Tintle. $1.2 million. September 1, 2009-August 31, 2011.

Loan Repayment Program. National Human Genome Research Institute of the National Institutes of Health. 7/1/2009-6/30/2013.

"Pedagogical innovations in Statistics"Great Lakes College Association Pathways to Learning Collegium. Nathan Tintle, PI. Todd Swanson and Jill VanderStoep, co-Pis. $5,000 Fall 2009.

"Evaluating the Cost-Effectiveness of Alternative Sample Designs for Genetic Association Studies" Supplement to National Institutes of Health. National Human Genome Research Institute. 3R15-HG004543-01S1. Nathan Tintle, PI. Airat Bekmetjev, co-PI. $19,325 May 2009-April 2011

"Pedagogical and curricular reform in statistics education at Hope College" Howard Hughes Medical Institute Undergraduate Science Education Program. $90,000. Nathan Tintle, PI. August 2008-July 2009. Part of $1.4 grant to Hope College (Joanne Stewart, PI).

"Evaluating the Cost-Effectiveness of Alternative Sample Designs for Genetic Association Studies" National Institutes of Health. National Human Genome Research Institute. R15-

HG004543-01. Nathan Tintle, PI. $193,500 May 2008-April 2011

"Evaluating the cost-effectiveness of replicate genotype data" Hope College-Howard Hughes Medical Institute CSM Scholar's Research Award, Summer 2007.
$3,500. Nathan Tintle, PI.

"Development and Testing of a New State-Trait Hopelessness Scale." Susan Dunn and Nathan Tintle, PI's. Funded by the Hope College-Howard Hughes Medical Institute Faculty Development Grants for Interdisciplinary Research. $10,000. January-December 2007.

"Course development for Applied Statistical Models: Math 312." Nathan Tintle, PI. Funded by the Hope College-Howard Hughes Medical Institute Interdisciplinary course development grants program. January -December 2007. $15,000

"Refining theoretical genome-scale models with experimental data." Aaron Best, Matt DeJongh, Nathan Tintle, PI's. Funded by the Hope College-Howard Hughes Medical Institute Faculty Development Grants for Interdisciplinary Research. $10,000. June-December 2006.

"Developing a pre-professional program in actuarial science" Summer-Fall 2006, Crossroads Project at Hope College, Nathan Tintle PI, Aaron Cinzori and Airat Bekmetjev, Co-PIs. $4000.

Pending Grants

"REU: Perennial grain development" co-PI. National Science Foundation. Pending budget request of $350,000. Submitted August 2018.

Positions Held

2016 to present, Professor of Statistics, Dordt College, Sioux Center, IA

2014 to present, Director for Research and Scholarship, Dordt College, Sioux Center, IA

2014 to 2016, Department Chairperson, Department of Mathematics, Statistics and Computer Science. Dordt College, Sioux Center, IA

2011 to 2016, Associate Professor of Statistics
Dordt College, Sioux Center, IA

2005 to 2011, Assistant Professor of Mathematics (received tenure Jan. 2011)
Hope College, Holland, MI

2005 to 2012, Statistical Consultant
Dept of Psychiatry, State University of New York, Stony Brook
World Mental Health Survey, Ukraine

2003 to 2005, Lead Statistical Analyst
Dept of Psychiatry, State University of New York, Stony Brook
World Mental Health Survey, Ukraine

Positions in Professional Societies

Section on Statistics Education, American Statistical Association, Elected to at-large committee position. Term: January 1, 2012-December 31, 2014

Member of working group on training the next-generation of statisticians. Invited committee member for ASA presidential initiative. 2012-2013.

International Genetic Epidemiology Society, Scientific Program Committee member. Program committee chair for 2016 conference, Toronto, Canada.
January 1, 2014-December 31, 2016.

Member of steering and judging committee for USCLAP and USRESP undergraduate statistics poster competitions. 2007-2017. Chair 2013-2017.

Editor of Proceedings for Genetic Analysis Workshop 20. San Diego, CA. 2017. Published in BMC Proceedings 2018.

ASA Best JSE paper Award Committee. 2016-2021.

SIAM Undergraduate Research Online. Associate Editor. 2017-2020.

Courses taught

Introductory Statistics, Applied Statistical Models, Probability, Introductory Financial Mathematics, Intermediate Financial Mathematics, Actuarial Life Contingencies, Financial Economics

Research students mentored

96 students as of fall 2017, primarily in intensive summer research experiences in biostatistics. Most students have co-authored peer-reviewed papers and presented at national conferences.

Genetics Publications

Tintle, N. L., Ahn, K., Mendell, N. R., Gordon, D., & Finch, S. J. (2005). Characteristics of replicated single-nucleotide polymorphism genotypes from COGA: Affymetrix and center for inherited disease research. *BMC genetics. 6 Suppl 1*, S154. http://www.biomedcentral.com/1471-2156/6/S1/S154

Tintle, N. L., Gordon, D., McMahon, F. J., & Finch, S. J. (2007). Using duplicate genotyped data in genetic analyses: Testing association and estimating error rates. *Statistical applications in genetics and molecular biology, 6*, Article4. http://www.bepress.com/sagmb/vol6/iss1/art4/

Tintle, N.L., Best A.A., De Jongh M., Van Bruggen, D.*, Heffron F., Porwollik S., Taylor R.C. (2008) "Gene set analyses for interpreting microarray experiments on prokaryotic organisms." *BMC Bioinformatics*. 9:469. http://www.biomedcentral.com/1471-2105/9/469

Tintle, N.L., Gordon D., Van Bruggen D.*, Finch, S.J. (2009) "The cost effectiveness of duplicate genotyping for testing genetic association." *Annals of Human Genetics*. 73, 370-378.

Borchers, B.*, Brown, M.*, McLellan, B.*, Bekmetjev, A., **Tintle, N.L.** (2009) "Incorporating duplicate genotype data into linear trend tests of genetic association: methods and cost-effectiveness" *Statistical Applications in Genetics and Molecular Biology*. 8(1):24. http://www.bepress.com/sagmb/vol8/iss1/art24

Tintle, N.L., Borchers, B.*, Brown, M.*, Bekmetjev A. "Comparing gene set analysis methods on SNP data from GAW16." (2009) *Proceedings of Genetic Analysis Workshop 16*, St. Louis, MO. *BMC Proceedings*, 3(Suppl 7)**:**S96. http://www.biomedcentral.com/1753-6561/3/S7/S96

Tintle, N.L., Lantieri F., Lebrec, J., Sohns, M., Ballard, D., Bickeböller, H. (2009) "Inclusion of *a priori* information in genome-wide association analysis" *Genetic Epidemiology*. Volume 33(S1):S74-S80.

Petersen A*, Sitarik A*, Luedtke A*, Powers S*, Bekmetjev A, **Tintle NL** (2011) "Evaluating methods for combining rare variant data in pathway-based tests of genetic association" *BMC Proceedings*. 5(9):S48. http://www.biomedcentral.com/1753-6561/5/S9/S48

Luedtke A*, Powers S*, Petersen A*, Sitarik A*, Bekmetjev A, **Tintle NL** (2011) "Evaluating Methods for the Analysis of Rare Variants in Sequence Data." *BMC Proceedings*, 5(9):S119 http://www.biomedcentral.com/1753-6561/5/S9/S119

Ravcheev D, Best AA, **Tintle NL**, DeJongh M, Osterman AL, Noviichkov PS, Rodionov DA (2011) "Inference of transcriptional regulatory network in Staphylococcus aureus by integration of experimental and genomics-based evidence" Journal of Bacteriology. 193(13): 3228-3240.

Tintle NL, Aschard H, Hu I, Nock N, Wang H, Pugh E. (2011) "Inflated type I error rates when using aggregation methods to analyze rare variants in 1000 genomes exon sequencing data in unrelated individuals: a summary report from Group 7 at Genetic Analysis Workshop 17" *Genetic Epidemiology*, 35:S56-60.

Sun YV, Sung YJ, **Tintle NL**, Ziegler A (2011) "Identification of Genetic Association of Multiple Rare Variants Using Collapsing Methods" *Genetic Epidemiology*, 35:S101-S106.

Powers S* and **Tintle NL**. (2011) "Assessing the impact of non-differential genotyping errors on rare variant tests of association" Human Heredity. 72(3):152-159.

Ghosh S, Bickeböller H, Bailey J, Bailey-Wilson JE, Cantor R, Daw W, DeStefano AL, Engelman C, Hinrichs A, Houwing-Duistermaat J, König I, Kent J Jr., Pankratz N, Paterson A, Pugh E, Sun Y, Thomas A, **Tintle NL**, Zhu X, MacCluer JW and Almasy L. (2011) "Genetic Analysis Workshop 17: Unraveling Human Exome Data." *BMC Proceedings*, 5(9):S1. http://www.biomedcentral.com/1753-6561/5/S9/S1

Bekmetjev A, Van Bruggen D*, McLellan B*, DeWinkle B*, Lunderberg E*, **Tintle NL**. (2012) "Reclassification as a cost-effective method of estimating disease prevalence." PLoS One. 7(2):e32058.

Tintle NL, Sitarik A*, Boerema B*, Young K*, Best AA and DeJongh M. (2012) "Evaluating the consistency of gene sets used in the analysis of bacterial gene expression data" BMC

Bioinformatics. 13:193. http://www.biomedcentral.com/1471-2105/13/193

Liu K*, Luedtke A*, **Tintle NL** (2013) "Optimal methods for using posterior probabilities in association testing" Human Heredity. 75(1): 2-11.

Mayer-Jochimsen M*, Fast S*, **Tintle NL** (2013) "Assessing the impact of differential genotyping errors on rare variant tests of association" PLoS One. March 5, 2013. http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0056626

Liu K*, Fast S*, Zawistowski M, **Tintle NL** (2013) "A geometric framework for the evaluation of rare variant tests of association" Genetic Epidemiology. 37(4): 345-357.

Petersen A*, Alvarez C*, DeClaire S*, **Tintle NL** "Assessing methods for assigning SNPs to genes in gene-based tests of association using common variants. PLoS One. May 31, 2013. http://dx.plos.org/10.1371/journal.pone.0062161

Greco B*, Luedtke A*, Hainline A*, Alvarez C*, Beck A* and **Tintle NL** (2014) "Application of family-based tests of association for rare variants to pathways" *BMC Proceedings.* 8(Suppl 2):S105. http://www.biomedcentral.com/1753-6561/8/S1/S105

Hainline A*, Alvarez C*, Luedtke A*, Greco B*, Beck A*, **Tintle NL** (2014) "Evaluation of the power and type I error of recently proposed family-based tests of association for rare variants" *BMC Proceedings.* 8(Suppl 2):S36. http://www.biomedcentral.com/1753-6561/8/S1/S36

Rogers A*, Beck A*, **Tintle NL** (2014) "Evaluating the concordance between sequencing, imputation and microarray genotype calls in the GAW18 data" *BMC Proceedings.* 8(Suppl 2):S20. http://www.biomedcentral.com/1753-6561/8/S1/S22

Blue E, Sun L, **Tintle NL**, Wijsman E (2014) "Value of mendelian laws in segregation in families: data quality control, imputation and beyond" *Genetic Epidemiology*. 38(S1):S21-S28.

Aslibekyan S, Almeida M, **Tintle NL** (2014) "Pathway approaches for rare and common variants: insights from GAW18" *Genetic Epidemiology*. 38(S1):S86-S91.

Cook K*, Benitez A*, Fu C*, **Tintle NL** (2014) "Evaluating the impact of genotype errors on rare variant tests of association" *Frontiers in Statistical Genetics and Methodology.* http://journal.frontiersin.org/Journal/10.3389/fgene.2014.00062/abstract

Tintle NL, Pottala JV, Lacey S, Ramachandran V, Westra J*, Rogers A*, Clark J*, Olthoff B*, Larson M, Harris W, Shearer G. "A genome wide association study of fourteen red blood cell fatty acids in the Framingham Heart Study" (2015) *Prostoglandins, Leukotrienes and Essential Fatty Acids*. 94:65-72.

Valcarcel A*, Grinde K*, Cook K*, Green A*, **Tintle NL**. "A multi-step approach to SNP-set analysis: An evaluation of power and type I error of gene-based tests of association after pathway-based association tests" *BMC Proceedings* for Genetic Analysis Workshop 19, Vienna, Austria. 9 Suppl 8:S49.

Tintle NL, Newman JW, Shearer GC. "Optimal fatty-acid profiles and metabotypes for prevention of acute coronary syndrome using biomarkers of fatty-acid elongase and desaturase" *Metabolomics*. 11(5):1327-1337.

Green A*, Cook K*, Grinde K*, Valcarcel A*, **Tintle NL**. "A general method for combining different family-based rare variant tests of association to improve power and robustness to a wide range of genetic architectures" *BMC Proceedings* for Genetic Analysis Workshop 19, Vienna, Austria. 9 Suppl 8:S18.

Held E*, Cape J* and **Tintle NL.** "Comparing machine learning and logistic regression methods for predicting hypertension using a combination of gene expression and next-generation sequencing data" *BMC Proceedings* for Genetic Analysis Workshop 19, Vienna, Austria. 9 Suppl 8:S14.

Powers S*, De Jongh M, Best A, **Tintle NL** (2015) "Cautions about the reliability of pairwise gene correlations based on expression data." *Frontiers in Microbiology*. 6:650. http://dx.doi.org/10.3389/fmicb.2015.00650

Greco B*, Hainline A*, Arbet J*, Grinde K*, Benitez A* and **Tintle NL**. (2016) "A general approach for combining diverse rare variant association tests provides improved robustness across a wider range of genetic architecture" *European Journal of Human Genetics*. 24:774-778.

Konig I, Auerbach J, Deng Q, Gola D, Held E*, Holzinger E, Legault M, Sun R, **Tintle NL** and Yang H. "Machine learning and data mining in complex genetic data- a review on the lessons learned in Genetic Analysis Workshop 19" *BMC Genetics*. Vol 17(Suppl 2):1 http://bmcgenet.biomedcentral.com/articles/10.1186/s12863-015-0315-8

Disselkoen C*, Greco B*, Cook K*, Koch K*, Lerebours R*, Viss C*, Cape J*, Held E*, Ashenafi Y*, Fischer K*, Acosta A*, Cunningham M*, Best AA, DeJongh M, **Tintle NL**. "A Bayesian framework for the inference of microbial gene activity states" *Frontiers in Microbiology*. July 2016.

Bowerman N*, **Tintle NL,** DeJongh M, Best AA (2017) "Identification and analysis of bacterial genomic metabolic signatures" *Pacific Symposium on Biocomputing*. 22:3-14.

Kamp T*, Adams M*, Disselkoen C*, **Tintle NL** (2017) "Improved performance of gene set analysis on genome-wide transcriptomics data when using gene activity state estimates" *Pacific Symposium on Biocomputing*. 22:449-460.

Beck A*, Luedtke A*, Liu K*, **Tintle NL**. "A powerful method for including genotype uncertainty in tests of Hardy-Weinberg Equilibrium" *Pacific Symposium on Biocomputing*. Accepted September 2016.

Faria JP, Davis JJ, Taylor RC, Weisenhorn PB, Olson R, Stevens RL, Rocha M, Rocha I, Best AA, DeJongh M, **Tintle NL**, Overbeek R and Henry CS (2016) "Computing and applying atomic regulons to understand gene co-regulation, co-expression and gene expression experiment design" *Frontiers in Microbiology*. 7:1819.

Veenstra J*, Kalsbeek A*, Westra J, Disselkeon C*, Smith C, **Tintle NL**. (2017) "Genome-wide interaction study of omega-3 PUFAs and other fatty acids on inflammatory biomarkers of cardiovascular health in the Framingham Heart Study." *Nutrients*. 9(8).

Veenstra J*, Kalsbeek A*, Koster K*, Ryder N*, Bos A*, Huisman J*, VanderBerg L*, VanderWoude J* and **Tintle NL**. "Epigenome wide association study of SNP-CpG interactions on changes in triglyceride levels after pharmaceutical intervention: A GAW20 analysis" (2018). *Proceedings of Genetic Analysis Workshop 20*. 12 (Suppl 9):58.

Grinde K*, Arbet J*, Green A*, O'Connell M*, Valcarcel A*, Westra J, **Tintle NL** (2017) "Illustrating, quantifying and correcting for bias in post-hoc analysis of gene-based rare variant tests of association" *Frontiers in Genetic Epidemiology*. 8:117.

VanderWoude J*, Huisman J*, VanderBerg L*, Veenstra J*, Bos A*, Kalsbeek A*, Koster K*, Ryder N*, **Tintle NL**. "Evaluating the performance of gene-based tests of genetic association when testing for association between methylation and change in triglyceride levels at Genetic Analysis Workshop 20." (2018) *Proceedings of Genetic Analysis Workshop 20*. Accepted August 2017. 12(Suppl 9):50.

Fuady AM, Lent S, Sarnowski C, **Tintle NL**. "Application of novel and existing methods to identify genes with evidence of epigenetic association" Results from Genetic Analysis Workshop 20. *BMC Genetics*. Accepted November 2017.

Tintle NL, Fardo DW, de Andrade M, Aslibekyan S, Bailey JN, Bermejo JL, Cantor RM, Ghosh S, Melton P, Wang X, MacCluer JW and Almasy L. (2018) GAW20: methods and strategies for the new frontiers of epigenetics and pharmacogenomics. *BMC Proceedings*. 12(Suppl 9):26.

Westra J*, Hartman N*, Lake B*, Shearer G, **Tintle NL**. (2018) "Analyzing metabolomics data for association with genotypes using two-component Gaussian mixture distributions" *Pacific Symposium of Biocomputing*. 23:496-506.

Arkin A, Cottingham R, C Henry , N Harris , R Stevens , S Maslov , P Dehal , D Ware , F Perez , S Canon , MSneddon , M Henderson , W Riehl , D Murphy-Olson , S Chan , R Kamimura , S Kumari , M Drake , TBrettin , E Glass , D Chivian , D Gunter , D Weston , Bn Allen , J Baumohl , A Best , B Bowen , S Brenner , C Bun , J Chandonia , J Chia , R Colasanti , N Conrad , J Davis , B Davison , M DeJongh , S Devoid , E Dietrich , I Dubchak , J Edirisinghe , G Fang , J Faria , PFrybarger , W Gerlach , M Gerstein , J Gurtowski , H Haun , F He , R Jain , M Joachimiak , K Keegan , Mr. S Kondo , Dr. V Kumar , M Land , F Meyer , M Mills , PNovichkov , T Oh , G Olsen , B Olson , B Parrello , S Pasternak , E Pearson , S Poon , GPrice , S Ramakrishnan , P Ranjan , P Ronald , M Schatz , S Seaver , M Shukla , R Sutormin , M Syed , J Thomason , **N Tintle** , D Wang , F Xia , H Yoo , S Yoo , D Yu (2018) "The DOE Systems Biology Knowledgebase (KBase)" *Nature Biotechnology*. 36:566-569.

Ryder N*, Dorn KM, Huitsing M*, Adams M*, Ploegstra J, DeHaan L, Larson S, **Tintle NL** (2018). Transcriptome assembly and annotation of johnsongrass (Sorghum halepense) rhizomes identifies candidate rhizome-specific genes. *Plant*. https://onlinelibrary.wiley.com/doi/abs/10.1002/pld3.65

Li K*, Chen R*, Lindsey W, Best A, DeJongh M, Henry C and **Tintle NL**. (2019) Implementing and evaluating a Gaussian mixture framework for identifying gene function from TnSeq data. *Pacific Symposium on Biocomputing*. To appear.

Gasdaska A*, Friend D*, Chen R*, Westra J, Zawistowski M and **Tintle NL** (2019). Leveraging summary statistics to make inferences about complex phenotypes in large biobanks. *Pacific Symposium on Biocomputing*. To appear.

Epidemiology and Biostatistics Publications

Bromet, E. J., Gluzman, S. F., Paniotto, V. I., Webb, C. P., **Tintle, N. L.,** Zakhozha, V., et al. (2005). Epidemiology of psychiatric and alcohol disorders in ukraine: Findings from the ukraine world mental health survey. *Social psychiatry and psychiatric epidemiology, 40*(9), 681-690.

Bromet, E. J., Havenaar, J. M., Gluzman, S. F., & **Tintle, N. L**. (2005). Psychological aftermath of the Lviv air show disaster: A prospective controlled study. *Acta Psychiatrica Scandinavica, 112*(3), 194-200.

Webb, C. P., Bromet, E. J., Gluzman, S., **Tintle, N. L.,** Schwartz, J. E., Kostyuchenko, S., et al. (2005). Epidemiology of heavy alcohol use in ukraine: Findings from the world mental health survey. *Alcohol and Alcoholism (Oxford, Oxfordshire), 40*(4), 327-335.

Bromet, E. J., Havenaar, J. M., **Tintle, N.,** Kostyuchenko, S., Kotov, R., & Gluzman, S. (2007). Suicide ideation, plans and attempts in ukraine: Findings from the ukraine world mental health survey. *Psychological medicine, 37*(6), 807-819.

Webb, C. P., Bromet, E. J., **Tintle, N. L.,** Schwartz, J. E., Gluzman, S. F., Kostyuchenko, S., et al. (2007). Smoking initiation and nicotine dependence symptoms in ukraine: Findings from the ukraine world mental health survey. *Public Health, 121(9):*663-72

Loganovsky K, Havenaar J.M., **Tintle N.L.**, Tung L, Kotov R., Bromet EJ. (2008) "The Mental Health of Clean-Up Workers 18 Years After the Chernobyl Accident" *Psychological Medicine*. 38(4):481-488.

O'Leary KD, **Tintle NL**, Bromet EJ, Gluzman SF. (2008) "Descriptive epidemiology of intimate partner aggression in Ukraine" *Social Psychiatry and Psychiatric Epidemiology*. 43(8):619-26.

Tintle NL, Bacon B*, Gutkovich Z, Bromet EJ. (2011) "Risk factors and correlates for depression in elderly Ukrainians" *International Journal of Geriatric Psychiatry*. 26:1292-1299.

O'Leary D, **Tintle NL**, Bromet E (2014) "Risk Factors for Physical Violence against Partners in the US" *Psychology of Violence*. 4(1): 65-77.

Dunn S, Olamijulo G*, Fuglseth H*, Holden T, Swierenga L*, Sit M*, Rieth N*, **Tintle NL**. (2014) "The State-Trait Hopelessness Scale: Development and Testing. *Western Journal of Nursing Research*. 36(4).

Anderson I.K., Lerstrom, A., **Tintle NL** (2014) "First year students' use of social network sties to reduce the uncertainty of anticipatory socialization" *Journal of the first-year experience and students in transition*. 26(1).

Friedberg F, **Tintle NL**, Clark J*, Bromet EJ. (2015) "Prolonged fatigue in Ukraine and the United States: Prevalence and risk factors. *Fatigue Biomedicine, Health and Behavior*. 33(1):33-46.

Dunn S, Dunn LM, Rieth NP, Olamijulo GB, Swierenga LL, Holden TP, Clark JA*, DeVon HA and **Tintle NL**. "The impact of home- and hospital-based cardiac rehabilitation exercise on hopelessness in patients with coronary heart disease" *Journal of Cardiopulmonary Rehabilitation and Prevention*. Accepted May 2015. In press.

Dunn SL, Dunn LM, Buursma M*, Clark J, Vander Berg L*, DeVon HA, **Tintle NL**. "Home and Hospital-based cardiac rehabilitation exercise: the important role of physician recommendation" *Western journal of nursing research*. Submitted June 2016. Accepted July 2016. Best journal article of 2016 award winner.

Dunn S, Sit M*, DeVon H, Makidon D*, **Tintle NL**. "Dog Ownership and Dog Walking: The Relationship with Exercise, Depression and Hopelessness in Patients with Ischemic Heart Disease" *Journal of Cardiovascular Nursing*. Accepted March 2017.

Del Gobbo L, **Tintle NL**, Harris W. "The Omega-3 index and relative risk for coronary heart disease mortality: estimation from 10 cohort studies" (2017) Atherosclerosis. 262:51-54.

Wu J, Marklund M, Imamura F, **Tintle NL**, …, Micha R, Mozaffarian D, for the Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) Fatty Acids and Outcomes Research Consortium (FORCE). (2017) "Omega-6 fatty acid biomarkers and incident type 2 diabetes: a pooled analysis of 20 cohort studies" *Lancet Diabetes and Endocrinology*. 5(12):965-974.

Bolt M*, **Tintle NL**, Helming LM. "Mental Health Impacts of the Chernobyl Nuclear Disaster" *Frontiers in Psychiatry*. Accepted January 2018.

Harris WS, **Tintle NL**, Etherton M, Ramachandran VS (2018) "Erythrocyte long-chain omega-3 fatty acid levels are inversely associated with mortality and incident cardiovascular disease: the Framingham heart study" *Journal of Clinical Lipidology*. Accepted February 2018.

Kalsbeek A*, Veenstra J*, Westra J*, Disselkoen C*, Koch K*, McKenzie K*, O'Bott J*, Fischer K*, Shearer G, Harris WS, **Tintle NL**. (2018) "A genome-wide association study of red blood cell fatty acids and ratios incorporating dietary covariates: Framingham heart study offspring cohort." *PLoS One*. Accepted April 2018.

Meyerholz D, **Tintle NL**, Amanda Beck (2018). "Common pitfalls in analysis of tissue scores" *Veterinary Pathology*. Accepted July 2018.

Imamura F, Fretts A, Marklun M, Korat A, Yang W-S, Lankinen M, Qureshi W, Helmer C, Chen T-A, Wong K, Basstt JK, Murphy R, **Tintle NL**, et al. Fatty Acid Biomarkers of dairy fat consumption and incidence of type 2 diabetes: a pooled analysis of prospective cohort studies. *PLoS Medicine*. Accepted September 2018.

Dunn S, DeVon H, VanderBerg L* and **Tintle NL**. (2019). "Ethnic minority members may be at risk for state hopelessness following hospitalization for ischemic heart disease" *Archives of Psychiatric Nursing*. 33(51-56).

Dunn SL, Robbins LB, Smith SW, Ranganathan R, DeVon HA, Collins EG, Hong G and **Tintle NL** (2018). "Enhancing physical activity in cardiac patients who report

hopelessness: Feasibility testing of an intervention." *Health Education Journal*. Accepted October 2018.

Fretts A, Imamura F, Marklund M, Micha R, Wu J, Murphy R, Chien K-L, McKnight B, **Tintle NL**, Forouhi N, et al. (2018) "Associations of circulating very-long chain saturated fatty acids and incident type 2 diabetes: a pooled analysis of prospective cohort studies." *American Journal of Clinical Nutrition*. Submitted October 2018. Accepted January 2019.

Harris W, **Tintle NL**, Ramachandran V (2018) "Erythrocyte n-6 fatty acids and risk for cardiovascular outcomes and total mortality in the Framingham Heart Study" *Nutrients*. 10(12): 2012.

Statistics Education Publications

Tintle NL, VanderStoep J, Holmes V-L, Quisenberry B*, Swanson T. "Development and assessment of a preliminary randomization-based introductory statistics curriculum." Journal of Statistics Education. Volume 19(1). March 2011. http://www.amstat.org/publications/jse/v19n1/tintle.pdf

Tintle NL, Topliff K*, VanderStoep J, Holmes V-L, Swanson T "Retention of statistical concepts in a preliminary randomization based introductory statistics curriculum" *Statistics Education Research Journal*. May 2012. Volume 11(1). http://www.stat.auckland.ac.nz/~iase/serj/SERJ11(1)_Tintle.pdf

Tintle NL, Chance B, Cobb G, Rossman A, Roy S, Swanson T and VanderStoep J. (2013) "Challenging the state of the art in post-introductory statistics: preparation, concepts and pedagogy." *Proceedings of the world congress on statistics*. http://2013.isiproceedings.org/Files/IPS032-P1-S.pdf

Tintle NL, Rogers A*, Chance B, Cobb G, Rossman A, Roy S, Swanson T, VanderStoep J (2014). "Quantitative evidence for the use of simulation and randomization in the introductory statistics course" *Proceedings of the ninth International Conference on Teaching Statistics*. Flagstaff, Arizona. http://iase-web.org/icots/9/proceedings/pdfs/ICOTS9_8A3_TINTLE.pdf

Swanson T, VanderStoep J, **Tintle NL** (2014) "Student attitudes toward statistics from a randomization-based curriculum" *Proceedings of the ninth International Conference on Teaching Statistics*. Flagstaff, Arizona. http://iase-web.org/icots/9/proceedings/pdfs/ICOTS9_1F1_SWANSON.pdf

Roy S, Rossman A, Chance B, Cobb G, VanderStoep J, **Tintle NL** and Swanson T. (2014) "Using simulation/randomization to introduce p-value in week 1." *Proceedings of the ninth International Conference on Teaching Statistics*. Flagstaff, Arizona. http://iase-web.org/icots/9/proceedings/pdfs/ICOTS9_4A2_ROY.pdf

Klanderman D, Maxwell M, Tintle NL (2015) "Experiencing a paradigm shift: teaching statistics through simulation-based inference" *Proceedings of the biennial conference of the Association for Christians in the Mathematical Sciences*. Redeemer University College. Hamilton, ON.

Tintle NL, Chance B, Cobb G, Roy S, Swanson T, VanderStoep J (2015) "Combating anti-statistical thinking using simulation-based methods throughout the undergraduate curriculum" *The American Statistician*. 69(4):362-70.

Chance B, Wong J*, **Tintle NL**. "Student performance in curricula centered on simulation-based inference: a preliminary report. (2016) *Journal of Statistics Education*. 24:3, 114-126.

Tintle NL, Clark J*, Fischer K*, Chance B, Cobb G, Roy S, Swanson T and VanderStoep J. (2018) "Assessing the association between quantitative maturity and student performance in introductory statistics: simulation-based inference vs. non-simulation-based inference." *Journal of Statistics Education*. 26:2, 103-109.

Tintle NL and VanderStoep J. (2018) Development of a tool to assess students' conceptual understanding in introductory statistics. *Proceedings of the 10th annual conference on teaching statistics*. http://www.isi-stats.com/isi/presentations/ICTOS2018-7.pdf

McGaughey K, Chance B, **Tintle NL**, Roy S, Swanson T, VanderStoep J (2018) "Finding meaning in a multivariable world: A conceptual approach to an algebra-based second course in statistics. *Proceedings of the 10th annual conference on teaching statistics* http://www.isi-stats.com/isi/presentations/ICOTS2018-4.pdf

Chance B, Mendoza S and Tintle NL (2018) "Student gains in conceptual understanding in introductory statistics with and without a curriculum focused on simulation-based inference. *Proceedings of the 10th annual conference on teaching statistics* http://www.isi-stats.com/isi/presentations/ICOTS2018-1.pdf

Textbooks and chapters

A spiral approach to financial mathematics. **Nathan Tintle**, Nathan Schelhaas and Todd Swanson. Elsevier. June 2018.

Introduction to Statistical Investigations: AP edition. **Nathan Tintle**, Ruth Carver, Beth Chance, George Cobb, Allan Rossman, Soma Roy, Todd Swanson and Jill VanderStoep. First edition. January 2018. John Wiley and Sons. http://math.hope.edu/isi

Introduction to Statistical Investigations. **Nathan Tintle**, Beth Chance, George Cobb, Allan Rossman, Soma Roy, Todd Swanson and Jill VanderStoep. First edition. January 2016. John Wiley and Sons. http://math.hope.edu/isi

Petersen A*, Spratt J*, **Tintle NL** "Incorporating prior evidence into tests of genetic association" Chapter 25 in Genome-Wide Association Studies and Genomic Prediction. Eds. Cedric Gondro, Julius van der Werf and Ben Hayes. Springer, Methods in Molecular Biology series. In press. Anticipated publication 2013.

Bromet, E.J., Gluzman, S.F., **Tintle, N.L.,** Paniotto, V.I., Webb, C.P.M., Zakhozha, V., Havenaar, J.M., Gutkovich, Z., Kostyuchenko, S., Schwartz, J.E. (2008). The State of Mental Health and Alcoholism in Ukraine. In R. C. Kessler & T.B. Üstün (Eds.). The World Mental Health Survey Initiative Volume One: Patterns of mental illness in the WMH Surveys. New York: Cambridge University Press.

Other non-peer reviewed publications

"Genetic Analysis Workshop 20: methods and strategies for the new frontiers of epigenetics and pharmacogenomics" BMC Proceedings. Nathan Tintle, David Fardo, Mariza de Andrade, Stella Aslibekyan, Julia Bailey, Justo Lorenzo Bermejo, Rita Cantor, Saurabh Ghosh, Philip Melton, Xuexia Wang, Jean MacCluer, Laura Almasy. February 2018.

"Improvements to Bayesian Gene Activity State Estimation from Genome-wide transcriptomics data" Craig Disselkoen, Nathan Hekman, Brian Gilbert, Sydney Benson, Matthew Anderson, Matthew DeJongh, Aaron Best and Nathan Tintle.
https://www.biorxiv.org/content/early/2017/12/29/241000

"Negotiating for release time and leave." Maura Mast and Nathan Tintle. AMS Notices. May 2016.

"Broadening the impact and evaluating the effectiveness of a simulation-based inference curriculum" Proceedings of the TUES/AAAS PI's conference. Washington, DC. April 2016.

"The data revolution" Christian Courier. January 11, 2016.
http://www.christiancourier.ca/columns-op-ed/entry/the-data-revolution

"Explorers and immigrants" Inallthings.org blog post. January 2016.
http://inallthings.org/explorers-and-immigrants/

"Broadening the impact and evaluating the effectiveness of a simulation-based inference curriculum" Amstat News. ISI Team. March 2015.

"Simulation-based inference in statistics education: Exciting progress and future directions" Nathan Tintle. Statistics Views. John Wiley and Sons publishing. January 2015.
http://stats.cwslive.wiley.com/details/feature/7293032/Simulation-based-inference-in-statistics-education-Exciting-progress-and-future-.html

"Emphasizing the entire research process throughout the curriculum: the next step in real data integration in introductory statistic courses" Simulation-based inference blog.
www.causeweb.org/sbi January 2015.

Bickeboller H, Bailey JN, Beyene J, Cantor RM, Cordell HJ, Culverhouse RC, Engelman CD, Fardo DW, Ghosh S, Konig IR, Bermejo JL, Melton PE, Santorico SA, Satten GA, Sun L, Tintle NL, Ziegler A, MacCluer JW, Almasy L (2014) "Genetic analysis workshop 18: Methods and strategies for analyzing human sequence and phenotype data in members of extended pedigrees" *BMC Proceedings*. 8(Suppl 1):S1.
http://www.biomedcentral.com/1753-6561/8/S1/S1

"Characterizing Membership Growth and Decline in the Reformed Church in America 2000-2005." **Nathan Tintle**, Kathryn Harper* and Jennifer Rice*. Reformed Review. Western Seminary Press. Fall 2007. Volume 60, No 3. p121-141.

"Perceived problems in the Eastern Synods of the Reformed Church in America." **Nathan Tintle** and Laura Malpass*. Reformed Review. Western Seminary Press. Fall 2007. Volume 60, No 3. p142-146.

*Undergraduate student.

Presentations/Activities

November 2018. Invited speaker. John Wiley and Sons seminar series. Simulation-based inference in introductory statistics.

November 2018. Co-workshop leader. Statistical Thinking in Undergraduate Biology network workshop. PKAL. Atlanta, Georgia.

September 2018. Co-workshop leader. Statistical Thinking in Undergraduate Biology network workshop. Morro Bay, California.

August 2018. Invited speaker. Fresno State University, College of Mathematics and Sciences. Faculty assembly. "Models of Interdisciplinary Research."

August 2018. Chair of panel on undergraduate research and speaker for session on simulation-based inference at Joint Statistics Meetings, Vancouver.

July 2018. Workshop leader for two workshops, and one invited presentation. International Conference on Teaching Statistics. Kyoto, Japan.

May 2018. Workshop leader for two workshops at the electronic conference on teaching statistics: Second course in statistics and teaching statistics in biology courses.

April 2018. Invited presentation. University of Wisconsin – Lacrosse. Teaching with simulation based inference.

April 2018. Two invited presentations. Michigan State University. College of Nursing Dean's speaker series. Fatty acids and cardiac health. Building and sustaining and undergraduate research program.

February 2018. Invited presentation. Fresno State University. Science Division colloquium series. Fresno, CA.

January 2018. Invited presentation. Simulation based inference in the teaching of introductory statistics. Joint Mathematics Meetings. San Diego, CA.

December 2017. CME Statistics Conference. Invited presentation. Simulation-based inference and the revised GAISE guidelines for the first course in statistics. London, U.K.

November 2017. CLASP conference. Philadelphia, PA.

September 2017. External Reviewer. Department of Mathematics and Statistics. William Paterson University.

September 2017. CHARGE consortium meeting. Boston, MA.

August 2017. University of Nebraska- Lincoln. In-service TA training session on teaching with simulation based inference.

July 2017. Montana State University. Bozeman, MT. In-service TA training session on teaching with simulation based inference.

June 2017. Statistical Society of Canada. Pre-conference workshop leader on teaching using simulation-based inference. Invited session leader on teaching using simulation based inference.

May 2017. Association for Christians in the Mathematical Sciences. Pre-conference workshop leader on teaching using simulation-based inference.

May 2017. United States Conference on Teaching Statistics. Penn State University. Led three breakout sessions.

April 2017. Illinois Mathematics Association of Two Year Colleges. Invited keynote speaker. Workshop Leader. Simulation-based inference methods in introductory statistics courses.

March 2017. Proceedings editor, group leader and two student oral presentations. Genetic Analysis Workshop 20. San Diego, CA.

January 2017. Two posters and one oral presentation on statistical genetics. Pacific Symposium on Biocomputing. Kona, HI.

January 2017. Panel talk on the future of introductory statistics. Joint Mathematics Meetings. Atlanta, GA.

November 2016. "Ukraine international REU program at Dordt" Augustana University. Psychology club seminar series.

November 2016. "Teaching Introductory Statistics with Simulation-based inference" AMATYC satellite workshop. Denver, CO.

November 2016. "Simulation-based inference in introductory statistics" UC Denver. Invited speaker.

October 2016. "Genome wide interaction study of inflammatory biomarkers" International Genetic Epidemiology Society 25th annual meeting. Toronto, CA.

August 2016. "Assessing the Association Between Quantitative Maturity and Student Performance in Simulation-Based and Traditional Introductory Statistics" Joint Statistics Meetings. Panel presentation. Chicago, IL.

August 2016. "Teaching Introductory Statistics with Simulation-based Inference" co-Workshop leader. Chicago, IL.

July 2016. Land Institute. Kernza investigators meeting. Invited Presentation. Wilson, KS.

June 2016. University of Manitoba, Department of Statistics, colloquium series. "Teaching with Simulation based inference" Winnipeg, MB.

May 2016. eCOTS. Breakout session co-leader with Beth Chance. "Simulation-based inference beyond Stat 101"

May 2016. eCOTS. Workshop co-leader with Beth Chance. "Teaching with simulation-based

inference"

April 2016. Westchester and Dutchess County Community Colleges. New York. Invited speaker. "The role of simulation-based inference methods in teaching introductory statistics"

April 2016. TUES/AAAS invited paper presenter. "Simulation-based inference in teaching introductory statistics." Washington, DC. Biennial conference.

April 2016. Johnson County Community College. Kansas City, MO. Invited speaker. "The role of simulation-based inference methods in teaching introductory statistics"

April 2016. University of Iowa. Department of Biostatistics. "A framework for rare variant tests of genetic association and its implication" Invited speaker for seminar series.

April 2016. Invited speaker at Drake University/Northeast Iowa AEA sponsored high school math teacher workshop. "Using randomization and simulation in the high school mathematics classroom"

February 2016. Invited speaker. John Wiley and Sons. Promotional event for "Introduction to Statistical Inference" Orlando, Florida.

February 2016. Invited speaker. University of Pennsylvania. Department of Biostatistics. "Using simulation-based methods to teach statistical inference"

February 2016. Invited speaker. Penn State University. Department of Nutrition. "Using a geometric framework to understand and extend rare variant tests of association"

January 2016. Professional development seminar. "Examples of using simulation based methods of teaching statistics in high school" Dordt Math Challenge. Sioux Center, Iowa.

January 2016. Invited speaker. "Using a geometric framework to understand and extend rare variant tests of association" Cal Poly- San Luis Obispo. Department of Statistics. Colloquium series.

October 2015. Organizer of the first electronic undergraduate statistics research conference.

October 2015. Session chair and mentor to three poster and one oral student presentation at the annual meeting of the International Genetic Epidemiology Society meeting. Baltimore, MD.

September 2015. "Simulation-based inference in the high school classroom." Afternoon workshop. Iowa council of teachers of mathematics annual meeting. Valley High School, Des Moines, IA.

September 2015. "Simulation-based inference: Teaching tips." Morning workshop. Iowa Association of Mathematics at Two-year Colleges. Northwest Iowa Community College.

September 2015. "Reflections on making the switch to a simulation-based inference curriculum" CAUSE Teaching and Learning webinar. Panel moderator.

May 2015. "Teaching a simulation-based approach to statistical inference" USCOTS 2015, Pre-conference workshop. Co-leader.

May 2015. Invited talk "What's wrong with Stat 101" Plenary session discussant. USCOTS 2015. Penn State University.

March 2015. Invited talk "Reflections on 10 years of mentoring undergraduate research students in biostatistics" University of Michigan, Department of Biostatistics.

March 2015. Invited speaker at Drake University/Northeast Iowa AEA sponsored high school math teacher workshop. "Using randomization and simulation in the high school mathematics classroom"

January 2015. External reviewer. Cornell College. Mathematics and Statistics Department.

November 2014. Reviewer for NIH Genes, Genomes and Genomics group R15 proposals.

August 2014. "An adaptive approach to combining multiple tests of genetic association" International Genetic Epidemiology Society meeting. Vienna, Austria.

August 2014. "Teaching a randomization based introduction to statistics". CAUSE pre-JSM workshop. Boston, MA. Workshop leader

July 2014. "Assessment data for randomization based introductory statistics courses". International conference on teaching statistics conference. Flagstaff, AZ.

June 2014. "Teaching a randomization based introduction to statistics". MAA-PREP workshop. Workshop leader. San Luis Obispo, CA.

May 2014. "Teaching a randomization based introduction to statistics". Biennial electronic conference on teaching statistics (eCOTS). Workshop leader.

January 2014. "Randomization based inference in introductory statistics." Invited presentation. University of South Dakota, Mathematics Department, Colloquium series.

January 2014. "Teaching a randomization based introduction to statistics". CAUSE pre-JMM workshop. Baltimore, MD.

November 2013. "A custom pipeline for the analysis of genetic association data" R-users workshop. Sioux Falls, SD.

October 2013. Chaired session on "Family data in genetic association testing" at American Society of Human Genetics, Annual Meeting. Boston, MA.

October 2013. "Using data in decision making" Dordt Defender Days, Broader Vision Seminar. Sioux Center, Iowa.

September 2013. Two oral presentations: (1) Randomization and simulation in the first Statistics Course. (2) A geometric framework for gene-based rare variant tests of association. South Dakota State University.

August 2013. Oral Presentation. "*Challenging the state of the art in post-introductory statistics: preparation, concepts and pedagogy*." ISI/IASE. Hong Kong, China.

August 2013. Invited panelist. "Is the 'world' ready for a simulation approach to introductory

topics?" Joint Statistics Meetings. Montreal,QC.

August 2013. External reviewer for tenure and promotion for two faculty members at other institutions.

June 2013. Abstract reviewer for ASHG annual meeting.

June 2013. Presenter/ local-organizer for workshop on teaching the randomization curriculum. MAA-PREP workshop. Campus of Dordt College. June 2013.

May 2013. Presenter at workshop on teaching the randomization curriculum; table leader for roundtable discussion on teaching the randomization curriculum. USCOTS. May 2013.

"Developing an innovative randomization-based introductory statistics curriculum" TUES/AAAS Principal investigator's meeting. Washington, DC. January 2013.

"Recent technological breakthroughs in genomics and their impact on treatment and research for common psychiatric disorders" NAMI support group. Sioux Center, IA. December 2012.

Pathway analysis group leader. Proceedings editor. GAW18. Stephenson, WA. October 2012.

"A geometric framework to guide understanding of rare variant tests of association" 1000 genomes conference. IGES. Stephenson, WA. October 2012.

"Using Randomization and Simulation to Teach Inference" Panelist. Joint Statistics Meetings. San Diego, CA. August 2012.

"A geometric framework to guide understanding of rare variant tests of association" 1000 genomes conference. Ann Arbor, MI. July 2012.

"A debate of what we know, think we know, and don't know about the use of simulation and randomization-based methods as alternatives to the consensus curriculum of the Stat 101 course" eCOTS. May 2012.

"Debating the big ideas in statistics education" Invited panelist. eCOTS. May 2012.

National Science Foundation. TUES Review Panel member. April 2012.

ENAR 2012. Washington, D.C. April 2012.

"Careers in applied mathematics and statistics" Great Plains Math League. March 2012. Dordt College, Sioux Center, IA.

"Careers in applied mathematics and statistics" Unity Christian High School. Orange City, IA. November 2011.

"An introductory statistics course using randomization methods" StatChat. Northfield, MN. November 2011.

"Designing and analyzing the next generation of genome-wide association studies" St. Olaf College. Northfield, MN. November 2011.

Presenter. Heartland Conference "Content and teaching style changes in statistics education" Sioux Center, IA. October 7, 2011.

Invited panelist at USCOTS 2011. Raleigh, NC. May 19-21, 2011. "A randomization approach to the first course in statistics"

Breakout session leader at USCOTS 2011. Raleigh, NC. May 19-21, 2011. "An algebra-based second course in statistics: the next big thing?"

Joint Mathematics Meetings. New Orleans, LA. January 8-9, 2011.

Co-group leader and co-group presenter Genetic Analysis Workshop 17. Boston, MA. October 2010.

Invited panelist for "Beyond the Introductory Course--Strategies for a Second Course in Statistics." Joint Statistical Meetings. Shonda Kuiper, Robin Lock, Brad Hartlaub, Nathan Tintle. August 2010. Vancouver, B.C.

"A randomization approach to the first course in statistics" Poster presentation. Todd Swanson and Nathan Tintle. Joint Statistical Meetings. August 2010. Vancouver, B.C.

Invited presentation "A randomization approach to teaching statistical inference" Project MOSAIC meeting. Minneapolis, MN. July 2010.

"Integrating 207 gene expression microarrays for Shewanella Oneidensis with operons, regulons, subsystems and metabolic models" Weeklong workshop at Argonne National Labs, Chicago IL. February 15-19, 2010.

"Quantifying Metabolic Diversity in Bacterial Genomes" Presentation at Pacific Symposium on Biocomputing. Kona, HI. January 5-9, 2010.

"Statistical Genetics Research at Hope College" Hope College Math Department Colloquium series. November 2009.

"Gene set analysis methods for genome-wide association studies" American Society of Human Genetics Annual Meeting. Honolulu, HI. October 2009.

"Gene set analysis methods for genome-wide association studies" International Genetic Epidemiology Society Annual Meeting. Kahuku, HI. October 2009.

"The Hope College model for a second course in Statistics." Webinar presentation. CAUSE-cluster for the post-introductory statistics course. September 30, 2009.

Undergraduate research programs in Statistics Workshop. Washington DC. August 2009.

"Second Courses in Statistics" Poster presentation. Shonda Kuiper, Nathan Tintle, and Doug Andrews. United States Conference on Teaching Statistics. June 2009.

Member of dissertation committee for Matthew Rosales. Western Michigan University. April 2009.

Judge for USPROC—national statistics poster competition. March 2009.

Statistics Career Day. Grand Valley State University. October 31, 2008.

Genetic Analysis Workshop 16 (GAW16)/International Genetic Epidemiology Society meeting. St. Louis, MO. September 14-20, 2008. Co-group leader and co-presenter at GAW16.

Participant in Young Investigators in Biostatistics workshop at ENAR annual meeting. Arlington, VA. March 15, 2008.

"Statistical Genetics Research at Hope College" Hope College Math Department Colloquium Series with Brian McLellan and Dirk Van Bruggen. January 17, 2008

Online course in longitudinal data analysis (Statistics.com). August 2007.

Bootstrapping and permutation methods course at Joint Statistical Meetings. August 2007.

"Repeated classification as a cost-effective sample design to test association when there are random misclassification errors" Poster presentation. Joint Statistical Meetings, Salt Lake City, Utah. August 2007.

"Genome-scale Metabolic Reconstruction and Modeling of Microbial Life" Hope College. HHMI Interdisciplinary Talk with Aaron Best and Matt DeJongh. June 2007.

"Using duplicate genotyped data in tests of association" Calvin College. Math Colloquium Series. April 2007.

Using M-Plus. Continuing education at ENAR meeting. March 2007.

"Using re-genotyped data in tests of association" Eastern North American Region of the International Biometric Society Spring Conference. Atlanta, GA. March 10-13 2007.

"Interdisciplinary research across Biology, Mathematics, and Computer Science: Genome-scale Metabolic Reconstruction and Modeling of Microbial Life." Presented with Aaron Best and Matt DeJongh. Invited presentation at the Pew workshop "Interdisciplinary science education: institutional examples, lessons learned and challenges. February 23-25 2007. St. Olaf and Carelton Colleges.

Judge for first national Undergraduate Statistics Poster Competition (USPROC) sponsored by the consortium for the advancement of statistics education. February 17, 2007. Central Michigan University.

"Using re-genotyped data in tests of association" Grand Valley State University. Statistics Seminar Series. September 2006.

ENAR annual meeting. March 2006. Tampa, FL. Attendee.

"What are some advantages of teaching statistics as systematized inductive reasoning?" United States Conference on Teaching Statistics. May 2005

"Using re-genotyped data in tests of association" Columbia University. Genetic Epidemiology Seminars. November 2004.

Genetic Analysis Workshop 14 (GAW14). Noordwijkerhout, The Netherlands. September 2004.
Participant and presenter.