

## Curriculum Vitae

**Veronica J. Vieland, Ph.D.**  
**Battelle Chair in Quantitative and Computational Biology**  
**Director, Battelle Center for Mathematical Medicine**  
**Vice-President for Computational Research**  
**The Research Institute at Nationwide Children's Hospital**  
**&**  
**Professor, Departments of Pediatrics & Statistics**  
**The Ohio State University**

### Contact Information

Battelle Center for Mathematical Medicine  
 WB5129  
 575 Children's Crossroad  
 Columbus OH 43215

*Phone* (614) 355-5651  
*Fax* (614) 355-6671  
*Email* [Veronica.Vieland@Nationwidechildrens.org](mailto:Veronica.Vieland@Nationwidechildrens.org)

### Areas of Research Interest

Statistical genetics  
 Genetic architecture of psychiatric and other complex human disorders  
 Genetic modifiers of Mendelian disorders  
 Computational methods in biology  
 Measurement theory in biology  
 Foundations of statistical inference  
 Intersection of thermodynamics, information theory and statistical inference  
 Philosophy of statistics

### Education

| <u>Year</u> | <u>Degree, field</u>   | <u>Institution</u>  |
|-------------|--|---|
| 1979        | B.A., Philosophy   | Barnard College, New York, New York                                       |
| 1981        | M.A., Philosophy (Mathematical Logic and Philosophy of Science)  | Columbia University, Department of Philosophy<br>New York, New York       |
| 1986        | Ph.D., Philosophy (Mathematical Logic and Philosophy of Science) | Columbia University, Department of Philosophy<br>New York, New York       |
| 1988        | M.S., Biostatistics  | Columbia University, Department of Biostatistics<br>New York, New York    |
| 1988-90     | Postdoctoral Research Fellow<br>Biostatistics/Child psychiatry   | Columbia University, Department of Child Psychiatry<br>New York, New York |

### Academic Appointments

| <u>Year</u> | <u>Position</u>             | <u>Institution</u>   |
|-------------|-----------------------------|--|
| 1981-84     | Instructor                  | Columbia University, New York, NY                          |
| 1984-86     | Graduate Research Assistant | Columbia University  |
| 1986        | Instructor                  | Marymount Manhattan College, New York, NY                  |
| 1986-88     | Graduate Research Assistant | Columbia University, School of Public Health, New York, NY |

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|---------|--|---|
| 1988-90 | Research Scientist   | New York State Psychiatric Institute, New York, NY  |
| 1990-95 | Assistant Professor  | Departments of Psychiatry and Biostatistics,<br>Columbia University   |
| 1991    | Visiting Scholar   | Department of Biomathematics, University of California Los Angeles  |
| 1995-99 | Associate Professor  | Department of Preventive Medicine & Environmental Health,<br>Division of Biostatistics, College of Medicine<br>The University of Iowa, Iowa City, IA<br>(primary appointment) |
| 1995-00 | Associate Professor  | Department of Psychiatry, College of Medicine<br>The University of Iowa<br>(secondary appointment)  |
| 1996-00 | Associate Professor  | Interdepartmental Ph.D. Program in Genetics<br>The University of Iowa   |
| 1999-00 | Associate Professor  | Department of Biostatistics, College of Public Health (founded 1999)<br>The University of Iowa<br>(primary appointment)   |
| 2000-03 | Professor  | Department of Biostatistics, College of Public Health<br>The University of Iowa<br>(primary appointment)  |
| 2000-06 | Professor  | Department of Psychiatry, College of Medicine<br>The University of Iowa<br>(secondary appointment)  |
| 2000-06 | Professor  | Interdepartmental Ph.D. Program in Genetics<br>The University of Iowa   |
| 2000-03 | Director   | Division of Statistical Genetics, Department of Biostatistics<br>College of Public Health<br>The University of Iowa   |
| 2000-06 | Director   | Center for Statistical Genetics Research<br>College of Public Health & Carver College of Medicine<br>The University of Iowa   |
| 2003-06 | Professor & Head   | Department of Public Health Genetics<br>College of Public Health<br>The University of Iowa  |
| 2006-07 | Dwight E. Peters and Juanita R. Curran Professor of Pediatric Research | The Research Institute at Nationwide Children's Hospital  |
| 2006-07 | Director, Center for Quantitative and Computational Biology            | The Research Institute at Nationwide Children's Hospital  |
| 2007-   | Battelle Chair in Quantitative and Computational Biology               | The Research Institute at Nationwide Children's Hospital  |

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|---------|---|--|
| 2007-   | Director, Battelle Center<br>for Mathematical Medicine<br>(formerly known as Center for<br>Quantitative and Computational<br>Biology) | The Research Institute at Nationwide Children's Hospital                     |
| 2006-   | Professor (Primary)   | Department of Pediatrics<br>College of Medicine<br>The Ohio State University |
| 2007-   | Professor (Secondary)   | Department of Statistics<br>The Ohio State University                        |
| 2007-10 | Adjunct Professor   | Department of Genetics<br>Rutgers University                                 |
| 2011-   | Vice-President for<br>Computational Research  | The Research Institute at Nationwide Children's Hospital                     |

### Honors and Awards

Elected Fellow, American Association for the Advancement of Science (AAAS), 2013.

Elected Fellow, American PsychoPathological Association (APPA, founded in 1910), 2012.

National Institute of Mental Health Career Development Award, 1997-2002

Myers Center Award for the Study of Human Rights in North America (awarded to Get Smart!), 1994

World Congress on Psychiatric Genetics Junior Investigator Travel Award, Oct. 1993

National Institute of Mental Health Scientist Development Award, 1990-1995

Columbia University President's Fellowship, 1979-1982

Graduated cum laude with Honors, Barnard College, Columbia University, 1979

William Pepperell Montague Prize for Promise of Distinction in Philosophy, Barnard College, Columbia University, 1979

### Professional Affiliations

Member, Society for Women in Philosophy, 1981-1986

President, New York Chapter of the Society for Women in Philosophy, 1983-1984

American Society of Human Genetics, 1990-2015

International Genetic Epidemiology Society, founding member, 1991-2017

Member, American Association for the Advancement of Science (AAAS), 2008-

Member, Society for Philosophy of Science in Practice, 2009-

Member, Genetics Society of America, 2012-2014

Member, American PsychoPathological Association (APPA), 2012-

Member, The Philosophy of Science Association, 2013 –

## Classroom Teaching

| <u>Year</u> | <u>Course Title and Number</u>   |
|-------------|--|
| 1981        | Formal Logic   |
| 1982        | Epistemology   |
| 1982-84     | Contemporary Civilization  |
| 1985        | Mathematical Logic   |
| 1986        | Mathematical Logic   |
| 1994        | Probability Theory with Statistical Applications   |
| 1996        | Risk and Protective Factors in Childhood Psychopathology (Child Psychiatry Residents' Lecture) |
| 1996        | Independent Study in Statistical Genetics (Susan Slager)                                       |
| 1996        | Summer Student Seminar Series in Human Genetics  |
| 1996        | Statistical Genetics   |
| 1997        | Independent Study (Terry Braun, Genetics Ph.D. Rotation)                                       |
| 1997        | Advanced Topics in Genetic Data Analysis   |
| 1997        | Biostatistics Preceptorship (Kim Williamson)   |
| 1998        | Risk and Protective Factors in Childhood Psychopathology (Child Psychiatry Residents' Lecture) |
| 1999        | Statistical Genetics   |
| 1999        | Advanced Biostatistics Seminar   |
| 1999        | Advanced Topics in Genetic Data Analysis   |
| 1999        | Biostatistics Preceptorship (Wen Huang)  |
| 2001        | Statistical Genetics I   |
| 2001        | Advanced Topics in Genetic Data Analysis   |
| 2002        | Statistical Genetics I: Dichotomous Traits   |
| 2002        | Biostatistics Preceptorship (Deli Wang)  |
| 2002        | Statistical Genetics Preceptorship (Jackie Bartlett)   |
| 2002        | Statistical Genetics Preceptorship (LaVonne Mangin)  |
| 2003        | Statistical Genetics I: Dichotomous Traits   |
| 2003        | Advanced Topics in Genetic Data Analysis   |
| 2003        | Biostatistics Preceptorship (Xinqun Yang)  |
| 2003        | Statistical Genetics Preceptorship (Huaming Tan)   |
| 2004        | Statistical Genetics Preceptorship (Min Shi)   |
| 2005        | Statistical Genetics Preceptorship (Diana Istook)  |
| 2005        | Clinical Genetics Practicum (Instructor of record for genetics clinic/journal club rotation)   |
| 2006        | Theory of Statistical Genetics   |
| 2006        | Clinical Genetics Practicum (Instructor of record for genetics clinic/journal club rotation)   |
| 2006        | Independent Study in Statistical Genetics (Yungui Huang)                                       |

## Doctoral Thesis Committees

Thesis Committee Member for Daniel Nettleton  
 Department of Statistics & Actuarial Science, The University of Iowa, Ph.D. awarded, 1996.  
 Dissertation title: Order-restricted inference for interval mapping of quantitative trait loci

Thesis Co-director for Kai Wang  
 Department of Statistics & Actuarial Science, The University of Iowa, Ph.D. awarded, 1998.  
 Dissertation title: A Bayesian approach to replication of linkage studies

Oral Examination Committee for Maria Mendoza  
 Department of Biostatistics, University of Iowa, Ph.D. awarded, 1999

Thesis Co-Director for Susan Slager  
 Department of Biostatistics, The University of Iowa, Ph.D. awarded, 1999  
 Dissertation title: Linkage disequilibrium mapping of complex disorders: Investigating statistical power to detect linkage.

Thesis Co-Director for Elizabeth Ludington

Department of Biostatistics, The University of Iowa, Ph.D. awarded, 2000  
Dissertation title: Sex-specific recombination in linkage analysis

Thesis Director for Mark Logue  
Department of Statistics & Actuarial Science, The University of Iowa, Ph.D. awarded, 2001  
Dissertation title: Bayesian linkage detection under an unknown genetic model

Thesis Committee Member for Terry Braun  
Interdisciplinary Genetics Ph.D. Program, The University of Iowa, Ph.D. awarded, 2001  
Dissertation title: A Software Tool Architecture to Assist Disease Gene Identification

Thesis Committee Member for Todd Scheetz  
Interdisciplinary Genetics Ph.D. Program, The University of Iowa, Ph.D. awarded, 2001

Thesis Committee Member for Christopher Bartlett  
Center for Molecular & Behavioral Neuroscience, Rutgers University, Newark NJ, Ph.D. awarded, 2003  
Dissertation title: Localization of genes negatively influencing language development in specific language impairment with applications to autism.

Thesis Co-Director for Xinqun Yang  
Department of Biostatistics, Division of Statistical Genetics, The University of Iowa, Ph.D. awarded, 2005  
Dissertation title: A New Bayesian Approach to Disequilibrium Mapping

Thesis Co-Director for Manika Govil  
Program in Public Health Genetics (Statistical Genetics), College of Public Health, The University of Iowa, Ph.D. awarded, 2005  
Dissertation Title: Extensions of the Posterior Probability of Linkage: Distributed Computing, Incorporation of Genetic Map Information, an Application to Cleft Lip and/or Palate

Thesis Committee Member for Kwang-Youn Kim  
Department of Biostatistics, Division of Statistical Genetics, College of Public Health, The University of Iowa, Ph.D. awarded, 2006

Thesis Director for Yungui Huang  
Program in Public Health Genetics (Statistical Genetics), College of Public Health, The University of Iowa, Ph.D. awarded, 2000  
Dissertation Title: Association Statistics Under the PPL Framework

### **Postdoctoral Fellows Supervised**

Co-Mentor for Linda Brzustowicz, M.D., Principal Investigator  
NIMH Mentored Career Development Award  
"Phenotype Definition in Familial Schizophrenia," 1997-2002  
Department of Genetics, Rutgers University

Primary Mentor for Jian Huang, Ph.D., Principal Investigator  
NIMH Mentored Research Scientist Development Award  
"Statistical Models of Genetic Anticipation in Psychiatry," 1998-2003  
Department of Statistics, The University of Iowa

Co-Mentor for Peggy C. Nopoulos, M.D., Principal Investigator  
NIDR Mentored Patient Oriented Career Development Award  
"Brain Structure/Function in Orofacial Clefting Disorders," 1999-2004  
Department of Psychiatry, The University of Iowa

Co-Mentor for Thomas Wassink, M.D., Principal Investigator  
NIMH Mentored Career Development Award  
"A Multi-faceted Search for Autism Disease Genes," 2000-2005

Department of Psychiatry, The University of Iowa

Co-Mentor for Vicki L. Ellingrod, M.D., Principal Investigator  
NIMH Mentored Scientist Development Award  
"Genetics of Antipsychotic Metabolism," 2001-2006  
Department of Psychiatry, The University of Iowa

Primary Mentor for Mark Logue, Ph.D., Postdoctoral Research Fellow  
NIMH Psychiatric Genetics Training Program (R Crowe, PI)  
Department of Psychiatry, The University of Iowa, 2002

Co-Mentor for Robert Philibert, M.D., Principal Investigator  
NIMH Mentored Career Development Award  
"A Thyroid Receptor Co-Activator Hypothesis for Psychosis," 2002-2006  
Department of Psychiatry, The University of Iowa

Primary Mentor for Christopher Bartlett, Ph.D., Postdoctoral Research Fellow  
Center for Statistical Genetics Research, University of Iowa, 2003- 2006

Primary Mentor for Hongling Wang, Ph.D., Postdoctoral Research Fellow  
Center for Statistical Genetics Research, University of Iowa, 2005-2006; Center for Quantitative and Computational Biology, Columbus Children's Research Institute, 2006-2007.

Primary Mentor for Sang-Cheol Seok, Ph.D., Postdoctoral Research Fellow  
Battelle Center for Mathematical Medicine, The Research Institute at Nationwide Children's Hospital, 2007-2009.

Co-Mentor for Manika Govil, Ph.D., Principal Investigator  
NIDCR Translation to Independence Award  
"Statistical Genetic Analysis of Complex Craniofacial and Dental Genetic Disorders", 2008-2013  
Center for Craniofacial and Dental Genetics, University of Pittsburgh

Primary Mentor for Kimberly Walters, Ph.D., Postdoctoral Research Fellow  
Battelle Center for Mathematical Medicine, The Research Institute at Nationwide Children's Hospital, 2009 –2015

Member, Mentorship Committee for Jennifer Trittman, M.D., Assistant Professor of Pediatrics  
Neonatal-Perinatal Medicine and the Center for Perinatal Research, The Research Institute at  
Nationwide Children's Hospital 2012-2015

Primary Mentor for Joseph McEwen, Ph.D., Postdoctoral Research Fellow  
Battelle Center for Mathematical Medicine, The Research Institute and Nationwide Children's Hospital. 2017

### **Administrative Committees**

| <u>Year</u> | <u>Committee</u>  |
|-------------|---|
| 1995-96     | Department of Preventive Medicine and Environmental Health, University of Iowa<br>Resource and Space Committee                                  |
| 1996-97     | Department of Preventive Medicine and Environmental Health, University of Iowa<br>Computer Committee  |
| 1996-01     | Department of Preventive Medicine and Environmental Health, University of Iowa<br>NIMH Training Grant Steering Committee                        |
| 1996-01     | Department of Preventive Medicine and Environmental Health, University of Iowa<br>Chair, NIMH Training Grant Pre-Doctoral Recruitment Committee |
| 1997        | Department of Preventive Medicine and Environmental Health, University of Iowa  |

Environmental Health Science Research Center,  
Pilot Project Review Committee

1997-98 Department of Preventive Medicine and Environmental Health, University of Iowa  
Biostatistics Curriculum Review Committee

1997-98 Department of Preventive Medicine and Environmental Health, University of Iowa  
Student Evaluation Committee

Fall 1998 Department of Preventive Medicine and Environmental Health, University of Iowa  
Faculty Organizer, M.S. Specialty and Ph.D. Qualifying Exam in Biostatistics

1999 Ad Hoc Committee to Design a Biostatistics Track For the Undergraduate  
Mathematics Major, University of Iowa

1999-00 Department of Preventive Medicine and Environmental Health, University of Iowa  
Master's Examination Committee

1999-01 College of Public Health, Department of Biostatistics, University of Iowa  
Co-chair, Statistical Genetics Search Committee

2000-01 Offices of the Vice President for Research and Provost, University of Iowa  
Member, Informatics Study Committee

2000-01 College of Public Health & College of Medicine, University of Iowa  
Research Week Planning Committee

2000-02 Interdisciplinary Genetics Ph.D. Program, University of Iowa  
Planning Committee for new Bioinformatics and Computational Biology Track

2000-02 College of Medicine, Department of Psychiatry, University of Iowa  
Statistical Genetics/Psychiatry Search Committee

2000- 06 College of Public Health, University of Iowa  
CPH Research Advisory Council

2001-02 College of Public Health, Department of Biostatistics, University of Iowa  
Chair, Statistical Genetics Search Committee

2001-02 College of Public Health, Department of Biostatistics, University of Iowa  
Biostatistics Department Head Search Committee

2001-02 College of Public Health, University of Iowa  
Merck Fellowship Committee

2001-02 College of Public Health, University of Iowa  
New Investigator Research Award Review Committee

2001-02 Offices of the Vice President for Research and Dean of the Graduate College, University of Iowa  
Informatics Initiative Steering Committee

2002-05 College of Public Health, University of Iowa  
Chair, Computation and Informatics Committee

2002-03 College of Public Health, University of Iowa  
Chair, Admissions Committee, Department of Biostatistics

2002-05 Health Informatics Program Steering Committee

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| 2003      | College of Public Health, Department of Biostatistics, University of Iowa<br>Chair, Statistical Genetics Subtrack Comprehensive Exam Committee |
| 2003-04   | College of Public Health, Program in Public Health Genetics, University of Iowa<br>Chair, Strategic Planning Committee                         |
| 2003-06   | College of Public Health, University of Iowa<br>Executive Committee  |
| 2003-05   | College of Public Health, University of Iowa<br>Alumni Relations Council   |
| 2003-05   | Co-Chair, Offices of the Vice President for Research and Dean of the Graduate College,<br>University of Iowa Informatics Steering Committee    |
| 2003-06   | Interdisciplinary PhD Program in Genetics, University of Iowa<br>Computational Genetics Subtrack Committee                                     |
| 2004      | Graduate College, University of Iowa<br>Collegiate Consulting Group  |
| 2010-2011 | Member, Research Information Technology Advisory Council, The Research Institute at<br>Nationwide Children's Hospital                          |
| 2011-2014 | Chair, Research Information Technology Advisory Council, The Research Institute at Nationwide<br>Children's Hospital                           |
| 2010-     | Member, Research Conflict of Interest Committee, The Research Institute at Nationwide Children's<br>Hospital                                   |
| 2011-12   | Member, Research Strategic Planning Committee, The Ohio State University   |
| 2011-     | Member, Enterprise Data Strategy Committee, Nationwide Children's Hospital   |
| 2012      | Chair, The Chief Research Information Officer Search Committee, The Research Institute at<br>Nationwide Children's Hospital                    |
| 2013-2014 | Member, The Chief Research Information Officer Search Committee, The Research Institute at<br>Nationwide Children's Hospital                   |
| 2013-2014 | Chair, Research Computing Executive Committee, The Research Institute at Nationwide Children's<br>Hospital                                     |
| 2014      | Member, Director of Genomics Search Committee, Nationwide Children's Hospital  |
| 2014      | Member and Affirmative Action Advocate, Center for Gene Therapy Faculty Member Search<br>Committee, Nationwide Children's Hospital             |
| 2014-     | Member, Internal Advisory Board for the Center for Genomic Medicine & Pharmacogenomics, The<br>Ohio State University College of Medicine       |
| 2016      | Member, Research Retreat Planning Committee, The Research Institute at Nationwide Children's<br>Hospital                                       |
| 2016-2017 | Member, Biostatistical Core Director Search Committee  |
| 2016-2017 | Member, Biobehavioral Health Faculty Search Committee  |



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| 2017-     | Member, Bremer Lecture Selection Committee   |
| 2017-2020 | Member, Promotion and Tenure Committee, Department of Pediatrics, The Ohio State College of Medicine |

### Other Professional Activities

| <u>Year</u> | <u>Activity</u>  |
|-------------|--|
| 1991        | Invited Participant, Genetics Training Workshop, MacArthur Foundation Mental Health Research Network   |
| 1990 -      | Participant in Genetic Analysis Workshops 7, 9, 10, 11, 12, 13, 15   |
| 1994-       | Referee for <i>American Journal of Epidemiology</i> , <i>American Journal of Human Genetics</i> , <i>American Journal of Public Health</i> , <i>Annals of Human Genetics</i> , <i>Archives of General Psychiatry</i> , <i>European Journal of Human Genetics</i> , <i>Genomics</i> , <i>Neuropsychiatric Genetics</i> , <i>Nature Genetics</i> , <i>Thyroid et al.</i> |
| 1995        | NIMH Ad Hoc Genetics Review Committee  |
| 1996, 2000  | Referee for Genetic Analysis Workshop 10 publication submissions   |
| 1996-2001   | Consultant, NIH-NIDCD Grant R01 DC01654, Family Genetic Studies of Language Impairment. PI: P Tallal   |
| 1997        | NIMH Genetics and Epidemiology Initial Review Group  |
| 1998        | NIMH, Chair, Special Initial Review Group  |
| 1998, 2000  | Co-chair, Psychiatric Genetics Chromosome 5 Workshops  |
| 1997-2005   | Member of International Board of Scientific Advisors, Canadian Medical Research Grant GR-14501, The Genetics of Complex Disorders: An Integrated Approach To the Study of Bipolar Disorder, Schizophrenia, Alcoholism and Autism. PI's: M Maziade, R Palmour, MA Roy, P Szatmari   |
| 1998        | Organizer and Chair, Iowa Workshop in Statistical Genetics in Public Health, June 15-17, 1998, The University of Iowa  |
| 2001        | Associate Editor, Genetic Analysis Workshop (Genet Epidem)   |
| 2002        | Session Co-Moderator, Haplotype blocks and linkage disequilibrium mapping. American Society of Human Genetics, Baltimore MD  |
| 2002        | NIH Special Review Panel   |
| 2002        | NCI Biostatistics Program, External Review Committee   |
| 2002-2005   | Psychiatric Genetics editorial board   |
| 2002        | American Society of Human Genetics, Abstract Reviewer for 2002 Annual Meeting  |
| 2003        | NIH Mammalian Genetics Review Committee, Ad Hoc Member   |
| 2003        | Judge, Poster Session, College of Medicine/College of Public Health Research Week  |

2004 Invited Participant and Presenter, NIH Forum on “Gene Discovery in Mental Disorders: How to Proceed?”, Laguna Beach CA

2004 Judge, Poster Session, College of Medicine/College of Public Health Research Week

2004 Group Leader, Genetic Analysis Workshop 14, Noordwijkerhout, The Netherlands

2004-2006 Collaborator, Gerontological Nursing Interventions Research Center, UI College of Nursing

2005 Associate Editor, Genetic Analysis Workshop 14 (Biomed Central)

2006-2011 Scientific Consultant to Genome Canada's Autism Genome Project (Steve Scherer, PI)

2006 Participant, Committee on Institutional Cooperation (CIC) Professional Development Seminar for Department Heads and Chairs, Park Ridge, Illinois February 9-11

2006 Invited Participant, "A Critical Assessment of Autism Genetics" and Chair, Session 5 Statistical Genetics, Banbury Center, Cold Spring Harbor Laboratory NY, March 12-14

2006 Invited Workshop Participant, "Systems Genetics and Complex Phenotypes." National Institute of General Medical Sciences, Bethesda MD, September 7-9

2006 Group Leader, Genetic Analysis Workshop 15, St. Pete Beach, FL

2006-2011 Consultant, Molecular Genetic Study of Autism and Related Phenotypes In Extended Pedigrees, CIHR, Szatmari PI

2007-2008 Scientific Consultant to NIH 1R01DK-077510-01  
‘Genome-wide association of common alleles with long-term diabetic complications’  
Period: 09/30/2006 08/31/2009  
PI: AD Paterson.

2007 Associate Editor, Genetic Analysis Workshop 15, (Biomed Central)

2005-2007 Member, NIH Center for Inherited Disease Research Access Committee

2007 -2008 Chair, NIH Center for Inherited Disease Research Access Committee

2008 Chair, NIH Center for Inherited Disease Research Ad hoc Review

2008 Session Co-Moderator, Neuropsychiatric Disorders and Neurodevelopment. American Society of Human Genetics, Philadelphia, PA

2008-2013 Consultant, “Genome-Wide Association Study of Hypoplastic Left Heart and Related Defects” RO1 HL090506, McBride PI

2010-2012 Member, Steering Committee, NIMH Rutgers University Cell and DNA Repository U24 MH068457, Tischfield, PI

2010 Member, NIA Special Emphasis Panel (U01: Alzheimer’s Disease Neuroimaging Initiative)

2010- Member, College of CSR Reviewers, National Institutes of Health Center for Scientific Review

2010-2016 Associate Editor, Human Heredity

2011-2016 Editorial Board, G3:Genes|Genomes|Genetics, International Conference on Mathematical and Computational Medicine

- 2012 Co-Organizer (with Gunter Wagner, Yale University), Workshop on Measure Theoretic Issues in Biology, Columbus, Ohio, June 10-12.
- 2013 Member, Advisory Panel, “Foundations of Quantification and Measurement in the Biological Science”, Templeton Foundation, New York, NY, February.
- 2014 Ad Hoc Grant Reviewer, Natural Sciences and Engineering Research Council of Canada
- 2015 Organizer, American Association for the Advancement of Science Symposium “Extracting Evidence from Biological Data: Multiple Disciplines Get In on the Act,” San Jose, CA, February 14.
- 2016 Organizer, Society for Philosophy of Science in Practice Symposium, “Replication and Evidence: A Tenuous Relationship,” Glassboro, NJ, June 17-19.
- 2017 Invited Symposium participant, “Evidence: An Interdisciplinary Conversation about Knowing and Certainty,” Center for Science and Society and the Institute for Social and Economic Research and Policy, Columbia University, New York, NY, April 21-22. (See also Scientific Presentations and Invited Lectures, below.)
- 2017 Invited Symposium participant, “Unraveling Genetic Modifiers of Muscular Dystrophy” Eccles Institute of Human Genetics, University of Utah, Salt Lake City, UT, May 24. (See also Scientific Presentations and Invited Lectures, below.)
- 2017 Invited Workshop participant, “How do we decide what to measure?” Centre for Biodiversity Dynamics, Norwegian University of Science and Technology, Trondheim, Norway, June 6-10. (See also Scientific Presentations and Invited Lectures, below.)

## Research Grants

| <u>Title &amp; Agency</u>  | <u>Role</u>       | <u>Dates</u> |
|--|-------------------|--------------|
| Post-doctoral Fellowship in Psychiatric Genetics<br>NIMH Training Grant MH14620 (Raymond Crowe, PI)                                | Faculty<br>Member | 1989-2002    |
| Genetic Modeling of Child Psychopathology<br>NIH Mentored Career Development Award K01 MH00884                                     | PI                | 1990-1995    |
| Psychiatric Genetics and Family Studies: Robust Methods<br>NIH R01 MH48858 (Susan E. Hodge, PI)                                    | Co-I              | 1992-1997    |
| Sampling Models & Methods for Complex Genetic Diseases<br>NIMH Shannon Award   | PI                | 1994-1995    |
| Family Study of Obsessive Compulsive Disorder<br>NIH R01 MH44175 (Abby Fyer, PI)   | Co-I              | 1994-1998    |
| Sampling Models & Methods for Complex Genetic Diseases<br>NIH R01 MH2841   | PI                | 1995-2004    |
| Pre- and Post-doctoral Fellowships in Psychiatric<br>Epidemiology and Biometry<br>NIMH Training Grant MH15168 (Robert Woolson, PI) | Faculty<br>Member | 1996-2001    |
| Genetic Modeling of Psychopathy<br>NIMH Career Development Award K02 MH01432   | PI                | 1997-2002    |
| Linkage Study of Panic Disorder<br>NIMH R01 MH 34728 (Raymond Crowe, PI)   | Co-I              | 1997-2000    |

|   |       |           |
|---|-------|-----------|
| Collaborative Linkage Study of Autism<br>NIH R01 MH528401 (Joseph Piven, PI)  | Co-I  | 1999-2004 |
| Molecular Genetics of Autism<br>NIMH R01 NS43550 (Thomas Wassink, PI)   | Co-I  | 2002-2006 |
| Gene-Brain-Behavior Relationships in Autism<br>NIMH STAART Center U54 MH066418 (Joseph Piven, PI)   | Co-I  | 2002-2007 |
| Infrastructure to Facilitate Discovery of Autism Genes<br>NINDS R01 NS42165-01 (Joachim Hallmeyer, PI)  | Co-PI | 2002-2009 |
| Autism Genome Project<br>National Alliance for Autism Research (NAAR)<br>PI for Data Coordination Site  | Co-PI | 2004-2006 |
| Integrated Statistical and Computational Methods for Isolating<br>Genes for Non-Syndromic Cleft Lip with or without Cleft Palate<br>Roy J Carver Charitable Trust | PI    | 2005-2007 |
| Identification and Functional Assessment of Autism<br>Susceptibility Genes<br>NIMH R01 MH76433<br>Linked to separate R01s to L. Bruzstowicz and J. Millonig       | PI    | 2005-2011 |
| Molecular Genetic Study of Autism and Related Phenotypes<br>In Extended Pedigrees<br>NIMH RO1 MH076028 (Joseph Piven, PI)   | Co-I  | 2005-2010 |
| Bayesian Reanalysis of a Multi-Site Gene-Mapping Study of<br>Cleft Lip/Cleft Palate<br>NIDCR R03 DE017167   | PI    | 2006-2008 |
| Autism Genome Project<br>Autism Speaks<br>PI for Data Coordinating Site   | Co-PI | 2007-2012 |
| Autism Trio Collection Consortium<br>Autism Speaks<br>PI for Data Coordinating Site   | Co-PI | 2007-2009 |
| Coalescent Modeling for Genetic Mapping in<br>Population-Based Samples<br>IPR and Population & Health TIE Seed Grant, The Ohio State University                   | Co-PI | 2008-2009 |
| The Psychiatric GWAS Consortium: Integrated<br>and Coordinated GWAS Meta-Analyses<br>NIH U01 MH085515 (Mark Daly, PI)   | Co-I  | 2008-2009 |
| Combining Epidemiologic Designs to<br>Model Genetic Risks for Psychiatric Disorders<br>NIMH RO1 MH086117  | PI    | 2009-2012 |
| Combining Epidemiologic Designs to<br>Model Genetic Risks for Psychiatric Disorders (Supplement)<br>NIMH RO1 MH086117 S1  | PI    | 2010-2012 |
| A Molecular Genetic Study of Autism and Related Phenotypes  | Co-I  | 2011-2016 |

## In Extended Pedigrees

Canadian Institutes of Health Research (Peter Szatmari, PI)

|  |               |           |
|--|---------------|-----------|
| NIMH Center for Collaborative Genetic Studies (CCGS)<br>Combined Analysis of Psychiatric Studies (CAPS)<br>NIH U24MH068457 (LM Brzutowicz, J Tischfield, PI) | PI (CAPS)     | 2012-2023 |
| Quantitative determination of Ecological Niches for Polymicrobial<br>Colonization in OM<br>NIH RO1 GM 103612 (Jayajit Das, PI)                               | Co-I          | 2013-2017 |
| Genetic Modifiers of Duchenne Muscular Dystrophy<br>NIH R01 NS 085238 (Kevin Flanigan, PI)   | Co-I          | 2014-2019 |
| A National Pediatric Learning Health System<br>Patient-Centered Outcomes Research Institute (Chris Forrest, PI)  | Site PI (NCH) | 2014-2015 |
| Uncovering Basic Signaling Mechanisms in NK Cells in Mice<br>And Humans<br>NIH R56 AI 108880 (Jayajit Das, PI)   | Co-I          | 2014-2016 |
| Measuring the Evidence in Evidence-Based Medical Research<br>W. M. Keck Foundation   | PI            | 2015-2019 |

**Patents**

Modulators of Disease Severity in Muscular Dystrophy. Flanigan K, Weiss RB, **Vieland VJ**. *Submitted September 22, 2017.*

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85. Nouanesengsy B, Seok SC, Vieland VJ. Visualizing multidimensional support intervals for genetic models. ASHG 60<sup>th</sup> annual meeting, American Society of Human Genetics, #3023/f, 2010.
86. Valentine-Cooper W, Huang Y, Seok S, Veronica VJ. Poster: High-Performance Computing for Mapping Disease-Related Genes. Computational Advances in Bio and Medical Sciences (ICCABS), 2011, *IEEE 1st International Conference on* , vol., no., pp.263, 3-5 Feb. 2011
87. Huang Y, Tomer Y, Vieland VJ. Modeling HLA epistatic interactions using a unified GWAS and linkage analytical method maps new putative genes for Type 1 Diabetes. ASHG 61<sup>st</sup> annual meeting, American Society of Human Genetics, Poster 694W, 2011.

88. Seok SC, Nouanesengsy B, Vieland VJ. KELVIZ: A Graphing and Annotating Tool for Statistical Evidence in Human Genetics. ASHG 61<sup>st</sup> annual meeting, American Society of Human Genetics, Poster 674W, 2011.
89. Walters KA, Tobin K, Azaro M, Lehner T, Brzustowicz LM, Vieland VJ. Review and re-analysis of all schizophrenia multiplex families in the NIMH repository substantially alters overall linkage findings. ASHG 61<sup>st</sup> annual meeting, American Society of Human Genetics, Poster 646T, 2011.
90. Vieland VJ, Walters KA, Tobin K, Azaro M, Lehner T, Brzustowicz LM. Combined linkage and genome-wide association analysis of multiple schizophrenia (SZ) and bipolar data (BP) sets from public repositories reveals striking new evidence of distinct and overlapping genes. ASHG 61<sup>st</sup> annual meeting, American Society of Human Genetics, Poster 551F, 2011.
91. Govil M, Mukhopadhyay N, Huang Y, Valentine-Cooper W, Field LL, Lidral A, Murray J, Marazita ML, Vieland VJ. CL/P: Utilizing Advanced Analytic Approaches to Identify Etiologic Genes. AADR Annual Meeting, March 2012.
92. Thompson A, Szatmari P, Vieland VJ, Piven J, Fernandez BA, Walters K, Parlier MC, O'Conner I, Whitten K. Sex differences in extended pedigrees with ASD. International Society for Autism Research (INSAR), Toronto, Canada, May 17, 2012.
93. Oikkonen J, Huang Y, Ukkola-Vuoti L, Raijas P, Vieland VJ, Onkamo P, Järvelä I. Biological pathways of musical aptitude. Poster HGM2013-ICG-1338; HGM/ICG Conference (HGM2013/21<sup>st</sup> International Congress of Genetics), Singapore, April 13-18, 2013.
94. White P, Vieland VJ, Greenberg DA, Hodge SE. Combine and conquer: An integrated software suite for finding causal relationships between sequence variants and clinical phenotypes. Nationwide Children's Hospital and The Ohio State University Genetics Collaboration Symposium, Columbus, OH, May 20, 2014.
95. Trittman JK, Gastier-Foster JM, Vieland VJ, Klebanoff MA, Chicoine LG, Nelin LD. Bronchopulmonary dysplasia-associated pulmonary hypertension and mutations in the *DDAHI* gene. The American Physiological Society, Experimental Biology Conference, 2015.
96. Seok SC, Vieland VJ. A Quest for a Calibrated Statistical Evidence Measure: Multinomial Hypotheses. The Third International Mathematical and Computational Conference, Columbus, OH, May 15-18, 2016.
97. Brzustowicz L, Vieland V, Ambite JL, Lehner T, Tischfield J. NRGR: NIMH Repository and Genomics Resource: New Collections, Services and Access Tools to Search Data and Biosamples. European Neuropsychopharm, Oct 1, 2017.

#### **Media Attention for Work on Statistical Evidence**

"Medicine needs a sensible way to measure weight of the evidence" Tom Siegfried, Science News Prime, December 19, 2011

"Making Data Work: Researchers pursue analogy between statistical evidence and thermodynamics" Tom Siegfried, Science News, September 8, 2012

"An overdependence on p-values". Proceedings of the National Academy Sciences podcast interview, November 13, 2014

"Top 10 scientific mysteries for the 21st century," includes measurement of evidence as mystery #7 with link to Vieland et al. paper. Science News, February 1, 2015.

#### **Scientific Presentations and Invited Lectures**

1. Statistical Inference in the Absence of Sampling. Invited presentation, Bernice Ryerson-MacEvoy Child Psychiatry Research Colloquium, New York State Psychiatric Institute, January 1989.

2. Adequacy of single-locus linkage models for analysis of multilocus traits. Columbia University Seminar in Genetic Epidemiology, February 1992.
3. Data management in molecular genetic studies – from pedigrees to lod scores. American Psychopathological Association, 1992.
4. Genetic linkage analysis of panic disorder. American Psychopathological Association, 1992.
5. Segregation analysis of panic disorder. International Genetic Epidemiology Society, 1992.
6. Evidence for a major gene for obsessive-compulsive disorder. Behavioral Genetic Association, 1992.
7. Why haven't we found any genes for psychiatric disorders? Child Psychiatry Grand Rounds, St. Lukes-Roosevelt Hospital, New York, September 1993.
8. A robust approach to ascertainment correction. Columbia University seminar in genetic epidemiology, December 1993.
9. How many models should we use in linkage analysis of genetically complex disorders? Invited presentation, National Institutes of Health, Molecular Epidemiology and Disease Indicators Branch, February 1994.
10. Ascertainment bias: An intractable problem for segregation analysis. Invited presentation, National Institutes of Mental Health Mentored Awardees Conference, June 1994.
11. Simple linkage analysis of complex traits. Invited presentation, Division of Genetics Seminar, Department of Pediatrics, University of Pennsylvania, November 1994.
12. A likelihood solution to a classical problem in human genetics: ascertainment corrections for sequentially and nonsequentially sampled pedigrees. Invited presentation, Department of Preventive Medicine Seminar, University of Iowa, November 1994.
13. A likelihood solution to a classical problem in human genetics: Ascertainment corrections for sequentially and nonsequentially sampled pedigrees. Invited presentation, Department of Biostatistics Seminar, Columbia University, April 1994.
14. Did you know that maximizing the lod score yields asymptotically biased estimates of the recombination fraction? Invited presentation, Workshop on Statistical Methods in Genetic Mapping, Tarrytown, NY, November 1995.
15. Statistical Genetics and Genetic Epidemiology, Epidemiology Student Meeting, The University of Iowa, November 1995.
16. Families: A problem for genetic linkage studies. Division of Biostatistics Seminar, The University of Iowa, April 1996.
17. A new statistical test of age-of-onset anticipation: With application in bipolar disorder. Invited presentation, Genetic Analysis Workshop 10, 1996.
18. Model fitting in human genetics: How hard can it be. Invited presentation, Statistical Society of Canada Annual Meeting, Fredericton, Canada, June 1997.
19. Design for a genetic linkage study of pulmonary fibrosis. Pulmonary Research Conference, The University of Iowa, June 1997.
20. A new test for age-of-onset anticipation in human genetics. The University of Iowa, 1997.
21. Statistical evaluation of age-of-onset anticipation in human genetics may not be feasible. Platform presentation, American Society of Human Genetics, October 1997.

22. A new statistical test for genetic anticipation. Invited presentation, Department of Biostatistics Seminar, Johns Hopkins School of Public Health, Baltimore MD, October 1997.
23. How hard can it be to find a difference between two means? Division of Biostatistics Seminar, The University of Iowa, November 1997.
24. Results of a genomic screen for autism include strong evidence of linkage to chromosome 13. Vieland VJ, for the Collaborative Linkage Study of Autism (CLSA). Platform presentation, American Society of Human Genetics, October 1998.
25. A Bayesian approach to replication of linkage studies. Genetic Analysis Workshop 11, Arachon, France, 1998.
26. The effect of allelic heterogeneity on the power of transmission-disequilibrium tests and affected sib-pair linkage tests. International Genetic Epidemiology Society, Arachon, France, 1998.
27. A novel Bayesian approach to linkage analysis based on multiple sets of data. Invited presentation, University Seminar in Genetic Epidemiology, Columbia University, November 1998.
28. A novel approach to genetic linkage analysis based on multiple sets of data. Invited presentation, Department of Genetics Seminar, Rutgers University, September 1999.
29. Statistical genetics: is it part of bioinformatics? University of Iowa and Iowa State Joint Workshop on Bioinformatics, The University of Iowa, Iowa City IA, 2000.
30. Combined multipoint analysis of multiple asthma data sets based on the posterior probability of linkage. Genetic Analysis Workshop, San Antonio TX, 2000.
31. Measuring the strength of statistical evidence for or against linkage based on multiple sets of data. Invited presentation, Callaway Gardens Conference on Autism Research GA, March 2001.
32. HLODs, trait models, and ascertainment. Invited presentation, Columbia University, New York NY, March 2001.
33. How many ASPs does it take to tell the heterogeneity from epistasis? Invited presentation, Columbia University, NY, October 2002.
34. Quantitative methods for mapping human disease-genes: Ongoing work in the UI Center for Statistical Genetics Research. Applied Mathematical and Computational Sciences Seminar, The University of Iowa, November 2002.
35. How many ASPs does it take to tell heterogeneity from epistasis? Invited presentation, Mayo Clinic, Rochester MN, December 2002.
36. Center for Statistical Genetics Research (CSGR). Invited presentation, International Autism Conference, Zurich, Switzerland, May 2003.
37. Mapping Genes for Autism: Ongoing Work at the University of Iowa. Dept. of Psychiatry Research Seminar, University of Iowa, 2003.
38. A new genome screen for autism based on the posterior probability of linkage (PPL). Platform Presentation, American Society of Human Genetics, Los Angeles CA, November 2003.
39. Measurement of linkage disequilibrium (LD) parameter  $D'$  for complex traits via the posterior probability of LD (PPL-LD) changes the LD picture with CAPON, a large candidate gene for schizophrenia. Platform Presentation, American Society of Human Genetics, Toronto, Ontario, Canada, October 2004.
40. Current challenges in autism genetics research: A statistical geneticist's perspective. Invited presentation, Columbus Children's Hospital, Columbus OH, August 2005.

41. Statistical paradigms, genetic complexity, and computation: A statistical pragmatist's approach to gene mapping for complex disorders. Invited presentation, Dept. of Epidemiology & Biostatistics, Case Western Reserve University, Cleveland OH, September 2005.
42. Statistical paradigms and statistical genetics. Seminar presentation, Program in Public Health Genetics, Univ. of Iowa, Iowa City IA, September 2005.
43. Statistical paradigms and the search for autism genes. Invited presentation, Dept. of Epidemiology, Biostatistics, & Occupational Health, McGill University, Montreal CA, November 2005.
44. The incredible shrinking LOD: How increasing the sample size can actually obscure true linkage peaks, and what we can do about this. Invited presentation, Banbury Center meeting, "A critical assessment of autism genetics." Cold Spring Harbor Laboratory, Cold Spring Harbor NY, March 2006.
45. Measurement of statistical evidence in genetic research. Invited presentation, Columbus Children's Research Institute Annual Research Retreat, Granville OH, April 2006.
46. Genetics of autism: Common pitfalls in interpretation. Invited Educational Symposium, International Meeting for Autism Research, Montreal CA, June 2006.
47. Measuring statistical evidence in the age of a million SNPs. Second Annual Canadian Genetic Epidemiology & Statistical Genetics Meeting, Toronto CA, April 2007.
48. More is known than is: How what we know (about gene mapping for complex diseases) can hurt us. Invited presentation, Department of Genetics, Rutgers, The State University of New Jersey, Piscataway, New Jersey, September 2007.
49. PPLD: extension of the PPL framework to detect trait-marker LD and estimate  $D'$  in general pedigree structures. Platform Presentation (VJV presenter), American Society of Human Genetics, San Diego, CA, October 2007.
50. And now for something completely different: How philosophy of measurement can help us find genes for autism. Invited presentation, Cincinnati Children's Hospital, Cincinnati, Ohio, May 2008.
51. New linkage analysis by the Autism Genome Project (AGP) reveals strong evidence of linkage to multiple loci as well as gene-gene interactions. Platform Presentation, American Society of Human Genetics, Philadelphia, PA, October 2008.
52. What does it mean to measure statistical evidence? Invited presentation, Columbia University, New York, New York, February 2009.
53. Disease mapping via the coalescent. Hoffman L (presenting author), Kubatko L, Vieland VJ, Huang Y. Joint Statistical Meeting, Washington DC, August 2009.
54. Copy number variation discovery in autism spectrum disorder. Pagnamenta AT (presenting author), Pinto D, Khan H, Vieland VJ, Le Couteur A, Scherer SW, Monaco AP, for the Autism Genome Project (AGP). Platform Presentation, American Society of Human Genetics, Philadelphia, PA, October 2009.
55. Kelvin: Computer Program or Way of Life? A brief history of a piece of statistical genetics software. Invited presentation, Columbia University, New York, New York, November 2009.
56. Theory and practice of evidence measurement in statistical genetics: The PPL framework in its current incarnation. Invited presentation, University of Alabama at Birmingham, January 2010.
57. Measurement of evidence and evidence of measurement. Invited presentation, Offord Centre, McMaster University, Hamilton Ontario, December 2010.
58. Association statistics in the PPL framework. Invited Rounds, Population Genomics Program, McMaster University, Hamilton Ontario, December 2010.

59. The importance of being accurate: Measurement in psychiatric genetic research, Child Psychiatry Grand Rounds, Columbia University, New York, NY, November 2011.
60. Searching for a good measure of evidence: A work in progress, Genetic Epidemiology Seminar, Columbia University, New York, NY, November 2011.
61. Calibration of statistical evidence using principles of thermodynamics. Invited presentation, University of Toronto, Toronto, Ontario, April 2012.
62. Calibration of statistical evidence using principles of thermodynamics. Invited presentation, Johns Hopkins University, Baltimore, MD, May 2012.
63. Measurement of evidence: What's the problem? Workshop on Measure Theoretic Issues in Biology, Columbus, OH, June 2012.
64. Measurement of evidence on an absolute scale using thermodynamic principles. Workshop on Measure Theoretic Issues in Biology, Columbus, OH, June 2012.
65. Measurement of evidence in biomedical (and other) applications. Invited talk at "Foundations of Quantification and Measurement in the Biological Science", Templeton Foundation, New York, NY, February 2013.
66. Is the universe made of information? Plenary Speaker, MidSouth Computational Biology and Bioinformatics Society (MCBIOS) X Conference, Columbia, MO, April 2013.
67. Is the universe made of information? Invited presentation, Mathematical Biosciences Institute, The Ohio State University, Columbus, OH, April 2013.
68. Genomic Medicine: The view from genetics. Invited talk, "Road to Collaboration: NCH and OSU Human Genetics Community", Columbus, OH, May 2014.
69. P-values are not measures of evidence, in session "The Perils of P Values: How to Be Smart When Writing about Stats". Invited talk, National Association of Science Writers, Columbus, OH, October 2014.
70. Replication, measurement and biological evidence, with Hasok Chang, part of the symposium "Quantifying Life". Invited talk, Philosophy of Science Association, Chicago, IL, November 8, 2014.
71. An information-dynamic framework for measuring statistical evidence. Plenary speaker, The Second Annual Zing Conference on Mathematical and Computational Medicine, Cancun, Mexico, December, 2014.
72. Towards a new information-dynamic framework for measuring evidence in biology. American Association for the Advancement of Science, San Jose, CA, February 14, 2015.
73. Measuring statistical evidence in biological research. Invited talk, Department of Biological Sciences, Columbia University, New York, NY, March 2015.
74. Guest speaker, Columbia University Biological Sciences SCNC W3920 (Ignorance, S Firestein Instructor), New York, NY, March 11, 2015.
75. Is rigorous measurement of statistical evidence possible? Invited speaker, Society for Philosophy of Science in Practice, Aarhus, Denmark, June 24, 2015.
76. Measurement of evidence in theory and in practice. Invited speaker, Making of Measurement, Cambridge, UK, July 23, 2015.
77. Reproducibility, Replication and Scientific Evidence. Invited speaker, Sickkids Centre for Brain and Mental Health and Child Health, Toronto, CAN, December 9, 2015.



78. Measurement of Statistical Evidence in Scientific Applications. Invited speaker, Department of Statistical Sciences, University of Toronto, Toronto, CAN, December 10, 2015.
79. How to Know When We Are (or Are Not) Measuring Statistical Evidence. Invited speaker. The Third International Conference on Mathematical and Computational Medicine, Columbus, OH, May 18, 2016.
80. Replication, Evidence, and Statistical Practice. Platform presentation, Society for Philosophy of Science in Practice (SPSP) Biennial Conference, Glassboro NJ, June 17-19, 2016.
81. Measurement of Statistical Evidence: Picking up Where Hacking (et al.) Left Off. Platform presentation, Philosophy of Science Biennial meeting, Atlanta, GA, November 2016.
82. What the History of Age-of-Onset Anticipation Studies Can Teach Us About Reproducibility and Evidence. Invited lecture at Symposium: "Evidence: An Interdisciplinary Conversation about Knowing and Certainty," Center for Science and Society and the Institute for Social and Economic Research and Policy, Columbia University, New York, NY, April 21-22, 2017. (See also Other Professional Activities, above.)
83. The Relationship Between Replication and Statistical Evidence: To Be Clear, It's Very Confusing. Invited lecture, Department of Biostatistics (graduate seminar on Likelihood, Professor Lisa Strug, Instructor). University of Toronto, Toronto, CA, May 15, 2017.
84. Statistical Modeling of Genetic Modifiers. Invited lecture at Symposium: "Unraveling Genetic Modifiers of Muscular Dystrophy" Eccles Institute of Human Genetics, University of Utah, Salt Lake City, UT, May 24, 2017. (See also Other Professional Activities, above.)
85. Some Topics in Statistical Measurement. Invited lecture at Workshop: "How do we decide what to measure?" Centre for Biodiversity Dynamics, Norwegian University of Science and Technology, Trondheim, Norway, June 6-10, 2017. (See also Other Professional Activities, above.)
86. Measurement of Statistical Evidence on an Absolute Scale Following Thermodynamic Principles: Measurement Scales and Minimal Evidence. Invited participant in Symposium, "The Concept of Statistical Evidence," Statistical Society of Canada annual meeting, Montreal CA, June 4-June 6, 2018
87. Who Knows Which Way the Evidence is Going? Platform presentation, Society for Philosophy of Science in Practice (SPSP) Biennial Conference, Ghent, Belgium, June 29-July 2, 2018
88. Linkage Analysis of Complex Traits: Failed paradigm or powerful tool? Invited presentation. Mathematical Bioscience Institute, The Ohio State University, Columbus, Ohio, September 17-19, 2018.