

October 2021

**ALICIA L. CARRIQUIRY  
RESUME**

Department of Statistics  
Iowa State University  
Ames, IA 50011-1090, USA  
Phone: (515) 294-7278 (Office), (515) 451-3322 (Cell)  
Fax: (515) 294-4040  
E-mail: alicia@iastate.edu

**EDUCATION**

- Ph.D. in Statistics and Animal Science, Iowa State University, May 1989.
- M.Sc. in Statistics, Iowa State University, December 1986.
- M.Sc. in Animal Science, University of Illinois at Urbana, May 1985.
- Ing. Agr., Universidad de la República, Uruguay, December 1981.

**EXPERIENCE**

**President's Chair in Statistics**, Iowa State University, October 2016 – date.

**Director**, Center for Statistics and Applications in Forensic Evidence, June 2015 – date.

**Associate Provost**, Iowa State University, January 2000 – June 2004.

**Director of Graduate Education**, Department of Statistics, Iowa State University, August 2004 to October 2014.

**Associate Chair**, Department of Statistics, Iowa State University, August 2008 to October 2014.

**Distinguished Professor**, Department of Statistics, Iowa State University, July 2010 -- date.

**Professor**, Department of Statistics, Iowa State University, July 2001 – July 2010.

**Associate Professor**, Department of Statistics, Iowa State University, July 1995 – July 2001.

**Assistant Professor**, Department of Statistics, Iowa State University, August 1990 – July 1995.

**Adjunct Professor**, MS Program in Bioinformatics and Biological Statistics, Universidad de la República del Uruguay, Montevideo, Uruguay, March 2009 – date.

**Adjunct Professor**, Doctoral Program in Statistics, Pontificia Universidad Católica de Chile, Santiago, Chile, July 2007 – December 2014.

**Visiting Professor**, Institute of Statistics and Decision Sciences, Duke University, Spring 1997.

**Visiting Professor**, Department of Statistics, Pontificia Universidad Católica de Chile, Santiago, Chile, Fall 1993, Fall 1996 and 2007 – 2008.

**Post-doctoral Research Associate**, Department of Economics and Center for Agricultural and Rural Development (CARD), Iowa State University, January – August 1990.

## **AWARDS AND HONORS**

Florence N. David Award, Committee of Presidents of Statistical Societies, 2021.

Zellner Medal, International Society for Bayesian Analysis, 2021.

Foundational Lecturer, International Society for Bayesian Analysis, 2020.

Elected Associate Member of the American Academy of Forensic Sciences, 2020.

Invited to join the Intelligence Science and Technology Experts Group (ISTEG) of the National Academies of Science, Engineering and Medicine, 2019.

Founders Award, American Statistical Association, 2018.

Named Technical Advisor to Association of Firearm and Toolmark Examiners (AFTE) 2018 – 2023.

Elected Fellow of AAAS, 2016.

Elected to the National Academy of Medicine, 2016.

Appointed President's Chair in Statistics, 2016

Elected Fellow of ISBA, 2014.

Promoted to Distinguished Professor at Iowa State University, 2011.

Presidential Invited Lecture at the annual meeting of the Western North American Region of the International Biometrics Institute, Seattle, Washington, 2010.

Plenary lecture at the annual meeting of the Texas Defense Lawyers Association, Houston, TX October 2009.

Elected Fellow of the Institute of Mathematical Statistics, 2006.

Drafting Expert in the FAO-WHO Workshop on Nutritional Risk, held in Geneva, Switzerland, on May 2 – 6 2005.

Keynote address at the Statistics Applied to Agriculture conference, Kansas, April 2005.

20/20 Visionary Award, Iowa State University, October 2000.

Distinguished International Service Award, Iowa State University, April 2000.

Elected Fellow of the American Statistical Association 1999.

Elected member of the Iowa State University Nutritional Sciences Council. December 1998.

Elected Member of the International Statistical Institute 1995.

Invited to the Forum, “Meeting the Challenge. Health, Safety, and Food for America,” organized by the Executive Office of the Office of Science and Technology Policy, and by the National Academy of Sciences. Washington, D.C., November 21 – 22 1994.

Member of Sigma Xi, Mu Sigma Rho, and Gamma Sigma Delta.

**SERVICE (since 1993)**

**Editorial Activities:**

Guest Editor, *Statistical Science* special issue on reproducibility in statistical research. 2021 – 2022.

Editorial Board, *Annual Review of Statistics and Its Application*, 2017 – date.

Editor, *Electronic Encyclopedia of Statistics*, 2009 – 2013. In representation of the International Statistical Institute.

Associate Editor, *The Annals of Applied Statistics*, January 2007 – May 2012.

Editor, *Bayesian Analysis*, July 2003 – June 2006.

Editor, *Statistical Science*, January 1998 – December 2007.

Editorial Board, *Case Studies in Bayesian Statistics IV, V, VI, VII, VIII*. September 1997 – August 2008.

**National Panels and Committees and Advisory Boards:**

Institute for Mathematics and Statistics Innovation (IMSI), Scientific Advisory Committee, 2021 – 2024.

National Academies of Science, Engineering and Medicine, Intelligence Science and Technology Experts Group (ISTEG). Member, 2019 – date.

Center for Integrity in Forensic Sciences, University of Wisconsin Madison, Board of Advisors, 2018 – date.

National Academy of Medicine, Committee to Review Dietary Reference Intakes for Sodium and Potassium, 2018 – 2019

National Academy of Sciences, Report Review Committee, 2017 – 2019, 2020 – 2022.

National Academy of Sciences, Standing Committee on Applied and Theoretical Statistics, 2003 – 2006, 2017 – 2019, 2020 – 2022.

National Academy of Sciences, Division of Behavioral and Social Sciences Education, 2016 – 2019, 2020 – 2023.

National Institutes of Health, Advisory Committee on Review of DRIs for Chronic Disease Outcomes, 2014 – 2015.

National Academy of Medicine and National Research Council, Committee to Review the WIC benefits package, 2014 – 2016.

National Academy of Medicine and National Research Council, Committee on Evaluating the Veteran’s Affairs Mental Health Services, 2013 – 2017, Chair of the committee.

National Academy of Sciences, Committee on Assessing the Value of Research on Advancing National Goals, 2012 – 2013.

US Department of Transportation, Advisory Council on Transportation Statistics, 2012 – 2014.

National Academy of Sciences, Committee on Advancing Institutional Transformation for Minority Women in Academia: a Workshop, 2011 – 2012.

National Academy of Sciences, Committee to Assess the Feasibility of Estimating the Number of Illegal Border Crossings between Mexico and the United States, 2011 – 2012, Chair of the committee.

US Environmental Protection Agency, Scientific Advisory Board, 2012 – 2014.

Institute of Medicine, Committee to Review the Child and Adult Care Food Program, 2009 – 2010.

National Academy of Sciences, Vitamin D and Calcium Review Committee (consultant), 2009 – 2010.

National Academy of Sciences, Standing Committee on National Statistics (CNSTAT), 2008 – 2014.

National Academy of Sciences, Standing Committee on Social Science Evidence to Use in Policy Decision-Making. 2007 – 2012.

US Environmental Protection Agency, Human Studies Review Board, 2006 – 2008.

National Academy of Sciences, Committee on Assessing the Technical Feasibility of a National Ballistics Database, 2004 – 2007.

National Academy of Sciences, Committee on Gender Differences in the Careers of Science, Engineering and Mathematics Faculty, 2004 – 2007.

National Academy of Sciences, Board on Technology and the Law: Advisability and Ethics of the Use of Third Party Intentional Dosing Studies with Human Subjects by the Environmental Protection Agency, 2002 – 2003.

National Research Council, Committee on National Statistics: Estimating Eligibility and Participation Rates in the Women and Infant Children (WIC) Program, 2000 – 2003.

Food and Nutrition Board, Institute of Medicine, National Academy of Sciences: Committee on Uses and Interpretations of Dietary Reference Intakes, 1997 – 2003.

Report Monitor of four National Academy of Sciences reports and reviewer of over 12 reports.

**Conferences: Organizing or Program Committees:** Multiple, both in the United States and abroad.

**Academic review, advisory and visiting committees:**

Review Board, Committee on National Statistics, Chair, March 2019.

External Review Committee, Army Research Office, Research Triangle, NC. August 2018.

Data Safety Monitoring Committee, NewLink Genetics, 2010 – 2018 (Chair from 2014 – 2018).

External Review Committee, Department of Statistics, Universidad de la República, Montevideo, Uruguay, February 2018.

External Review Committee, Department of Statistics, Virginia Tech University, April 2017.

External Review Committee, Department of Statistics, Colorado State University, November 2015.

External Review Committee, Department of Statistics, University of Nevada at Reno, February 2015.

External Auditing Review Committee, Institute of Mathematical Statistics (IMS), April 2014.

External Review Committee, Graduate Program in Statistics, University of Toronto, Canada, October 2009.

External Review Committee, Department of Statistics, Universidad de la República del Uruguay, Montevideo, Uruguay, 2008.

External Advisory Board, Centro de Investigaciones Matemáticas (CIMAT) (Center for Mathematics Research), Guanajuato, Mexico, 2007 – 2009.

Advisory Board member for Department of Statistics, Carnegie Mellon University, 2006.

External review committee for Department of Statistics, Harvard University, 2003 – 2006.

External Review Team (Chair) for Department of Statistics, Universidad Nacional de Colombia, Bogotá, Colombia, August 1998.

### **Professional Associations:**

#### American Statistical Association:

Chair, Wilks Award Committee, 2018 – 2021.

Chair, Section on Bayesian Statistical Sciences, 2013 (Elected).

Vice President, 2007 – 2009 (Elected).

Chair, Budget Committee, 2009.

Chair, Task Force on Graduate Education in Statistics in Vietnam, 2005 – 2006.

Task Force on Science Policy, 2006 – 2007.

Fellows Committee, Section on Statistics and the Environment, 2005 – 2007.

Strategic Planning Committee on Meetings, member, 2000.

Program Chair, Joint Statistical Meetings, 1999.

Committee on Meetings, 1998 – 2000.

Biometrics Section, member of the Executive Committee (Proceedings Editor) 1995 – 1997.

Section on Bayesian Statistical Sciences, member of Nominations Committee, 1996.

Iowa Chapter, President-Elect, 1995 –1996, President, 1996 – 1997 (Elected).

Program Chair, Biometrics Section, Joint Statistical Meetings, 1997.

#### International Society for Bayesian Analysis (ISBA)

Committee on Fellows, 2019 – 2022 (Chair, 2021).

Board of Directors, 2018 – 2020.

Chair, Bylaws Committee, 2018 – 2020.

Chair, Nominations Committee, 2002 (Elected).

President, 2001 (Elected).

Co-Chair, Ad-hoc Journals Committee, 2000 – 2003.

President-Elect, 2000 (Elected).

Member, Board of Directors, 1998 (Elected).

Program Chair, 1996 – 1997.

Program Committee, Fifth World Meeting, Oaxaca, Mexico, 1995.

Program Committee and co-Chair of Finance Committee, Seventh World Meeting, Crete, Greece, 2000.

#### National Institute of Statistical Sciences (NISS)

Executive Committee member, 2000 – 2002.

Chair, Jerome Sacks Award Committee, 2002.

Member of the Board of Trustees, 1998 – 2003 and 2004 – 2008 (Elected).

Member of the Corporation, 2001 – 2003 (Elected).

#### Institute of Mathematical Statistics (IMS)

Member, Committee on Fellows, 2018 – 2020 (Chair 2020).

Member, External Audit Committee, 2014.

Chair, Committee to Select Officers, 2011.

Chair, Committee to Establish an IMS Meetings Cycle in Latin America, 2007 – 2008.

Member of the Executive Committee 1999 – 2005.

Member, Nominations Committee, 1999.

Committee on Meetings, and Joint Meetings Advisory Committee, 2001 – 2005.

### Committee of Presidents of Statistical Societies (COPSS)

Chair, Diversity, Equality, and Inclusion Task Force, 2020 – 2021.

Chair, Fisher Lectures, 2017 – 2018.

Member, Elizabeth Scott Award Committee in representation of the Institute of Mathematical Statistics (IMS).  
1998 – 2000 (Chair in 2000).

### International Biometric Society Eastern North American Region (ENAR)

Member of the Regional Advisory Board (RAB), 1996 – 1999 (Elected).

### International Statistical Institute (ISI)

Chair, Short Course Committee, World Statistical Congress, 2015.

Member, Council of the Bernoulli Society, 2013 – 2017.

Editor, Electronic Encyclopedia of Statistical Sciences, 2009 – 2012.

Member, ISI Council, 2007 – 2009 (Elected).

Nominations Committee, 2009 – 2010.

Publications Committee, 2008 – 20011.

### **Proposal and Manuscript Panels and Review**

National Institutes of Health, Biostatistical Methods and Research Design Study (BMRD) Section, 2013 – 2015.

National Science Foundation Education and Human Resources Core Research Review Panel, 2013.

National Institutes of Health, Kidney, Nutrition, Obesity and Diabetes Study Section, 2011 – 2012.

National Science Foundation Review Panel. February 2011.

National Science Foundation Review Panel. December 2010.

National Science Foundation Review Panel. December 2009.

National Institutes of Health, Kidney, Nutrition, Obesity and Diabetes Study Section, 2005 – 2008.

National Science Foundation Review Panel for Statistics proposals, December 2004.

National Science Foundation Review Panel for Industry/University research cooperation, February 2000.

National Science Foundation Review Panel on Digital Government, February 1999.

Environmental Protection Agency and National Science Foundation Review Panel for Partnership for Environmental Research, May 1999.

National Science Foundation Review Panel for Statistics research proposals, December 1999.

Refereed research proposals for United States Department of Agriculture, the National Council on Science and Technology of Chile, the National Science Foundation, South African Foundation for Research Development, Environmental Protection Agency, National Institutes of Health, Department of Agriculture and the Iowa Pork Producers Association.

Refereed papers for Journal of the American Statistical Association, Biometrics, The American Statistician, Theoretical and Applied Genetics, Génétique Sélection Evolution, Revista Chilena de Estadística, Revista Colombiana de Estadística, Revista Brasileira de Estadística, American Journal of Public Health, Communications in Statistics (Theory and Methods), Journal of Computational and Graphical Statistics, Statistics and Probability Letters, Biometrika, International Journal of Agricultural Economics, Journal of Nutrition, Metrika, Statistical Science, Journal of the American Dietetics Association, Public Health Nutrition, American Journal of Agricultural Economics, Journal of Agricultural, Biological and Environmental Statistics, Journal of the Royal Statistical Society, Springer-Verlag Publications, Elsevier Publications, Wiley Publications, National Academy of Sciences, Journal of Statistics Education.

**Iowa State University:**

Search committee for Vice President for Research, 2020.

Ad-Hoc committee to review appointments of NTER faculty, 2014.

Search committee for Dean of the College of Liberal Arts and Sciences, 2011.

Member of the Iowa Computational Biology Laboratory, 1998 – date.

Plant Sciences Initiative, Strategic Planning Committee for Laurence H. Baker Center for Bioinformatics and Biological Statistics, 1999 – 2000.

Bioinformatics and Computational Biology interdisciplinary major, Curriculum Development Committee member, 1999 – 2000.

Plant Sciences Institute, member of PSI Council, 2000 – 2004.

Plant Sciences Institute, search committee for Institute director, member, 2000.

Committee on Strategic Planning for Information Technology at Iowa State University, member, 2000.

Advisory Committee, International Institute for Theoretical and Applied Physics, member. 2000 – 2001.

Search committee for Dean of the College of Veterinary Medicine, representative of Provost, 2000.

Search committee for Dean of the College of Agriculture, representative of Provost, 2001.

Search committee for Dean of the College of Business, representative of Provost, 2002.

Search committee for Chief Information Officer, representative of Provost, 2003.

Search committee for Dean of the College of Family and Consumer Sciences, representative of Provost, 2003.

Search committee for Dean of the College of Veterinary Medicine, representative of Provost, 2003.

Search committee for Dean of the College of Engineering, representative of Provost, 2004.



### **College of Agriculture, Iowa State University:**

Member, International Agriculture Programs Faculty Advisory Committee, Iowa State University, 1993 – 2000.

### **College of Liberal Arts and Sciences, Iowa State University:**

Committee to Review Nominations for Distinguished Professors (Chair), 2011 – 2014.

Awards Committee, 2009 – 2014.

Promotion and Tenure Committee, College of Liberal Arts and Sciences, 2004 – 2006.

Liberal Arts and Sciences Minority Advisory Board, 1996.

Member of the Liberal Arts and Sciences Committee on Academic Standards, August 1995 – December 1999.

### **Department of Statistics, Iowa State University:**

Distinguished Lectures Committee Chair, 2016 – 2018

Admissions Committee 2009 – 2014 (Chair, 2009 – 2014).

Search Committee, 1992 – 1997, 2000, 2002 – 2005, 2014, 2016, 2018 – 2019.

Advisory Committee on Promotion and Tenure, 2009 – 2011, 2018 – date.

Snedecor Hall Renovation and Expansion committee, 2006 – 2007.

Co-Director of Graduate Education, 2004 – 2014.

Strategic Planning committee, Chair, 2004 – 2005.

Advisory Committee to the Department Chair, 2003 – 2006.

Capital Campaign Committee, 1995 – 1998.

Non-thesis Master Exam Committee, Department of Statistics, 1993 – 1995, 1997 – 1998 (Chair 1995 – 1996).

Seminar Committee, 1991 – 1992, 1998 – 1999.

### **GRANTS AND CONTRACTS (Funded)**

Uemura, E., **Carriquiry, A. L.**, and Kliemann, W. Mathematical Approach to Modeling Dendritic Growth. National Institutes of Health (NIH), May, 1991. \$300,000 over three years.

**Carriquiry, A. L.** and Kliemann, W. Mixed Linear Models and Quantitative Genetics. Iowa Agriculture Experiment Station Innovative Research Grant. 1991. \$3,810 over one year.

**Carriquiry, A. L.** and Jensen, H. H. Assessing the Health Risk Associated with Groundwater Contamination. Iowa State University Research Grant, Spring 1991 Competition. \$7,500 over one year.

Bouzaher, A. and **Carriquiry, A. L.** Multiproduct Yield Prediction when Products are not Independent. May 1991. Iowa Corn Promotion Board. \$17,000 over one year.

Bouzaher, A., **Carriquiry, A. L.**, and Jensen, H. H. Efficiency Analysis of Ukrainian Agriculture. National Council for Soviet and East European Research. May 1992. \$48,000 over 15 months.

**Carriquiry, A. L.** and Jensen, H. H. Collection of Data on Inputs in the Ukraine for Estimating Agricultural Productivity and Impacts of the Economic Reform. Office of International Cooperation and Development,

USDA. January 1993. \$6,761 over one year.

Jensen, H. H. and **Carriquiry, A. L.** NIS/Baltic Research Exchange, Agriculture Experiment Station, Iowa State University. March 1994. \$2,700 over one year.

Johnson, S. R. and **Carriquiry, A. L.** Research Budget Expenses. Egyptian Cultural and Educational Bureau. March 1994. \$13,000 over two years.

Johnson, S. R., Fuller, W. A., **Carriquiry, A. L.**, Jensen, H.H., and Nusser, S. M. Cooperative Agreement with Human Nutrition Information Service (HNIS) USDA. October 1994. \$203,625 over one year.

**Carriquiry, A. L.** International Travel Grant. American Statistical Association. June 1995. \$1,600.

**Carriquiry, A. L.** International Travel Grant. College of Agriculture, Iowa State University. July 1995. \$1,600.

**Carriquiry, A. L.** and Martinez, S. International Cooperation Programs, National Science Foundation. October 1995. \$35,280.

Kliemann, W., Breidt, F. J., Budhiraja, A., **Carriquiry, A.L.**, Mirkovic, D., and O'Donnell, B. Nonlinear Filtering Approaches to Multitarget Tracking. Office of Naval Research (ONR). November 1995. \$604,342 over 3 years.

Del Pino, G., Marshall, G., and **Carriquiry, A. L.** Topics in nonlinear mixed models. Fondo de Ciencia y Tecnologia (FONDECYT), Chile. \$15,000 over 2 years.

**Carriquiry, A. L.** and Nusser, S. M. Estimating usual intakes and biochemical measurement distributions for NHANES III. National Center for Health Statistics, Department of Health and Human Services. October 1996. \$25,000 for one year.

**Carriquiry, A. L.** International Travel Grant. American Statistical Association. June 1997. \$1,800.

**Carriquiry, A. L.** Data collection and processing in Extension. Extension Service, Iowa State University. June 1997. \$5,500.

**Carriquiry, A. L.** International Travel Grant. College of Liberal Arts and Sciences, Iowa State University. July 1997. \$1,050.

**Carriquiry, A. L.** and Nusser, S. M. Statistical issues associated to NHANES III. National Center for Health Statistics, Centers for Disease Control and Prevention. October 1997. \$48,000 for one year.

Nusser, S.M. and **Carriquiry, A. L.** Development of sampling methods to support the USDA. Nutritional Data Laboratory, U.S. Department of Agriculture. April 1998. \$31,650 for one year.

**Carriquiry, A. L.** Cooperation with Argentina. National Science Foundation. May 1998. \$32,100 for one year.

**Carriquiry, A. L.** Analysis of nonresponse patterns in the Supplementary Nutrition Survey of Elderly Americans. National Center for Health Statistics, Centers for Disease Control and Prevention. October 1998. \$84,000 for one year.

**Carriquiry, A. L.**, Daniels, M., and Stern, H. Statistical treatment of class evidence. Federal Bureau of Investigation (FBI). October 1998. \$150,000 for one year.

**Carriquiry, A. L.** Analysis of antioxidant intake data. Food and Nutrition Board, IOM. 1999. \$9,045 over three months.

**Carriquiry, A.L.** and Rotnizky, A. Eighth Latin American Congress on Probability and Mathematical Statistics, La Habana, Cuba. National Science Foundation, January 2001. \$31,070 for one year.

Devaney, B. and **Carriquiry, A. L.** Using the new Dietary Reference Intakes to assess nutrient adequacy among vulnerable groups. Economic Research Service, USDA. May 2001. \$247,000 for 18 months.

**Carriquiry, A.L.** PC software for dietary assessment. National Cancer Institute, NIH. November 2001. \$25,000 for one year.

**Carriquiry, A.L.** Ninth Latin American Congress on Probability and Mathematical Statistics. Punta del Este, Uruguay. National Science Foundation, January 2004. \$16,500 for one year.

**Carriquiry, A.L.** International Society for Bayesian Analysis 2004, Vina del Mar, Chile. National Science Foundation, March 2004. \$12,000 for one year.

Meeker, W.Q., **Carriquiry, A.L.**, Cook, D., Maitra, R., Nettleton, D., Opsomer, J. Computing equipment for the Statistics Department at Iowa State University. SCREMS program, National Science Foundation. January 2004. \$127,000 for one year.

**Carriquiry, A.L.** Bayesian analysis of traffic safety data. Iowa Department of Transportation. September 2004. \$75,000 for three years.

**Carriquiry, A.L.**, Meeker, W.Q., Morris, M., Vardeman, S. and Wu, H. Statistics for the Physical and Engineering Sciences: A Research Training Group. \$1,101,547 for four years. National Science Foundation, July 2005.

Jensen, H.H., **Carriquiry, A.L.** and Schalinski, K. Assessing intake of choline in at-risk groups. Egg Nutrition Council, August 2006. \$45,000 for one year.

Wolt, J., **Carriquiry, A.L.**, Correia, A., Hurd, S., Jensen, H.H., O'Connor, A., Rodriguez, L., Sandve, G. and Stecker, G. Enabling graduate learning in risk analysis with emphasis on food, agriculture and veterinary medicine. Higher Education Commission, May 2006. \$146,813 over two years.

Srinivasan, R., Carter, D., Harkey, D., Eccles, K., Council, F., Persaud, B., Lyon, C., and **Carriquiry, A.L.** Evaluation of safety strategies at signalized intersections. NCHRP 17-35 Transportation Research Board, June 2006. \$750,000 over three years.

Jahns, L. and **Carriquiry, A.L.** Epidemiologic tools to assess obesity-related energy and other nutrient intake. USDA NRI, December 2006. \$345,000 over three years.

Kurkalova, L., Kling, K., **Carriquiry, A.L.** Economic benefits and water quality consequences of ethanol production in the upper Mississippi river basin. USDA NCR-SARE, October 2006. \$676,000 over three years.

Hallmark, S., Maze, T., **Carriquiry, A.L.** and Boyle L.N. Development of analytical tools to evaluate road departure crashes using naturalistic driving study data. Federal Highway Administration. December 2006. \$99,000 over two years.

Hallmark, S., Maze, T., **Carriquiry, A.L.** and Boyle L.N. Development of analytical tools to evaluate road departure crashes using naturalistic driving study data – Phase II. Federal Highway Administration. April 2008. \$130,000 over two years.

**Carriquiry, A.L.** Planning food fortification in developing nations. World Health Organization. January 1 2008 – December 31 2009. \$79,400.

Welk, G., Nusser, S.M. and **Carriquiry, A.L.** A measurement error approach to estimating usual daily physical activity distributions. National Institutes of Health. October 1 2008 – September 30 2012. \$2,453,000.

**Carriquiry, A.L.** Measurement error in non-linear models – An application to serum vitamin D. National Institutes of Health. October 1 2009 – September 30 2011. \$176,000.

**Carriquiry, A.L.** A comparison of various methods for estimating usual food intake distributions. National Institutes of Health. October 1 2009 – September 30 2011. \$162,000.

**Carriquiry, A.L.** XI Latin American Congress on Probability and Mathematical Statistics. National Institutes of Health, Office of Dietary Supplements. October 1 2009 – March 31 2010. \$8,500.

Genschel, U., **Carriquiry, A.L.**, Dougherty, B., Johnson, E., Kliemann, W. Exploring the STEM gender gap: Introductory college mathematics and statistics instruction and its association with self-efficacy. National Science Foundation. January 1 2011 – December 31 2012. \$543,000.

Wiser, R., Balent-Kurti, P., Holland, J., Nelson, R. Lauter, N., **Carriquiry A.**, Payne, G. Genetic and histological dissection of phenotypic variation in quantitative resistance to maize diseases. National Science Foundation. November 15 2011 – November 14 2014. \$3,997,779. Carriquiry is PI for the Iowa State portion, which amounts to approximately \$950,000.

**Carriquiry, A.L.** Bayesian methods in traffic safety. Iowa Department of Transportation. January 2014. \$125,000 for two years.

**Carriquiry, A.L.**, Baldwin, D., Fienberg, S.E., Kafadar, K., Stern, H. NIST Center of Excellence in Forensic Science and Statistics. \$19,999,722 over 5 years. June 1 2015 – May 31 2020.

**Carriquiry, A.L.**, Garrett, B, Kafadar, K., Mejia, R., Morris, K., Stern, H. NIST Center of Excellence in Forensic Science and Statistics Renewal. \$20,000,000 over 5 years. June 1 2020 – May 31 2025.

## **PUBLICATIONS, REFEREED**

1. **Carriquiry, A. L.**, Gianola, D., and Fernando, R. L. 1987. Mixed Model Analysis of a Censored Normal Distribution with Reference to Animal Breeding. *Biometrics*, **43**:929-939.
2. Nusser, S. M., **Carriquiry, A. L.**, Jensen, H. H., and Fuller, W. A. 1990. A Transformation Approach to Estimating Usual Intake Distributions. *Proceedings of the Second Annual Kansas State University Conference on Statistics Applied to Agriculture*. Manhattan, KS 120-132.
3. **Carriquiry, A. L.**, Jensen, H. H., and Nusser, S. M. 1991. Modeling Chronic vs. Acute Human Health Risk from Contaminants in the Food. In: J. A. Caswell (ed.) *The Economics of Food Safety*, Elsevier, New York, 69-89.
4. **Carriquiry, A. L.**, Ireland, W., Kliemann, W., and Uemura, E. 1992. Statistical Evaluation of Dendritic Growth Models. *Bulletin of Mathematical Biology*, **53**:579-589.
5. Bouzaher, A. and **Carriquiry, A. L.** 1992. Multiproduct Yield Prediction when Products are not Independent. *Proceedings of the Third Annual Kansas State Conference on Statistics Applied to Agriculture*. Manhattan, KS 102-114.
6. Fink, D., and **Carriquiry, A. L.** 1992. Having Babies or Not – Household Composition in Rural Iowa and Nebraska, 1900-1910. *Great Plains Quarterly*, **12**:157-168.
7. Harville, D. A., and **Carriquiry, A. L.** 1992. Classical and Bayesian Prediction as Applied to an Unbalanced Mixed Linear Model. *Biometrics*, **48**:987-1003.

8. Bouzaher, A., Archer, D., Cabe, R., **Carriquiry, A. L.**, and Shogren, J. F. 1992. The Effects of Environmental Policy on Trade-Offs in Agri-chemical Management. *Journal of Environmental Management*, **36**:69-80.
9. Bouzaher, A., Lakshminarayan, P. G., Cabe, R., **Carriquiry, A. L.**, Gassman, P., and Shogren, J. F. 1993. Metamodels and Nonpoint Pollution Policy in Agriculture. *Water Resources Research*, **29**:1579-1587.
10. Mansur, L., **Carriquiry, A. L.**, and Rao-Arelli, M. 1993. Resistance to Race 3 of the Soybean Cyst Nematode. *Crop Science*, **33**:1249-1253.
11. Johnson, S. R., Bouzaher, A., **Carriquiry, A. L.**, Jensen, H. H., and Lakshminarayan, P. G. 1994. Production Efficiency and Agricultural Reform in Ukraine. With discussion. *American Journal of Agricultural Economics*, **76**:629-635.
12. Uemura, E., **Carriquiry, A. L.**, Kliemann, W., and J. Goodwin. 1995. Mathematical Modeling of Dendritic Growth *in vitro*. *Brain Research*, **671**:187-194.
13. Jensen, H. H., Lakshminarayan, P. G., Bouzaher, A., **Carriquiry, A. L.**, Johnson, S. R., and Sabluk, P. 1996. Stochastic frontier analysis of technical efficiency of Ukrainian crop and livestock enterprises and implications for reform. **Ukrainian Economic Review**, **2**:4--22.
14. Nusser, S. M., **Carriquiry, A. L.**, Dodd, K. W., and Fuller, W. A. 1996. A Semiparametric Approach to Estimating Usual Intake Distributions. *Journal of the American Statistical Association*, **91**:1440-1449.
15. Breidt, F. J., and **Carriquiry, A. L.** 1996. Improved quasi-maximum likelihood for stochastic volatility models. In: Lee J. C., Johnson, W. O., and Zellner, A. (eds.) *Modeling and Prediction: Honoring Seymour Geisser*. Springer-Verlag, 228-247.
16. Babcock, B. A., **Carriquiry, A. L.**, and Stern H. S. 1996. Evaluation of soil test information in agricultural decision making. *Journal of the Royal Statistical Society (C), Applied Statistics*, **45**:447-461.
17. Guenther, P. M., Kott, P. S., and **Carriquiry, A. L.** 1997. Development of an approach for estimating usual nutrient intake distributions at the population level. *Journal of Nutrition*, **127**:1106-1112.
18. **Carriquiry, A. L.** 1997. Bayesian legal decision-making: impossible task? In: Allen, R.J., and Redmayne, M. (eds.) *Bayesianism and Juridical Proof*. International Journal of Evidence and Proof, Special Issue, 299-304.
19. Allen, R. J., and **Carriquiry, A. L.** 1997. Factual ambiguity and a theory of evidence reconsidered: a dialogue between a statistician and a law professor. 31 *Israel Law Review*, 464-505.
20. **Carriquiry, A. L.**, and Fienberg, S. E. 1998. Log linear models. Armitage, P., and Colton, T. (eds.). *Encyclopedia of Biostatistics* **3**:2333-2349.
21. Fienberg, S. E., and **Carriquiry, A. L.** 1998. Rasch Models. Armitage, P., and Colton, T. (eds.). *Encyclopedia of Biostatistics* **5**:3724-3730.
22. **Carriquiry, A. L.**, Breidt, F. J., and Lakshminarayan, P. G. 1998. Sampling schemes for policy analyses using computer simulation experiments. *Journal of Environmental Management* **22**:505-515.
23. **Carriquiry, A.L.** 1999. Assessing the prevalence of nutrient inadequacy. *Public Health Nutrition* **2**:23-33.
24. Breidt, F. J., and **Carriquiry, A. L.** 2000. Highest density gates for multiple target tracking. *IEEE Transactions on Aeronautics and Electronic Control*, **36**:47-55.

25. Fernandez, S., Fernando, R., and **Carriquiry, A.L.** 2001. An algorithm to sample marker genotypes in a pedigree with loops. *Case Studies in Bayesian Statistics, Vol. V*, Gatsonis, C. et al. (eds.). Lecture Notes in Statistics, Springer-Verlag. 309-328.
26. **Carriquiry, A. L.**, and Daniels, M. 2001. Adjusting for measurement error of a dietary risk factor in age-related maculopathy. *ISBA 2000 Proceedings: Bayesian Methods with Applications to Science, Policy, and Official Statistics*. Italy: European Communities Press. 51-61.
27. Fernandez, S. A., Fernando, R. L., and **Carriquiry, A. L.** 2001. An algorithm to sample unobservable genotypes in complex pedigrees. *ISBA 2000 Proceedings: Bayesian Methods with Applications to Science, Policy, and Official Statistics*. Italy: European Communities Press. 125-135.
28. Fernandez, S. A., Fernando, R. L., Guldbbrandtsen, B., Totir, R., and **Carriquiry, A. L.** 2001. Sampling genotypes in large pedigrees with loops. *Genetics, Selection, Evolution*, **33**:337-367.
29. Daniels, M. J., and **Carriquiry, A. L.** 2002. Computing the posterior distribution of individual level usual intakes with application to diseases models. *Research in Official Statistics*, **1**: 67-81.
30. Kurkalova, L., and **Carriquiry, A.L.** 2002. An analysis of grain production decline during the early transition in Ukraine: Bayesian inference. *American Journal of Agricultural Economics*, **84**: 1256-1263.
31. Fernandez, S. A., Fernando, R. L., Guldbbrandtsen, B., Stricker, C., Schelling, M., and **Carriquiry, A. L.** 2002. Irreducibility and efficiency of ESIP to sample marker genotypes in large pedigrees with loops. *Genetics, Selection, Evolution*. **34**:537-555.
32. **Carriquiry A.L.**, Nusser SM. 2002. Latent class analysis of complex sample survey data: Application to dietary data – Comment. *Journal of the American Statistical Association*. **97**:729-731.
33. Arab, L. **Carriquiry, A.L.**, Steck-Scott, S., and Gaudet, M. 2003. Ethnic differences in the nutrient intake adequacy of premenopausal women: results from the National Health and Nutrition Examination Survey III. *Journal of the American Dietetics Association*, **103**:1008-1014.
34. **Carriquiry, A.L.** 2003. Estimation of usual intake distributions of nutrients and foods. *Journal of Nutrition*. **133**:601-608.
35. Jahns L, Arab L, **Carriquiry A.** 2003. Dietary reference intakes still used incorrectly in Journal articles. *Journal of the American Dietetics Association* 103(10):1292-3; author reply 1293.
36. Kurkalova, L., and **Carriquiry, A. L.** 2003. Input- and output-oriented technical efficiency of Ukrainian collective farms, 1989-1992: Bayesian analysis of a stochastic production frontier model. *Journal of Productivity Analysis*, **20**:191-211.
37. Wang, H., Reitmeir, C. A., Glatz, B.A, and **Carriquiry, A. L.** 2003. Mixed model analysis of sensory characteristics of irradiated apple cider. *Journal of Food Science*. **68**:230-237.
38. Mila, A.L, Zhao, J., **Carriquiry, A.L.**, and Yang, X. B. Impact of management practices on regional prevalence of soybean Sclerotinia stem rot in the north-central region of the United States and on farmers' decisions under uncertainty. 2003. *Plant Disease*, 87: 1048-1058.
39. Mila, A. L., Yang, X.B., and **Carriquiry, A. L.** Bayesian Logistic Regression of Soybean Sclerotinia Stem Rot Prevalence in the U.S. North-Central Region: Accounting for Uncertainty in Parameter Estimation. 2003. *Phytopathology*, 93:758-764

40. Mila, A.L, **Carriquiry, A.L.**, and Yang, X. B. 2004. Logistic regression modeling of prevalence of soybean Sclerotinia stem rot in the north-central region of the United States. *Phytopathology*, 94: 102-110.
41. Kruzich LA, Marquis GS, **Carriquiry AL**, Wilson CM, Stephenson CB. 2004. U.S. youth in the early stage of HIV disease have low intakes of some micronutrients important for optimal immune function. *J Am Diet Assoc.* 104:1095-1101.
42. Jahns, L. **Carriquiry, A.L.**, Arab, L., Mroz, T., and Popkin, B. 2004. Within and between person variability of nutrient intakes of Russian and US children differs by sex and age. *Journal of Nutrition* **134**: 3114-3120.
43. Mila, A.L., and **Carriquiry A. L.** 2004. Bayesian analysis in plant pathology. *Phytopathology* 94:1027-1030.
44. Jahns, L. Arab, L., **Carriquiry, A.L.**, Popkin, B. 2005. The use of external within-person variance estimates to adjust nutrient intake distributions over time and across populations. *Public Health Nutrition* **6**: 19-32.
45. Love, T.M., and **Carriquiry, A.L.** Statistical analyses of cDNA microarray data. 2005. *Proceedings of the XIII Conference on Statistics Applied to Agriculture* 1-32.
46. **Carriquiry, A.L.**, and Camano-Garcia, G. Evaluating dietary survey data using the Tolerable Upper Level intakes. 2006. *Journal of Nutrition*, **136**: 507S-513S.
47. Che, P., Love, T.M., Frame, B.R, Wang, K., **Carriquiry, A.L.**, and Howell, S.P. 2006. Gene expression changes during germination and maturation of somatic embryos in maize cultures. *Plant Molecular Biology*, **62**(1-2):1-14. Epub 2006 Jul 15.
48. Pawlovich, M., Li, W. **Carriquiry, A.L.**, and Welch, T. Iowa's experience with "road diet" measures: impacts on crash frequencies and crash rates assessed following a Bayesian approach. 2006. *Transportation Research Record* **1953**:163-171.
49. Stout, T.B., Pawlovich, M. Souleyrette, R.R. and **Carriquiry, A.L.**. 2006. Safety impacts of road diets in Iowa. *Institute for Transportation Engineers Journal* **76**:24-28.
50. Souleyrette, R.R, Tenges, B. J., McDonald, T., Maze, T.H. and **Carriquiry, A.L.** 2006. Safety effectiveness of stop controls at ultra-low volume unpaved intersections. *Transportation Research Record*, 1967:58-65.
51. Traynham, T.L., Myers, D.J., **Carriquiry, A.L.**, and Johnson, L.A. 2007. Evaluation of water-holding capacity for wheat-soy flour blends. *Journal of the American Oil Chemists Society*, doi:10.1007/s11746-006-1018-0.
52. Zhang, W., **Carriquiry, A.L.**, Nettleton, D. and Dekkers, J.C.M. 2007. Pooling mRNA in microarray experiments and its effect on power. *Bioinformatics*, doi: 10.1093/bioinformatics/btm081.
53. Welk, G.J., Calabro, M.A., **Carriquiry, A.L.**, Nusser, S.M. 2007. Validation of a Computerized 24 Hour Physical Activity Recall (24PAR) Instrument Using Pattern Recognition Monitors. *Med Sci Sports Exerc.* **39**(5 Suppl):S28.
54. Murphy, S., Barr, S. and **Carriquiry, A.L.** 2007. Using the Dietary Reference Intakes in nutritional assessment. In: Monsen, E.R., Van Horn, L. (Eds.) *Research: Successful Approaches*, 3<sup>rd</sup> edition. American Dietetic Association, Chicago, IL.
55. **Carriquiry, A.L.**, and Kliemann, W. 2007. The modes of posterior distributions in mixed linear models. *Proyecciones*, **26**: 281-308.

56. Yang, L., Song, G., **Carriquiry, A.L.**, and Jernigan, R. 2008. Close correspondence between the essential protein motions from principal component analysis of multiple HIV-1 protease structures and elastic network modes. *Structure*, **16**: 321-330.
57. Li, W., **Carriquiry, A.L.**, Pawlovich, M. and Welch, T. 2008. The choice of statistical models in road safety countermeasure effectiveness studies in Iowa. *Accident Analyses and Prevention*, **40**: 1531-142.
58. Hamner, H., Mulinare, J., Flores, A., Boyle, C.A., Prue, C.E. Cogswell, M., Wang, CY., and **Carriquiry, AL**. 2009. Predicted contribution of folic acid intake for the US population, NHANES 2001-2004. *American Journal of Clinical Nutrition*, **87**: 305 – 315.
59. Love, T., and **Carriquiry, A.L.** 2009. Incorporating multiple cDNA microarray scans into analyses – an application to maize embryogenesis. *JASA*, **104**:524 – 540.
60. Calabro, M.A., Welk, G.J., **Carriquiry, A.L.**, Nusser, S.M., Beyler, N.K., Matthews, C.E. 2009. Validation of a computerized 24-hour (24PAR) physical activity recall instrument with pattern recognition activity monitors. *Journal of Physical Activity and Health*, **6**: 211 – 220.
61. Yang, Q., Cogswell, M., Berry, R.J., Hamner, H. and **Carriquiry, AL**. 2010. Sources of folic acid intake, tolerable upper intake levels and folate status among US adults: findings from the National Health and Nutrition Examination Survey 2001-2004 *American Journal of Clinical Nutrition*, **91**: 64 – 72.
62. Durazo-Arvizu, R.A., Dawson-Hughes, B., Sempos, C.T., Yetley, E.A., Looker, A.C., Cao, G., Harris, S.S., Burt, V.L., Carriquiry, A.L., Picciano, M.F. 2010. Parathyroid Hormone and the Estimation of Optimal 25-Hydroxyvitamin D Using Several Statistical Approaches. *Journal of Nutrition*. **140**: 595 – 599.
63. Sax, C.R., Maze, T.H., Souleyrette, R.R., **Carriquiry, A.L.** 2010. Optimal urban clear zone distance. *Transportation Research Record* **2195**: 27 – 35.
64. Arimond, M., Wiesman, D., Becquey, E., **Carriquiry, A.**, Daniels M.C., Deitchler, M., Fagnou-Fogny, N., Joseph, M., Kennedy, G., Martin-Prevel, Y., Torheim, L.E. 2010. Simple Food Group Diversity Indicators Predict Micronutrient Adequacy of Women’s Diets in 5 Diverse, Resource-Poor Settings. *Journal of Nutrition*, **140**:2233-2240.
65. Sempos, C.T., **Carriquiry, A.L.**, Bailey L.R., Joseph, M.L., Looker, A.C., Durazo-Arvizu, R., Yetley, E.L., Dawson-Hughes, B., Dwyer, J.T., Picciano, M.F. 2010. The impact of within person variation on prevalence estimates for serum 25-hydroxyvitamin D in the National Health and Nutrition Examination surveys. *Journal of Nutrition*. In press.
66. Joseph, M., **Carriquiry, A.L.**. 2010. An error-in-the-equation approach to evaluating the association between diet diversity and nutrient intake adequacy. *Journal of Nutrition*. **140**: 2094S-2101S.
67. Li, W., Yu, C., **Carriquiry, A.L.**, Kliemann, W. 2011. The asymptotic behavior of the R/S statistic fractional Brownian motion. *Statistics and Probability Letters*, **81**:83-91.
68. Yeung, L.F., Cogswell, M.E., **Carriquiry, A.L.**, Bailey, L.B., Pfeiffer, C.M., Berry, R.J. 2011. Contributions of enriched cereal grain products, ready-to-eat cereals and supplements to folic acid and vitamin B12 usual intakes in US children: National Health and Nutrition Examination Survey (NHANES) 2003 – 2006. *American Journal of Clinical Nutrition*. **93**: 172-185.
69. Cena, L., Li, W., Keren, N., **Carriquiry, A**, Pawlovich, M. 2011. A Bayesian Assessment of the Effect of Highway Bypasses in Iowa On Crashes and Crash Rate. *Journal of Safety Research*, **42**: 241 - 252.



70. Manjarrés, L.M., Díaz, A., **Carriquiry, A.**, 2011. Asociación entre ingesta de nutrientes hematopoyéticos y tipo de anemia nutricional en mujeres colombianas anémicas en edad fértil. *Revista Panamericana de Salud Pública/Pan American Journal of Public Health*. In press.
71. Hotz, C., Loechl, C., deBrauw, A., Eozenou, P., Gilligan, D., Moursi, M., Munhaua, B., van Jaarsveld, P, **Carriquiry, A.**, Meenakshi, J.V. 2011. A large-scale intervention to introduce orange sweet potato in rural Mozambique reduces the prevalence of inadequate vitamin A intakes among children and women. *British Journal of Nutrition*, doi:10.1017/S0007114511005174.
72. **Carriquiry, A.L.** 2011. Election forensics and the 2004 Venezuelan presidential recall referendum as a case study. *Statistical Science*, **26**: 471 - 478.
73. Sigle, K.J., Camano-Garcia, G. **Carriquiry, A.L.**, Betts, D.M., Kuehn, M.H., McClellan, G.J. 2011. The effect of dorzolamide 2% on circadian intra-ocular pressure in cats with primary congenital glaucoma. *Veterinary Ophthalmology*, **14**: S48 – S53.
74. Dettmer, M., Alekel, D.L., Lasardo, J.A., Messina, M., **Carriquiry, A.L.**, Haiberger, K., Stewart, J.W., Franke, W. 2012. The Effect of Soy Protein Beverages on Serum Cell Adhesion Molecule Concentrations in Prehypertensive/Stage 1 Hypertensive Individuals. *Journal of the American College of Nutrition*, **31**: 100-110.
75. Hotz, C. Loechl, C., Lubwova, A., Tumwine, J.K., Ndeezi, G., Masawi, A.N., Baingana, R., **Carriquiry, A.L.**, de Brauw, A., Meeknashi, J.V., Gilligan, D. 2012. A large-scale intervention to introduce carotene-rich orange sweet potato was effective in increasing vitamin A intakes among children and women in rural Uganda. *Journal of Nutrition*, **142**: 1871 - 1880.
76. Cogswell, M.E., Zhang, Z., Carriquiry, A.L., Gunn, J.P., Kuklina, A.V., Saydah, S.H., Yang, Q. Moshfegh, A.M. 2012. Sodium and potassium intake among US adults – NHANES 2003 – 2008. *American Journal of Clinical Nutrition*, **96**: 647-657.
77. Murphy, S., Ruel, M., **Carriquiry, A.L.** 2012. Should household consumption and expenditure surveys be used for nutritional assessment and planning? *Food and Nutrition Bulletin*, **3**: S235-241.
78. Wall, R., Litchfield, R., **Carriquiry, A.L.**, McDonnell, E.T., Woodward-Lopez, G.M. 2012. Local wellness policy strength and perceived implementation of school nutrition standards across three states. *Childhood Obesity*, **8**: 331 – 338.
79. Bektas, B., **Carriquiry, A.L.**, Smadi, O. 2012. Using classification trees for predicting national bridge inventory condition ratings. *Journal of Infrastructure Systems*.**19**:425-433..
80. Love, T., **Carriquiry, A.L.**. 2012. Bayesian methods for microarray data. In: *Handbook of Statistics*, **28**: 13 – 38.
81. Gibbs, M.M., **Carriquiry, A.L.**, Capanzana, M.V., Gibson, R.S. 2012. Establishing desirable fortificant levels for calcium, iron and zinc in foods for infant and young child feeding: examples from three Asian countries. *Maternal and Child Nutrition*, **10**:112-125, DOI: 10.1111/j.1740-8709.2012.00405.x.
82. Nusser, S.M., Beyler, N.K., Welk, G.J., **Carriquiry, A.L.**, Fuller, W.A., King, B.M.N. 2012. Modeling errors in physical activity recall data. *Journal of Physical Activity and Health*, **9**: S56 – S67.
83. Taylor, C.L. **Carriquiry, A.L.**, Bailey, R.L., Sempos, C.T., Yetley, E.A. 2013. Appropriateness of the probability approach with a nutrient status biomarker to assess population inadequacy: a study using vitamin D. *American Journal of Clinical Nutrition*, **97**: 72 – 78.

84. Armah, S.M., **Carriquiry, A.L.**, Sullivan, D., Cook, J.M., Reddy, M.B. 2013. A complete-diet algorithm for predicting nonheme iron absorption in adults. *Journal of Nutrition*, **143**: 1136-1140.
85. Bailey, R.L., Durazu-Arvizu, R.A., Carmel, R., Green, R., Pfeiffer, C.M., Sempos, C.T., **Carriquiry, A.L.**, Yetley, E.A. 2013. Modeling a methylmalonic acid-derived change point for serum vitamin B12 for adults in NHANES. *American Journal of Clinical Nutrition*, **98**: 460-467.
86. Cogswell, M.E., Wang, C-Y., Chen, T-C., Pfeiffer, C.M., Elliot, P., Gillespie, C.D., **Carriquiry, A.L.**, Sempos, C.T., Liu, K., Perrine, C.G., Swanson, C.A., Caldwell, K.A., Loria, C.M. 2013. Validity of predictive equations for 24-h urinary sodium excretion in adults aged 18 – 39 y. *American Journal of Clinical Nutrition*, **98**: 1502-1513. doi: 10.3945/ajcn.113.059436.
87. Wang, C-Y., Cogswell, M.E., Loria, C.M., Chen, T-C., Pfeiffer, C.M., Swanson, C.A., Caldwell, K.A., Perrine, C.G., **Carriquiry, A.L.**, Liu, K., Sempos, C.T., Gillespie, C.D., Burt, V.I. 2013. Urinary excretion of sodium, potassium and chloride, but not iodine, varies by timing of collection in a 24-h calibration study. *Journal of Nutrition*, doi: 10.3945/jn.113.175927.
88. Zhang, Z., Cogswell, M.E., Gillespie, C., Fang, J., Loustalot, F., Dai, S., **Carriquiry, A.L.**, Kuklina, E.V., Hong, Y., Merritt, R., Yang, Q. 2013. Association between usual sodium and potassium intake and blood pressure and hypertension among U.S. adults 2005-2010. *PLoS One* **8**:1-10.
89. Mudgal, A., Hallmark, S., **Carriquiry, A.L.**, Gritza, K. 2014. Driving behavior at a roundabout: A hierarchical Bayesian regression analysis. *Transportation Research Part D*, **26**: 20-26.
90. Perrine, C.G., Cogswell, M.E., Swanson, C., Sullivan, K.M., Chen, T.C., **Carriquiry, A.L.**, Dodd, K.W., Caldwell, K., Wang, C.Y. 2014. *Thyroid*, **24**:748-757.
91. Orellana, M., Edwards, J., **Carriquiry, A.L.** 2014. Evidence of heterogeneous variances in multi-environment yield trials for corn (*Zea mays* L.) hybrids. *Crop Science*, **54**:1048-1056.
92. Dwyer, J.T., Woteki, C., Bailey, R., Britten, P., **Carriquiry, A.L.**, Gaine, P.C., Miller, D., Moshfegh, A., Murphy, M.M., Smith Edge, M. 2014. Fortification: New findings and implications. *Nutrition Reviews*, **72**:127-141.
93. Howard, R., **Carriquiry, A.L.**, Beavis, W.. 2014. Parametric and nonparametric statistical methods for genomic selection of traits with additive and epistatic genetic architectures. *Genes, Genetics and Genomics*, **4**:1027-1046.
94. Da Silva, N., **Carriquiry, A.L.**, O'Neill, K., Oppriessing, T., O'Connor, A.M. 2014. Mixed treatment comparison meta-analysis of porcine circovirus type 2 (PCV2) vaccines used in piglets. *Preventive Veterinary Medicine*, **117**:113-424.
95. Abdeen, Z., Ramelawi, A., Qaswari, R., Alrub, A.A., Dary, O., Rabeloson, Z., Shahab-Ferdows, S., Dror, D., Allen, L.H., **Carriquiry, A.**, Salman, R., Dkeidek, S. 2014. Predicted efficacy of the Palestinian wheat flour fortification programme: complementary analysis of biochemical and dietary data. *Public Health Nutrition*, **18**:1358-1368.
96. Welk, G.J., Kim, Y., Stanfill, B., Osthus, D., Calabro, M.A., Nusser, S.M., **Carriquiry, A.L.** 2014. Validity of 24-h physical activity recall: physical activity measurement survey. *Medicine and Science in Sports and Exercise*, **46**:2014-2024.
97. Gibson, R.S., **Carriquiry, A.L.**, Gibbs, M.M. 2015. Selecting desirable micronutrient fortificants for plant-based complementary foods for infants and young children in low-income countries. *Journal of the Science of Food and Agriculture*, **95**:221-224.
98. Mercado, C.I., Cogswell, M.E., Valderrama, A.M., Wang, C.Y., Loria, C.M., Moshfegh, A.J., Rhodes, D.G., **Carriquiry, A.L.** 2015. Difference between 24-h urine excretion for assessing population sodium and potassium intake in adults 18 to 39 y. *The American Journal of Clinical Nutrition*, 101:376-386. doi: 10.3945/ajcn.113.081604.

99. Wang, C.Y., **Carrquiry, A.L.**, Chen, T-C, Loria, C.M., Pfeiffer, C.M., Liu, K., Sempos, C.T., Perrine, C.G., Cogswell, M.E. 2015. Estimating the population distribution of usual 24-hour sodium excretion from timed urine void specimens using a statistical approach accounting for correlated measurement errors. *The Journal of Nutrition*, 145:1017-1024. doi:10.3945/jn.114.206250
100. Aburto, T., Cantoral, A. Hernandez-Barrera, L., **Carrquiry, A.**, Rivera, J. 2015. Usual dietary energy density is associated with excessive body weight in Mexican children. *Journal of Nutrition*, 145(7): 1524-1530. doi: 10.3945/jn.114.206359
101. Armah, S.M., **Carrquiry, A.L.**, Reddy, M.B. 2015. Total iron bioavailability from the US diet is lower than the current estimate. *Journal of Nutrition*, 145:2617-2621. doi: 10.3945/jn.115.210484.
102. Taylor , C., Bailey, R., **Carrquiry, A.L.** 2015. Use of folate-based and other fortification scenarios illustrate different shifts for tails of the distribution of serum 25-hydroxyvitamin D concentrations. *Journal of Nutrition*, 145:1623-1629. doi:10.3945/jn.115.211185
103. **Carrquiry, A.L.**, Spungen, J.H., Murphy, S.P., Pehrsson, P.R., Dwyer, J.T., Juan, W.Y., Wirtz, M. 2016. Variation in the iodine concentration of foods: considerations for dietary assessment. *American Journal of Clinical Nutrition*, 104 (Suppl. 3): 877-887.
104. Juan, W.Y., Trumbo, P.R., Spungen, J.H., Dwyer, J., **Carrquiry, A.L.**, Zimmerman, T.P., Swanson, C.A., Murphy, S.P. 2016. Comparison of two methods for estimating the prevalence of inadequate and excessive iodine intake. *American Journal of Clinical Nutrition*, 104:888S-897S.
105. Shamah-Levi, T., Rodriguez-Ramirez, S., Gaona-Pineda, E.B., Cuevas-Nasu, L., **Carrquiry, A.L.**, Rivera, J.A. 2016. Three 24-h recalls in comparison with one improve the estimates of energy and nutrient intakes in an urban Mexican population. *The Journal of Nutrition*, 146:1043-1050.
105. Lopez-Olmedo, N., **Carrquiry, A.L.**, Rodriguez-Ramirez, S., Ramirez-Silva, I., Espinosa-Montero, J., Hernandez-Barrera, L., Campirano-Nunez, F., Martinez-Tapia, B., Rivera, J.A. 2016. Usual intake of energy and macro-nutrients in the Mexican population. *The Journal of Nutrition*, 146:1856S-1865S.
106. Orozco, A., Yeung, L.F., Guo, J., Berry, R.J., **Carrquiry A.** 2016. Characteristics of US adults aged 19 years and older with usual daily folic acid intake above the tolerable upper intake level: National Health and Nutrition Examination Survey, 2003-2010. *Nutrients*, 8:195, doi:[10.3390/nu8040195](https://doi.org/10.3390/nu8040195).
107. Zimmermann, M.b., Hussein, I., Al Ghanami, S., El Badawi, S., Al Hamad, N.M., Abbas Hajj, B., Al-Thani, M., Winichagoon, P., Pongcharoen, T., van der Haar, F., Qing-Zheng, J., Dold, S., Andersson, M., **Carrquiry, A.L.** Estimation of the prevalence of deficient and excessive iodine intakes in school-age children from the adjusted distribution of urinary iodine concentrations from population surveys. *The Journal of Nutrition*, 146:1204-1211.
108. De Moura, F.F., Moursi, M., Angel, M.D., Angeles-Agdeppa, I., Atmarita, A., Gironella, G.M., Muslimatun, S., **Carrquiry, A.L.** 2016. Biofortified beta-carotene rice improves intake of vitamin A and reduces the prevalence of inadequacy among women and young children in a simulated analysis in Bangladesh, Indonesia and Philippines. *The American Journal of Clinical Nutrition*, 104:769-775.
109. Pedroza-Tobias, A., Hernandez-Barrera, L., Lopez-Olmedo, N., Garcia-Guerra, A., Rodriguez-Ramirez, S., Ramirez-Silva, I., Villalpando, S., **Carrquiry, A.L.**, Rivera, J.A. Usual intake of vitamins in the Mexican population: Results from the National Health and Nutrition Survey 2012. *The Journal of Nutrition*, 146:1866S-1873S.

110. Sanchez-Pimienta, T.G., Lopez-Olmedo, N., Rodriguez-Ramirez, S., Garcia-Guerra, A., Rivera, J.A., **Carriquiry, A.L.**, Villalpando, S. 2016. The usual intake of iron, zinc, calcium and magnesium in the Mexican population. *The Journal of Nutrition*, 146:1874S-1880S.
111. Saheed, M.S., Gkritza, K., **Carriquiry, A.**, Hallmark, S. 2016. Analysis of occupant injury severity in winter weather crashes: a fully Bayesian multivariate approach. *Analytic Methods in Accident Research*, 11:33-47.
112. Fiorentino, M., Landais, E., Bastard, G., **Carriquiry, A.**, Wieringa, F.T., Berger, J. 2016. Nutrient intake is insufficient among Senegalese urban school children and adolescents: Results from two 24-h recalls in state primary schools in Dakar. *Nutrients* 8:650-667.
113. **Carriquiry, A.L.** Understanding and assessing nutrition. 2017. *Reviews in Statistics*, 4:123-146
114. Hare, E., Hofmann, H., **Carriquiry, A.** 2017. Automatic matching of bullet lands. *Annals of Applied Statistics*. 4:2332-2356. Arxiv: 1601.05788v1.
115. Howard, R., **Carriquiry, A.L.**, Beavis, W.. 2017. Application of response surface methods to determine conditions for optimal genomic prediction. *Genes, Genetics and Genomics*, 7: 3103--3113.
116. Raatz, SK, Jahns, L., Johnson, LK., Scheett, A., **Carriquiry, A.**, Lemieux, A., Nakajima, M., al’Absi, M. 2017. Smokers report lower intake of key nutrients than nonsmokers, yet both fall short of meeting recommended intakes. *Nutrition Research*, 45:30 – 37.
117. Basulto-Elias, G., **Carriquiry, A.**, De Brabanter, K., Nordman, D. 2017. Fourierin: an R package to compute Fourier integrals. *The R Journal*, 9:72—83.
118. Hare, E., Hofmann, H., **Carriquiry, A.** 2018. Algorithmic approaches to match degraded bullet land impressions. *Law, Probability and Risk*, 16: 203-221.
119. Denney, L., Angeles-Adepta, I., Capanzana, M.V., Toledo, M.B., Donohue, J. , **Carriquiry, A.L.** 2018. Nutrient Intakes and Food Sources of Filipino Infants, Toddlers and Young Children are Inadequate: Findings from the National Nutrition Survey 2013. *Nutrients*, 10: 1730- 1739 <https://doi.org/10.3390/nu10111730>.
120. Castellanos-Gutierrez, A., Sanchez-Pimienta, T.G., **Carriquiry, A.L.**, da Costa, T.H.M., Ariza, A.C. 2018. Higher dietary magnesium intake is associated with lower body mass index, waist circumference and serum glucose in Mexican adults. *BMC Nutrition Journal* 17: 114-121. [doi.org/10.1186/s12937-018-0422-2](https://doi.org/10.1186/s12937-018-0422-2)
121. Shook, R., Hand, G., O’Connor, D., Thomas, DM., Hurley, TG., Drenowatz, C., Welk, G., Reis, D., **Carriquiry, A.**, Blair, S. 2018. Energy intake derived from an energy balance equation, validated activity monitors, and dual X-ray absorptiometry can provide acceptable caloric intake data among young adults. *Journal of Nutrition*, 148:490-496. [doi.org/10.1093/jn/nxx029](https://doi.org/10.1093/jn/nxx029).
122. Reis, D., **Carriquiry, A.** 2019. Measuring energy balance while correcting for measurement error via free knot splines. *PLoS*. [doi.org/10.1371/journal.pone.0201892](https://doi.org/10.1371/journal.pone.0201892)
123. Park, S., **Carriquiry, A.** Machine learning methods to compare the elemental composition of glass fragments. 2019. *Annals of Applied Statistics*, 13: 1068-1102.
124. Hubbard, D.W., **Carriquiry, A.L.** 2019. A straw man proposal for a new framework for statistical inference in science. *The American Statistician*, 73 sup1: 46-55. [doi.org/10.1080/00031305.2018.1543138](https://doi.org/10.1080/00031305.2018.1543138).

125. Allen, L.H., **Carriquiry, A.L.**, Murphy, S.P. 2019. Proposed harmonized nutrient reference values for populations. *Advances in Nutrition*, 00: 1-15. [doi.org/10.1093/advances/nmz096](https://doi.org/10.1093/advances/nmz096).
126. **Carriquiry, A.L.**, Reid, N., Slavkovic, A.B. 2019. Stephen Elliott Fienberg 1942-2016, Founding Editor of the *Annual Reviews of Statistics and Its Application*. *Annual Reviews of Statistics and Its Application*, 6: 1-18. [doi.org/10.1146/annurev-statistics-030718-105334](https://doi.org/10.1146/annurev-statistics-030718-105334).
127. Angeles-Agdeppa, A., Ye, S., Denney, L., Tanda, K.V., Octavio, R.A.D, **Carriquiry, A.L.**, Capanzana, M.V. 2019. Food sources, energy and nutrient intakes of adults: 2013 Philippines National Nutrition Survey. *BMC Nutrition Journal*, 18: 1-12. [doi.org/10.1186/s12937-019-0481-z](https://doi.org/10.1186/s12937-019-0481-z).
128. Angeles-Agdeppa, A., Denney, L., Toledo, M.B., Obligar, V.A., Jacquier, E.F., **Carriquiry, A.L.**, Capanzana, M.V. 2019. Inadequate intakes in Filipino schoolchildren and adolescents are common among those from rural areas and poor families. *Food and Nutrition Research*, 63: 1-12.
129. **Carriquiry, A.**, Hofmann, H., Tai, XH., VanderPlas, S. 2019. Machine learning in forensic applications. *Significance Magazine*, 16(2): 29-35.
130. Basulto-Elias, G., **Carriquiry, A.L.**, De Brabanter, K., Nordman, D. 2020. Bivariate kernel deconvolution with panel data. *Sankhya B*. [doi.org/10.1007/s13571-020-00226-x](https://doi.org/10.1007/s13571-020-00226-x).
131. Crawford, A., Ray, A., **Carriquiry, A.** 2020. A database of handwriting samples for applications in forensic statistics. *Data in Brief*, 28. [doi.org/10.1016/j.dib.2019.105059](https://doi.org/10.1016/j.dib.2019.105059).
132. Park, S., **Carriquiry, A.** 2020. An algorithm to compare 2D footwear outsole images using maximum clique and SURF. *Statistical Analysis and Data Mining*. [doi.org/10.1016/j.dib.2020.105508](https://doi.org/10.1016/j.dib.2020.105508).
133. Garton, N., Niemi, J. **Carriquiry, A.L.** 2020. Knot selection in sparse Gaussian processes with a variational objective function. *Statistical Analysis and Data Mining*, 13:324-336. [doi.org/10.1002/sam.11459](https://doi.org/10.1002/sam.11459).
134. Crawford, A.M., Berry, N.S., **Carriquiry, A.L.** 2020. A clustering method for graphical handwriting components and statistical writership analysis. *Statistical Analysis and Data Mining*. In press.
135. Murphy, S.P., Yaktine, A.L., **Carriquiry, A.L.** 2020. Planning nutritionally adequate diets for groups: Methods used to develop recommendations for a Child and Adult Care Food Program. *Advances in Nutrition*. [doi.org/10.1093/advances/nmaa119](https://doi.org/10.1093/advances/nmaa119).
136. Park, S., **Carriquiry, A.** 2020. Similarity of two-dimensional images: An application to the forensic comparison of footwear impressions. *Journal of Applied Statistics*. In press.
137. Raatz, S.K., Johnson, L.K., **Carriquiry, A.L.**, King, W.C., Kalarchian, M.A., Devlin, M.J., Marcus, M.D., Mitchell, J.E. 2021. Reported nutrient intake over seven years after Roux-en-Y gastric bypass in the longitudinal assessment of bariatric surgery – 3 (LABS – 3) psychosocial study. *Surgery for Obesity and Related Diseases*. In press.
138. Hofmann, H., VanderPlas, S., **Carriquiry, A.L.** 2021. Treatment of inconclusives in the AFTE range of conclusions. *Law, Probability and Risk*. In press.

#### PAPERS SUBMITTED OR IN PREPARATION

1. Garton, N., Niemi, J., **Carriquiry, A.L.** Being revised for *Journal of Machine Learning Research*. January 2020.

2. Crawford, A.M., **Carrquiry, A.L.**, Ommen, D.M. A Bayesian approach to the forensic analysis of handwriting. Submitted to *Annals of Applied Statistics*.
3. Garton, N., **Carrquiry, A.**, Ommen, D., Niemi, J. Submitted to *Statistical Science*. December 2020.
4. Lee, H.N., Qiu, Y. **Carrquiry, A.**, Ommen, D. Optimal matching rule with application in forensic science. In preparation.
5. Reis, D., **Carrquiry, A.** A Bayesian two-part model to evaluate compliance with physical activity guidelines by US adults. In preparation.
6. Moursi, M., Angel, MD., De Moura, FF., Angeles-Agdeppa, I., Atmarita, A., Gironella, GM., Muslimatun, S., **Carrquiry, A.** An ex-ante analysis of the impact of rice biofortified with zinc on dietary zinc inadequacy: Evidence from Bangladesh, Indonesia and the Philippines. Review requested, *American Journal of Clinical Nutrition*. August 2020.
7. Curley, B., **Carrquiry, A.L.**, Fuller, W.A. Nonlinear measurement error approach to modeling the association between vitamin D intake and serum 25(OH)D in adults. In preparation.
8. Joseph, M., **Carrquiry, A.L.**, Fuller, W.A. A change-point model with errors in variables: An application assessing the association between iPTH and 25(OH)D in adults. In preparation.

#### VOLUMES WRITTEN OR EDITED

*Case Studies in Bayesian Statistics*, Volume IV. 1998. Gatsonis, C., Kass, R., Carlin, B. **Carrquiry, A. L.**, Gelman, A., Verdinelli, I., and West, M. (eds.). Springer-Verlag, Lecture Notes in Statistics, 138. New York.

*Case Studies in Bayesian Statistics*, Volume V. 2002. Gatsonis, C., Kass, R., Carlin, B. **Carrquiry, A. L.**, Gelman, A., Verdinelli, I., and West, M. (eds.). Springer-Verlag, Lecture Notes in Statistics, 162. New York.

*Case Studies in Bayesian Statistics*, Volume VI. 2002. Gatsonis, C., Kass, R., **Carrquiry, A. L.**, Gelman, A., Higdon, D., Pauler, D., and Verdinelli, I.(eds.). Springer-Verlag, Lecture Notes in Statistics 167, New York.

*Dietary Reference Intakes: Applications in Dietary Assessment* 2000. Murphy, S., Arab, L. Barr, S., Borra, S., **Carrquiry, A.**, Devaney, B., Dwyer, J., Habitch, J.P., King, J., Kuhnlein, H. . Institute of Medicine, National Academy Press, Washington, D.C. 285 pp.

*Estimating Eligibility and Participation for the WIC Program: Phase I Report*. 2001. Betson, D., Buescher, P. **Carrquiry, A.L.**, Currie, J., DaVanzo, J., Geweke, J.F., Greenberg, D., Inman, R.P., Lepkowski, J., Scholtz, J.K., Sutor, C.W. National Academy Press, Washington, D.C. 86 pp.

*Estimating Eligibility and Participation for the WIC Program: Final Report*. 2003. Betson, D., Buescher, P. **Carrquiry, A.L.**, Currie, J., DaVanzo, J., Geweke, J.F., Greenberg, D., Inman, R.P., Lepkowski, J., Scholtz, J.K., Sutor, C.W. National Academy Press, Washington, D.C. 162 pp.

*Dietary Reference Intakes: Applications in Dietary Planning*. 2003. Barr, S., Agurs-Collins, T.D., **Carrquiry, A.L.**, Coulston, A.M., Devaney, B., Dwyer, J.T., Hunt, J.R., Murphy, S., and Tarasuk, V. Institute of Medicine, National Academy Press.

*Intentional Human Dosing Studies for EPA Regulatory Purposes: Scientific and Ethical Issues*. 2004. Childress, J., Taylor, M.R., Bruckner, J., **Carrquiry, A.**, Clayton, E.W., Doull, J., Greely, H.T., Harlow, S.D., Lave, L.B., Lo, B., Louis, T.A., Rodricks, J.V., Schroeder, C.H., Temple, R. National Academy Press. 208 pp.

*Ballistic Imaging*. 2008. Rolph, J.E., Meiran, E.S., Blumstein, A., **Carriquiry, A.L.**, Chumbley, S., Cook, P.J., De Graef, M., Donoho, D.M., Eddy, W.F., Gray, G., Grimson, E., Huttenlocher, D., Meyer, M., Nair, V., Ninivaggi, A., Pisenti, D.W., Pregibon, D., Reininga, H.M., Stewart, J.K., Stonebraker, M., Weschler, H., Weertman, J. National Academy Press, 322 pp.

*Gender Differences at Critical Transitions in the Careers of Science, Engineering, and Mathematics Faculty*. 2010. Canizares, C., Shaywitz, S., Abriola, L., Buikstra, J., Carriquiry, A., Ehrenberg, R. Girgus, J., Leibowitz, A., Morawetz, C.S., Taylor, T., Wu, L., Yu, X. National Academy Press. National Academy Press, 365 pp.

*Child and Adult Care Food Program- Aligning Dietary Guidance for All*. 2011. Murphy, S.P., Birkhead, N.D., **Carriquiry, A.L.**, Chernoff, R. Coto-Moreno, S., Cullen, K.W., Fox, M.K., Henchy, G., Jensen, H.H., Russell-Tucker, C., Stallings, V.A., Tucker, K.L. National Academy Press, 296 pp.

*Using Science as Evidence in Public Policy*. 2012. Prewitt, K., Bohrnstedt, G.W., Bradburn, N.M., **Carriquiry, A.L.**, Cartwright, N.D., Cooper, H., Farrell, M.J., Fienberg, S.E., Jasanoff, S.S., Jervis, R.L., Littan, R.E., Morning, A., Pollak, R.A., Schneider, S.H., Schwandt, T.A., Verba, S. National Academy Press. National Academy Press, 110 pp.

*Options for Estimating Illegal Entries at the U.S.-Mexico Border*. 2013. **Carriquiry, A.L.**, Majmundar, M. Eds. National Academy Press, 156 pp.

*Furthering America's Research Enterprise*. 2014. Celeste, R.A., Griswold, A., Straf, M. Eds. National Academy Press, 200 pp.

*Evaluation of the Department of Veterans Affairs Mental Health Services*. 2018. **Carriquiry, A.**, Mitchell, A., Aiuppa, L. Eds. National Academy Press, 440 pp.

*Statistics in the Public Interest: In Memory of Stephen E. Fienberg*. **Carriquiry, A.L.**, Eddy, W., Tanur, J.M. Springer. In press.

## TEACHING AND INSTRUCTION

PhD students:

- Kevin W. Dodd, 1999 (joint with W. Fuller, Statistics). National Cancer Institute.
- Chad Hart, 1999 (joint with S. Lence, Economics). Iowa State University, Dept. of Economics.
- Soledad Fernández, 2001 (joint with R. Fernando, Animal Science). The Ohio State University, Dept. of Biostatistics.
- Tanzy Love, 2005. Tenured Associate Professor, University of Rochester, Dept. of Statistics.
- Gabriel Camano, 2006. Universidad de la Republica, Uruguay, Dept. of Statistics.
- Wuyan Zhang, 2007 Abbott Laboratories.
- Wen Li, 2009 (joint with C. Yu and W. Kliemann). Merck Laboratories.
- Wei He, 2011 (joint with R. Fernando). Monsanto.
- Kristian Schmidt, 2012. Capital One, Richmond, VA.
- Yu-Yi Hsu, 2013. Food and Drug Administration, Washington, DC.
- Maria Joseph, 2013. General Dynamics, Des Moines, IA.
- Hui Lin, 2013 (joint with Chong Wang). Google Research, Mountain View, CA.
- Reka Howard, 2016 (joint with W. Beavis). Tenure-track assistant professor, Dept. of Statistics, U Nebraska Lincoln.
- Guillermo Basulto, 2016 (joint with D. Nordman and Kris de Brabanter). Scientist, INTRAN, ISU.
- Brenna Curley, 2017 – Tenure-track assistant professor, Dept. of Mathematics, Moravian College, PA.
- Eduardo Trujillo, 2017 (joint with D. Nordman) – Assistant research professor, Clinical Research and Leadership, George Washington University.

- Daniel Ries, 2017 – Scientist, Sandia National Laboratory, Albuquerque, NM.
- Soyoung Kim, 2018. Tenure-track assistant professor, National Pusan University, Busan, South Korea.
- Amy Crawford, 2020 (joint with D. Ommen). Statistical Scientist, Berry Consulting, Austin, TX.
- Nate Garton, 2020 (joint with J. Niemi). Commonwealth Computer Research, Inc., Charlottesville, VA.
- Jason Saporta, 2022 expected (joint with J. Tian).

MSc students:

- 38 students completed their MSc in Statistics under my supervision since 1990.

Have supervised, in addition, a Bachelor of Science and a Master of Science thesis from the Pontifical Catholic University of Chile, a Master of Science thesis from the Catholic University of Valparaiso, Chile, a Master of Science thesis from the Universidad Nacional Autónoma de México, and the MS of three students in the Department of Nutrition, University of Antioquia, Colombia. Was member of the doctoral committee of Dr. Lisa Jahns, School of Public Health, University of North Carolina at Chapel Hill. Was External Examiner of the doctoral dissertation of Mr. Robert Denham, The University of Newcastle, Australia. Was External Examiner of a doctoral student in the University of Aalborg, Denmark.

Undergraduate students:

Honors Students: Anyesha Rey, Dept. of Statistics, ISU. Emily Allen, Dept. of Statistics, ISU.

Elsewhere: Alexandria Arabio, Forensic Science major in Cedar Crest College in Allentown, PA. Madison McGregor, Forensic Science major in Columbia College in Columbia, MO.

Have mentored multiple undergraduate students who participated in Research Experiences for Undergraduates in the Dept. of Statistics and in CSAFE, ISU.

#### Courses taught

Introductory Statistics Stat 101 (2 times).

Introduction to Business Statistics Stat 226 (1 time).

Business Statistics Stat 326 (1 time).

Applied Business Statistics Stat 328 (1 time).

Applied Multivariate Methods Stat 407 (4 times).

Statistical Methods for Research Workers Stat 401 (3 times).

Design of Experiments for Research Workers Stat 402 (1 time).

Introduction to Bayesian Data Analysis Stat 444 (6 times).

Honors Project Stat 490 (1 time).

Statistical Methods Stat 500 (1 time).

Multivariate Analysis Stat 501 (4 times).

Response Surface Methodology Stat 513 (3 times).

Bayesian Analysis Stat 544 (3 times).

Assessment of Nutritional Status FSHN 572 (1 time, as part of a team).

Mixed Linear Models and Longitudinal Data Analysis (1 time, Chile).

#### **INVITED PRESENTATIONS AND SEMINARS (After 1990)**

Bayesian estimation of variance components in mixed linear models. IV Congress on Genetics Applied to Livestock Production. Edinburgh, Scotland. July 1990.

Classical and Bayesian approaches to the estimation of variance components in mixed linear models. X Winter School on Probability and Statistics. CIENES and Pontificia Universidad Católica de Chile. July 1991.

Topics on Bayesian estimation from components of variance models. First Congress of Mathematics Capricornio. Universidad Católica del Norte, Antofagasta, Chile. August 1991.



Statistical aspects of the genetic evaluation of livestock. Forum on Livestock Production at the Onset of MERCOSUR. Instituto Nacional de Investigaciones Agropecuarias (INIA). Montevideo, Uruguay, August 1991.

Approximate Inference for posterior means in mixed linear models. Department of Statistics, Universidad Nacional Autónoma de México. Mexico City, Mexico. February 1992.

Topics on estimation and prediction from components of variance models. XI Winter School on Probability and Statistics. Pontificia Universidad Católica de Chile and CIENES. Santiago, Chile. July 1992. (Series of 5 invited lectures.)

Computation of posterior modes in mixed linear models. XX Annual Meeting of the Chilean Statistical Society, Antofagasta, Chile. November 1992.

Posterior surfaces in mixed linear models. NSF-NBER Workshop of the Americas on Recent Advances in Bayesian Statistics and Econometrics. Caracas, Venezuela. December 1992.

Bayesian approaches to prediction in mixed linear models. Department of Statistics, Carnegie-Mellon University, Pittsburgh, PA. March 1993.

An overview of Bayesian prediction in components of variance models. Department of Statistics, Purdue University, West Lafayette, IN. April 1993.

Modern approaches to prediction in mixed linear models. IV Statistics Symposium, Universidad Nacional de Colombia, Bogotá, Colombia. June 1993.

Classical and Bayesian approaches to components of variance models. Semana de la Estadística. Universidad Católica de Valparaíso, Valparaíso, Chile. October 1993.

Estimation of usual intake distributions. Department of Statistics, Pontificia Universidad Católica de Chile, Santiago, Chile. October 1993.

Bayesian estimation of signal to noise ratios. NSF Conference on Bayesian Hierarchical Models. Rio de Janeiro, Brazil. December 1993.

Stochastic volatility models: Introduction and an Application. Department of Statistics, Iowa State University, Ames, IA. January 1994.

Stochastic volatility models for futures returns. Department of Finance, Iowa State University, Ames, IA. March 1994.

Estimating usual Intake distributions. U.S. Department of Agriculture, Human Nutrition Information Service. Hyattsville, MD. April 1994.

Economic - environmental models: Applications in agriculture. Department of Natural Resources, Universidad Autónoma de Chihuahua, Chihuahua, Mexico. May 1994.

Dietary assessment: A comparison of different procedures. Food and Drug Administration, Center for Food Safety and Applied Nutrition, Washington, D.C. June 1994.

Robust QML for stochastic volatility. International NSF-NBER Forecasting, Prediction and Modeling in Statistics and Econometrics Meeting. Hsinchu, Taiwan, December 1994.

Improved quasi-maximum likelihood for stochastic volatility models. Learning and Knowledge: 19th Annual Conference of the German Classification Society. Basel, Switzerland, March 1995.

Exploring stationary surfaces for Markov chain Monte Carlo iterations. Department of Statistics, University of Washington, Seattle, WA. May 1995.

ISU Method and software for estimating distributions of usual nutrient intake. Agricultural Research Service (ARS), US Department of Agriculture (USDA), Hyattsville, MD. May 1995.

Estimation of the usual intake distribution of ratios of dietary components. Agricultural Research Service (ARS), US Department of Agriculture (USDA), Hyattsville, MD. May 1995.

[Métodos de estimación en problemas de volatilidad estocástica.]. II Congreso Iberoamericano de Estadística, Oaxaca, Mexico, September 1995.

Change-point problems in agriculture: The case of response to fertilizer. III World Meeting of the International Society for Bayesian Analysis (ISBA). Oaxaca, Mexico, September 1995.

Assessing the dietary status of populations. Department of Biostatistics, University of Minnesota, Minneapolis, MN. October 1995.

Assessing the proportion of the population at dietary risk: A brief commentary. Meeting of the Food and Nutrition Board, Institutes of Medicine, National Academy of Sciences. Washington, D. C., December 12 1995.

Statistical issues in multi-target tracking. Tracker Workshop. NRaD, U.S. Navy, San Diego, California, February 6 – 8 1996.

Transformation of dietary intake records into estimates of population intakes. Invited special address in the Session: *New Perspectives Underlying Recommended Dietary Allowances: Food and Nutrition Board Update*, Washington, D.C., April 17 1996.

A Bayesian hierarchical approach to change point problems. German Cancer Research Institute, Heidelberg, Germany, June 17 1996.

Mixed models with dynamic random effects. III Congreso Latinoamericano de Sociedades de Estadística (III CLATSE). Santiago, Chile. October 9 1996.

Methodological issues in defining dietary recommendations. Defining Dietary Recommendations Workshop. Center for Human Nutrition and Biostatistics Department, Johns Hopkins University, Baltimore. October 24 1996.

Improved maximum likelihood for stochastic volatility estimation. Department of Statistics, Pontificia Universidad Católica de Chile, Santiago, Chile. November 1997.

Estimation of genetic trend. IV World Congress of the International Society for Bayesian Analysis (ISBA). Capetown, South Africa. December 19 1996.

Analyses of dietary intake data. Institute for Statistics and Decision Sciences, Duke University, Durham, NC. April 1997.

Highest density gates for multiple target tracking. V Congreso de Matemáticas Capricornio. Antofagasta, Chile, July 30 1997.

Metamodeling for environmental policy evaluations. Joint Statistical Meetings, Anaheim, August 10, 1997.

Risk assessment based on 24 – hr food intake data. Joint Statistical Meetings, Anaheim, August 13 1997.

Statistical issues in the analysis of dietary intake data. Department of Food Science and Human Nutrition, Iowa State University, Ames, IA. April 1998.

Bayesian methods in dietary assessment. VII Annual Meeting of the Portuguese Statistical Association. Tomar, Portugal, June 9 1998.

A maximum entropy approach to estimating the prevalence of nutrient inadequacy. Sixth Purdue Symposium on Statistics, Workshop on Nutrition and Statistics. Purdue University, West Lafayette, Indiana, June 18 1998.

Assessing the prevalence of nutrient inadequacy. 81st Annual Meeting and Exhibition of the American Dietetic Association. Kansas City, Kansas, October 19 1998.

Using reversible jump MCMC to estimate the density of usual nutrient intake. Department of Statistics, Purdue University, West Lafayette, IN. March 1999.

Analyses of dietary intake data. Department of Statistics, University of Iowa, Iowa City, IA. April 1999.

Preliminary methodological investigation of the Supplementary Nutrition Survey of Older Americans. Experimental Biology Meetings, Washington, D. C., April 19 1999.

Issues in the analysis of complex dietary intake surveys. Department of Statistics, Pontificia Universidad Católica de Chile, Santiago, Chile. June 1999.

Analysis of the non-response in the Supplementary Nutritional Survey of Older Americans. National Conference on Health Statistics, Centers for Disease Control and Prevention. Washington, D.C., August 4 1999.

A Bayesian approach to estimate the density of a random variable observed with measurement error. Department of Biostatistics, University of Rochester, Rochester, NY. October 1999.

Adjusting intake distributions and estimating prevalence of nutrient inadequacy. Department of Nutrition and Epidemiology, School of Public Health, University of North Carolina, Chapel Hill, NC. November 1999.

Do bullets have fingerprints? Fourth International Conference on Forensic Statistics, North Carolina State University. Raleigh, North Carolina, December 6 1999.

A hierarchical model to adjust for heterogeneous measurement error. Sixth World Meeting of the International Society for Bayesian Analysis, Crete, Greece, May 31 2000.

A method to assess the proportion of undernourished individuals in a population. Sixth International Conference on Dietary Assessment. Tucson, Arizona. September 19 2000.

Technical efficiency in the use of a single input. Workshop of the Midwest Econometrics Group. Chicago, October 20-21 2000.

Exploring the surface of a product form poly-t density. Department of Biostatistics, University of Minnesota, Minneapolis, MN. December 2000.

Estimation of the distribution of a random variable measured with error. Workshop on Robust Statistics. Argentinean Academy of Exact Sciences, March 4 – 9 2001. Buenos Aires, Argentina.

Forensic statistical methods for ballistic trace evidence. Los Alamos National Laboratory, Santa Fe, NM. May 2001.

An analytical approach to estimation in mixed models. IV Bayesian Statistics Workshop. Northern Catholic University, Antofagasta, Chile, October 1 2001.

Non-linear, non-Gaussian models for target tracking. Meetings of the Chilean Statistical Society, Antofagasta, Chile, October 3 2001.

Assessing nutrient adequacy in the U.S. Meeting of the American Society of Public Health, Atlanta, GA, October 22 2001.

Statistical methods for assessing trace evidence. I Congreso Bayesiano de América Latina, Ubatuba, Brazil, February 4 2002.

An analysis of the volatility of the British pound to guide arbitration. Department of Statistics, Stanford University, Palo Alto, CA. February 2002.

Using the Dietary Reference Intakes for group and individual assessment. School of Public Health, University of North Carolina at Chapel Hill, NC. March 2002.

Estimating usual intake distributions. Workshop on the Integrated NHANES survey: What We Eat in America. United States Department of Agriculture and Department of Health and Human Services, Rockville, Maryland, June 20-21 2002.

An analysis of the volatility of the British pound to guide arbitration. Fifth International Conference on Forensic Statistics, Venice, Italy, September 1 2002.

Estimating the distribution of usual nutrient and food intakes. Fifth International Conference on Dietary Assessment, Bangkok, Thailand, January 26 2003.

Estimated association between added sugar and micronutrient intake using nationwide food consumption data. ILSI, March 22 2003.

Challenges in the application of the Upper Tolerance Levels (UL) to dietary assessment. ILSI, March 23 2003.

Assessing usual nutrient intakes. National Cancer Institute, September 3 2003.

Series of invited lectures at the Latin American Congress on Nutrition, Acapulco, Mexico, November 10 – 14 2003.

EDA, Bayes, and the subjectivist versus objectivist controversy. Panel discussion, Eighth World Meeting of ISBA, Viña del Mar, Chile, May 22 – 27 2004.

The probative value of bullet lead evidence. Sixth International Conference on Forensic Statistics, College of Law, Arizona State University, Tempe, AZ, March 17-19 2005.

The analysis of microarray data. Keynote address, Conference on Statistics Applied to Agriculture, Kansas State University, Manhattan, KS, April 25 2005.

Estimation of usual nutrient exposure. Workshop on Nutrient Risk Assessment, World Health Organization, Geneva, Switzerland, May 2-6 2005.

An analysis of the volatility of exchange rates in a financial forensic problem. Dept. of Economics, Iowa State University, Ames, IA. May 2005.

Quantitative approaches to dietary assessment. Conference of the Brazilian Society of Nutrition, Sao Paulo, Brazil, November 17 2005.

Sampling issues in the construction of nutrient compositional databases. Conference of the Brazilian Society of Nutrition, Sao Paulo, Brazil, November 18 2005.

Incorporating multiple array scans in the analysis of microarray data. Departments of Statistics and Biostatistics, University of Wisconsin at Madison, WI. December 2005.

The many flavors of Bayesian analysis: an illustration using four-lane to three-lane conversion data from Iowa. Annual meeting of the Transportation Research Board, Washington, D.C., January 2006.

Sources of error in forensic analyses; what matters and what doesn't. Joint Statistical Meetings, Seattle. August 7 2006.

Dietary assessment using intake data from complex surveys. Annual meeting of the Colombian Society of Nutrition, Medellin, Colombia, August 10 2006. (Keynote address).

Estimating the probability of a coincidental match in bullet lead analysis. Department of Statistics, Michigan State University, Lansing, MI. March 2007.

Graduate statistics education in Vietnam. Joint Statistical Meetings, Salt Lake City, Utah, August 2007.

Statistical issues in food intake assessment and planning. Academy for Educational Development, Washington, D.C. August 2007.

Statistical methods to guide food and nutrition policy in developing countries. Infinite Possibilities Conference. Raleigh, NC, November 1 2007.

Challenges in the analysis of periodically consumed foods and other substances. Office of Dietary Supplements, National Institutes of Health. Bethesda, MD. December 5 2007.

Revisiting stochastic volatility models. Department of Statistics, Catholic University of Chile. May 2008.

Clustering posterior densities. Conference in Honor of Daniel Gianola's 65<sup>th</sup> Birthday. University of Wisconsin – Madison, May 6 – 9 2009.

Divergence metrics to cluster densities. Department of Statistics, University of Toronto, Canada. September 2009.

Assessing the probative value of evidence. Plenary talk. Annual Meeting of the Texas Defense Lawyers Association, Houston, TX., October 21 2009.

How well are women faring? A comparison of men and women in RI universities at critical transition points. Washington Statistical Society, Washington, D.C. October 28 2009.

Statistical challenges in the analysis of dietary intake observations. National Academy of Sciences, Washington, DC. February 2010.

How well are women faring? A comparison of men and women in RI universities at critical transition points. Presidential Invited Address. Annual Meeting of the Western American Region of the International Biometric Society. June 2010.

Designing and analyzing dietary intake data. Conference on Probability and Statistics. Renmin University, Beijing, China, July 2010.

Evaluating and planning intakes and their impact on nutrition policy in The Philippines. Food and Nutrition Research Institute. September 2010.

Dietary and physical activity assessment – some methodological issues. Joint Statistical Meetings, Miami, FL, August 2011.

Statistics in nutrition and health. Department of Biostatistics, University of Rochester, NY. October 2011.

Analyzing physical activity data to guide policy. XII Latin American Congress on Probability and Mathematical Statistics, Viña del Mar, Chile, March 2012.

Software for dietary assessment. ICDAM, Rome, Italy, May 2012.

Using toxicological risk assessment principles from a nutrition perspective. ILSI, Washington, June 2012.

A risk/benefit approach to assess nutrient intake – Do we need a new DRI? ILSI Annual Meeting, Miami, January 2013.

Biomarkers in nutrition epidemiology. ENAR Meetings, Orlando, FL, March 2013.

A measurement error model for physical activity data. International Conference on Diet and Activity Methods. June 2013.

Argentina and its corrupt statistical system -- When intervention by the judiciary is a good thing. World Statistical Congress, Hong Kong, China, August 2013.

Statistical issues in nutrition epidemiology. Department of Statistics, University of Nebraska, Lincoln, NE. September 2013.

IMAPP: A new tool to assess and plan intakes. International Congress on Nutrition. Granada, Spain, September 2013.

Statistics and public policy. StatFest. Rice University, Houston, TX. October 2013.

A statistician's look at STAR METRICS – Sample size, validation, measurement error. STAR METRICS Level I Workshop. Bethesda, MD, November 2013.

Measurement error in biomarker data. National Institutes of Health, Office of Dietary Supplements. Gaithersburg, MD. November 2013.

Statistical tools to work with big data. Pontifical Catholic University of Chile, Santiago, Chile, November 2014.

Adjustment for within-person variability in serum 25(OH)D. Workshop on Vitamin D Assessment, Office of Dietary Supplements, NIH. Bethesda, MD. December 2014.

Design, analysis and interpretation of national food consumption surveys. Ministerio de Bienestar Familiar, Bogota, Colombia. July 2015.

*How to Lie with Statistics* and the Veterans Administration. Joint Statistical Meetings, Seattle, WA. August 2015.

Statistical methods in nutrition epidemiology. International Center for Tropical Agriculture, Cali, Colombia. September 2015.

Survey non-response and approaches to prevent and correct its effects. Annual Meeting, Sociedad Uruguaya de Estadística, Montevideo, Uruguay. October 2015.

From daily intakes to usual intake distributions. Latin American Congress on Nutrition, Punta Cana, Dominican Republic. November 2015.

Introducing CSAFE. Midwest Crime Lab Directors' Meeting, Kansas Criminal Bureau of Investigations, Topeka, KS, June 2016.

Statistics and applications in forensic evidence. Annual Meeting of the International Biometric Society. Victoria, BC, July 2016.

Statistics for pattern evidence. World Congress of ISBA, Sardinia, Italy, July 2016.

Bivariate kernel deconvolution density estimation: an application to vitamin D absorption. Workshop on Advances and Critical Needs in Measurement Error Modeling. Banff International Research Station, Banff, Canada, August 2016.

Databases in forensic research and casework: completeness, representativeness, usefulness. Workshop on Probability and Statistics in Forensic Science. Isaac Newton Institute, University of Cambridge, Cambridge, UK. September 2016.

Advances in automated matching of bullet lands. Annual Meeting of the Royal Statistical Society, Manchester, UK. September 2016 (had to cancel at the last minute.)

Putting science in forensic sciences (and in many other places). Celebration of Stephen Fienberg. Carnegie Mellon University, Pittsburgh, October 2016.

How to select a research topic. Conference for Women in Statistics. Charlotte, NC. October 2016.

Remembering Stephen E. Fienberg. International Conference in Forensic Statistics, Minneapolis, MN September 2017.

Statistics and the law. Annual Meeting of the Sociedad Uruguaya de Estadística, Montevideo, Uruguay, September 2017.

Inference for the 21<sup>st</sup> century: beyond p-values. Symposium on Statistical Inference, Washington, DC October 2017.

Forensic statistics. Women in Statistics Conference, San Diego, CA, October 2017.

Statistics and the fair administration of justice. American Association for the Advancement of Science annual meeting. Austin, TX, February 2018.

The analysis of dietary intake data. School of Medicine, Peking University, Beijing, China, May 2018.

Statistics and forensic evidence. Department of Statistics, Peking University, Beijing, China, May 2018.

Quantitative evaluation of evidence. American Bar Association annual meeting, Fordham University, New York City, NY, June 2018.

Two-step approach for firearms examination. Association of Firearms and Toolmark Examiners annual meeting, Charleston, WV, June 2018.

Design of food consumption surveys in Latin America. Meeting of the Pan-American Health Association, Mexico City, Mexico, July 2018.

Sample size estimation for nationwide food consumption surveys. National Institute of Nutrition, Hanoi, Vietnam, July 2018.

Machine learning in forensic science. ASA annual meeting, Vancouver, BC, August 2018.

Research program in CSAFE. International Association of Identification annual meeting, San Antonio, TX, August 2018.

Statistics in the Courts. American Bar Association, Judicial Section annual meeting. Chicago, IL, August 2018.

Design of a nationwide food consumption survey in Kenya. FAO, Nairobi, Kenya, August 2018.

Machine learning and forensic evidence. Division of Behavioral and Social Sciences and Education, National Academy of Sciences, Washington, DC. October 2018.

Building successful professional collaborations. Conference for Women in Statistics (Plenary talk). Cincinnati, OH. October 2018.

Nutrient and food consumption in Colombia. University of Antioquia, Medellin, Colombia, October 2018.

Statistics and the law. Science Achievement Lecture, College of Science, Pennsylvania State University, State College, PA. November 2018. Inaugural Lecture.

Statistical challenges in the analysis of pattern evidence. Center for Integrity in Forensic Sciences Inaugural Meeting. Washington University School of Law, St. Louis, MO. December 2018.

Learning algorithms and forensic evidence. Women in Data Science Conference, College of Engineering, Stanford University. February 2019.

Statistics and the Fair Administration of Justice. Hari Shankar Lecture. Department of Mathematics, University of Northern Iowa. April 2019.

Statistics and the evaluation of forensic evidence. Sandia National Lab, Albuquerque, NM. May 2019.

Forensic analysis of handwriting. Latin American Congress on Bayesian Statistics (COBAL). Pilar Iglesias Lecture. Pontifical Catholic University of Peru, Lima. June 2019.

Machine learning and forensic evaluation of pattern evidence. Joint Statistical Meetings, Denver, CO. July 2019.

Decisions in the forensic context. SAMSI Working Group on Statistical Decision Theory. Raleigh, NC. August 2019.

Similarities between outsole impressions using SURF. Annual meeting of the International Association for Identification, Reno, NV. August 2019.

Using machine learning to match striae pattern on land-engraved areas of bullets. SimStat Conference, Salzburg, Austria. September 2019.

Using machine learning to match striae pattern on land-engraved areas of bullets. Annual meeting of the European Network of Forensic Science Institutes, Section on Firearms and Toolmarks. Krakow, Poland. October 2019.

Data science and forensic applications. 45<sup>th</sup> Annual Meeting of the Chilean Statistical Society. Puerto Varas, Chile. October 2019.



Statistics and the fair administration of justice. Iowa Louis Stoke Alliance for Minority Participation (LSAMP) , University of Northern Iowa, Waterloo, IA. February 2020.

Statistical learning algorithms and the evaluation of forensic evidence. Third Data Science Symposium, College of Liberal Arts and Sciences, South Dakota State University, Brookings, SD. February 2020.

A statistician's look at Risk Assessment Tools. Annual Conference, Judicial Division of the American Bar Association. Austin, TX. February 2020.

Quantifying the similarity between shoe outsole impressions. Annual Meeting of the American Academy of Forensic Sciences, Anaheim, CA. February 2020.

Assessing and planning nutrient intake for populations. US-AID, Washington, DC. February 2020.

P-values are rarely used in forensic science – That is (not) too bad. NISS Webinar, May 6 2020. (Virtual)

Who wrote it? A hierarchical model for forensic handwriting analysis. Dept. of Statistics, University of California Irvine, October 29 2020. (Virtual)

Research and training in CSAFE. Canadian Forensic Science Firearms Symposium, November 4 2020. (Virtual)

Statistics, mathematics, and the fair evaluation of evidence. Canadian Mathematical Society, Inaugural MITACS Innovation Lecture, December 4 2020. (Virtual)

[Note: Most of the conferences to which I was invited to speak after March in 2020 were rescheduled for 2021.]

Toward more science in forensic science. Law School, College of William and Mary. March 3 2021. (Virtual)

The forensic analysis of handwriting. Webinar, CSAFE, March 11 2021. (Virtual)

Machine learning and the fair evaluation of forensic evidence. Women in Data Science, ISU. March 25 2021. (Virtual)

A hierarchical model for forensic handwriting analysis. Department of Statistics, University of Nebraska Lincoln. March 31 2021. (Virtual)

Forensic handwriting analysis at CSAFE. Annual Conference of the European Association of Questioned Document Examiners (ENFHEX). June 17 2021. (Virtual)

CSI Bayes: Comparing and interpreting images in forensic evaluations. World Meeting of the International Society for Bayesian Analysis, plenary Foundational Lecture. June 29 2021. (Virtual)

Footwear research in CSAFE. Annual meeting of the International Association for Identification. Nashville, August 3 2021.

Statistics in the pursuit of justice: A more principled strategy to analyze forensic evidence. Joint Statistical Meetings, F.N. David Lecture. August 12 2021. (Virtual)

Pattern evidence research in CSAFE. Annual meeting of the American Society of Crime Lab Directors. Boston, August 24 2021.

Toward the quantitative evaluation of patterns evidence. Department of Forensic Science, University of Cordoba, Argentina. September 4 2021. (Virtual)

Forensic handwriting analysis. Annual meeting of the Scientific Association of Forensic Examiners (SAFE). October 1 2021. (Virtual)

CSI Statistics: How the principled use of quantitative methods can contribute to the fair administration of justice. Department of Mathematics and Statistics, Carleton College. Math Across the Cannon Lecture. Northfield, October 12 2021.

Quantifying the similarity between images for forensic analysis. Department of Mathematics and Statistics, Carleton College and St. Olaf College. October 13 2021.

The forensic analysis of handwriting. Congreso Latinoamericano de Sociedades de Estadística, Plenary Lecture. October 18 2021. (Virtual)

TBA. Department of Statistics, University of Michigan. Ann Arbor, November 5 2021.

### **SHORT COURSES TAUGHT (After 1990)**

[Tópicos sobre Regresión Lineal y No Lineal.] Curso-Taller Interamericano Para Usuarios de Estadística. Organization of American States/CIENES. Santiago, Chile. June 1990.

Bayesian Econometrics. Department of Agricultural Economics. University of California, Berkeley. May 1993.

[Modelo de Efectos Mixtos y Mejores Predictores Lineales, Insesgados (BLUP).] IV Statistics Symposium, Universidad Nacional de Colombia, Bogotá, Colombia. June 1993.

Topics in Regression Analysis. Interamerican Center for Statistics. Organization of American States/CIENES. Santiago, Chile. September 1993.

Sampling Techniques and PC CARP. Sampling Techniques and Applications. Organization of American States/CIENES. Santiago, Chile. October 1993.

Applied Bayesian Analysis: hierarchical models, numerical methods, and applications in agriculture. International Statistics Symposium: Statistics in Agriculture and the Environment. Santa Marta, Colombia, June 1995.

Bayesian approaches to linear models. International Statistics Symposium: Bayesian Statistics. Santa Marta, Colombia, June 1996.

Bayesian decision theory. African Educational Workshop. Capetown, South Africa, December 1996.

Using the new Dietary Reference Intakes (DRIs) to assess nutrient adequacy. Workshop on Measurement Error Adjustment Evaluation. School of Public Health, University of North Carolina, November 4 1999.

Statistical methods in forensic science. Short course presented to investigators and agents at the Federal Bureau of Investigations (FBI). May 8 and 9 2000.

Quantitative assessment of nutritional status, Latin American Congress on Nutrition, November 2003.

Bayesian methods in agriculture, Conference on Statistics in Agriculture, Kansas State University, Manhattan, KS. April 24 2005.

An introduction to Bayesian data analysis. ENAR Meetings, Tampa, Florida, March 26 2006.

An Introduction to Bayesian data analysis. CDC, Atlanta, Georgia, May 2006.

Bayesian data analysis. Universidad de Costa Rica, May 2007. (Invited, but had to cancel at last minute)

Analysis of geo-spatial data. VI Escuela de Invierno de Analisis Estocastico y sus Aplicaciones, Universidad de Valparaiso, Chile. July 2008.

Collection, analysis and interpretation of dietary intake data. Instituto Nacional de Salud Pública, Cuernavaca, Mexico. August 2010.

Collection, analysis and interpretation of dietary intake data. Food and Nutrition Research Institute, Manila, Philippines. September 2010.

Design and analysis of micro-array experiments. MS Program in Bioinformatics, Universidad de la República, Uruguay. November 2010.

Chewing over the numbers: how food consumption data drive Nutrition policy. Iowa State University, College of Liberal Arts and Sciences. Dean's Lecture Series, November 2010.

An introduction to statistical thinking -- Iowa Public Defender's Office. Tama, Iowa, June 2011.

Dietary assessment. Universidad La Molina, Lima, Peru. October 2011.

Collection, analysis and interpretation of dietary intake data. Food and Nutrition Research Institute, Jakarta, Indonesia. May 2012.

Collection, analysis and interpretation of dietary intake data. Instituto Nacional de Salud Pública, Cuernavaca, Mexico. August 2012.

Assessing and planning intakes. Ministry of Health. Jakarta, Indonesia. January 2013.

Design, analysis and interpretation of nationwide food consumption surveys. Ministry of Health and Human Services. Quito, Ecuador, April 2013.

Design, analysis and interpretation of nationwide food consumption surveys. Ministry of Health and Human Services. Bogota, Colombia, December 2013.

Design, analysis and interpretation of nationwide food consumption surveys. Ministry of Family Wellbeing. Bogota, Colombia, July 2015.

Design, analysis and interpretation of nationwide food consumption surveys. School of Medicine, University of Buenos Aires. Buenos Aires, Argentina, May 2016.

Introduction to statistics for forensic practitioners. Tri-County Regional Forensic Laboratory, Andover, MN. September 2016.

Using PC-SIDE to analyze the 2015 national food consumption survey of The Philippines. Food and Nutrition Research Institute, Manila, Philippines. December 2016.

Evaluating and planning intakes. Institute of Public Health, Cuernavaca, Mexico. August 2017.

Methods to analyze and interpret consumption information from the 2015 Food Consumption Survey in Colombia. Ministry of Health and Human Services, Bogota, Colombia. September 2017.

Collecting, analyzing and interpreting food consumption information. Ministry of Health, Buenos Aires, Argentina. December 2018.

Collecting, analyzing and interpreting food consumption information. Department of Nutrition, Universidad de La Republica, Montevideo, Uruguay. October 2019.

An introduction to machine learning for forensic applications. Annual Meeting of the American Academy of Forensic Sciences, Anaheim, CA. February 2020.

Statistical thinking for forensic practitioners. Texas Forensic Science Commission, Fall 2020.

Sampling for forensic practitioners. CSAFE, Fall 2021.

## **PROFESSIONAL PRACTICE**

### **International (1991-2015, not updated between 2015 and 2017):**

**FAO Kenya.** Design of a food consumption survey for Kenya. 2018 – 2019.

**Food and Health International (FHI360).** Technical assistance on design and analysis of food consumption surveys in Nigeria, Vietnam and Kenya. 2018 – 2019.

**New York Academy of Sciences.** Planning intakes. 2018 – 2020.

**Food and Nutrition Research Institute,** Manila, Philippines. Analysis of the 2015 food consumption survey. 2018.

**Ministry of Health. Bogota, Colombia.** Design and methods in the 2015 national food consumption survey. 2013.

**Ministry of Health and Human Services, Quito, Ecuador.** Training on dietary assessment methods and analysis of the 2012 nutrition survey. 2013

**Ministry of Health, Jakarta, Indonesia.** Training on dietary assessment methods and analysis of the 2010 nutrition survey. 2013.

**Food and Nutrition Research Policy, Philippines.** Analysis of the 2003 National Nutrition Survey and training of FNRI personnel in the analysis and interpretation. 2009 – 2011.

**Harvest Plus.** Baseline analysis and modeling of fortification strategies in Bangladesh, Philippines and Indonesia. 2010 – 2012.

**Universidad de Chile, Departamento de Nutricion.** Encuesta Nacional de Consumo de Alimentos (ENCA2010), consultant. 2008 – 2012.

**Pontificia Universidad Católica de Chile, Escuela de Salud Pública** Encuesta Nacional de Salud (ENS2008), co-investigadora. 2008.

**Ministerio de Salud Pública, Chile** Encuesta Nacional de Consumo de Alimentos (ENCA) – Statistical Consulting. May 2008 – 2010.

**International Food Research Policy Institute** Analysis of nutrient intake data from a survey of women and children in Uganda. July – September 2008.

**Academy for Educational Development** Analysis of nutrient intake data from the 2005 food intake survey in Palestine, 2005. September – December 2008 and September – December 2009.

**Academy for Educational Development** Analysis of nutrient intake data from a multiregional food intake survey in Uganda. 2008.

**Academy for Educational Development** Analysis of nutrient intake data from the 2003 Philippines survey of women and children. June 2007 – 2010.

**International Food Research Policy Institute** Analysis of nutrient intake and diet diversity data using data collected in Bangladesh. January 2007 – December 2007.

**WHO** Designing and evaluation food fortification programs in the developing world. A background paper and a suite of computer programs (with their manuals) will be produced in the context of this project. June 2007 – December 2008.

**WHO/FAO** Expert on assessing exposure for nutritional risk assessment. May, 2005. A background paper and a report were written in connection to this assignment.

**Colombia** 2004 – 2007 – Advisor to the Ministry of Health and Human Services on the design and analysis of a dietary intake survey. Two reports written to the Ministry of Health and Human Services of Colombia.

**New Zealand** 2000 – 2002. Advisor to the Ministry of Health and Human Services in New Zealand on the design and analysis of a dietary intake survey of children.

**Center for Indigenous People's Nutrition and Environment, McGill University, Canada** 1999 – 2000. Analysis of a dietary intake survey conducted in Baffin Island to assess the nutritional status and intake patterns of Inuit populations. A manuscript is under preparation. One MSc student in Statistics (D. Zaun) based his MSc Creative Component on this project.

**EUROSTAT** 1997 – 2000. Joint organization of a meeting to discuss the uses of Bayesian methods in Official Statistics. Collaboration resulted in ISBA 2000, the Sixth World Conference of ISBA, co-sponsored by EUROSTAT.

**University of Pasto, Colombia.** 1997 – 1999. Analysis of production data of *cuyes*, (guinea pigs), to assess the performance of breeding programs. *Cuyes* provide the main source of protein in the diet of native Colombian and Equatorian populations in the region. Report submitted to the Dean of the College of Agriculture, 2000.

**National University of Colombia.** 1993 – 1998. Advice on the establishment of a graduate program in Statistics in Santa Fé de Bogotá, Colombia. Chaired the committee established by the ASA charged with accreditation of the MSc program in Statistics at the National University in Colombia, and reviewed plans for a doctoral program in Statistics at the same institution. A report was written and submitted to the President of the National University of Colombia.

**Pontifical Catholic University of Chile.** 1995 – 1997. Collaborated in the writing of the proposal for the creation of a PhD in Statistics at the Catholic University in Chile, that was sent to the Secretary of Education of Chile for approval. The PhD program in Statistics at the Pontifical Catholic University of Chile, the first in the country, was approved and launched in 1999.

**Ministry of Social Affairs, Vilnius, Lithuania.** Spring 1993. Analysis of household expenditure survey data, including design issues. Estimation of proportion of families living in poverty.

**Agriculture CANADA.** 1992 – 1994. Development of an integrated agro-ecological economic system to estimate economic and environmental impacts of agricultural activities in Western Canada. Several reports were written under this project.

**Ministry of Agriculture/USAID, Lusaka, Zambia.** Spring, 1992. Adjustment for nonresponse of the 1991 Household Expenditure Survey. A final report to the Ministry of Agriculture and to USAID was written. Software for non-response adjustment was written and provided to Zambian officials.

**Ukrainian Institute of Agrarian Economics, Kiev, Ukraine.** September 1991 – 1994. Issues relating to collection of data on farm productivity, and efficiency analysis, including the estimation of efficient frontiers. Several reports and three published articles have been written under this project.

**Institute of Economics, Riga, Latvia.** Fall 1991 – 1993. Design of household expenditure surveys, adjustment for nonresponse, and impact analysis due to price restructuring. No report written.

**National Association of Milk Producers/GTZ, Montevideo, Uruguay.** June 1991 and June 1992. Organization of a national scheme for selection of genetically superior dairy animals. Including sampling schemes, creation and management of data bases, and development and adaptation of statistical procedures for estimating breeding values of animals. A report was written.

**National (1991-2013, not updated since then):**

Consultant to **CDC** on development of calibration equations for of urine sodium collected from partial voids. 2011 – 2013.

Consultant to **CDC** on analysis of iodine intake data. 2012.

Consultant to the **Institute of Medicine** on estimation of the distribution of serum vitamin D biomarkers and their association with levels of PTH. 2009 – 2011.

Consultant to **Centers for Disease Control and Prevention (CDC)** on analysis of folate and folic acid intake and its association with the incidence of birth defects in the United States. 2010.

Consultant to **Center for Disease Control and Prevention (CDC)** on analysis of food and supplement intake data. 2007 – 2008.

Consultant to **ABT Associates.** Analysis of food intake data collected from a nation-wide school breakfast program. 2006.

Consultant to **Mathematica Policy Research.** Design and analysis of food intake data collected from a federally funded nationwide school lunch program. 2003.

Expert witness in a murder trial in October 2001. Was certified as an expert in the **State of Alaska.**

**Kemin Industries,** Des Moines, IA. Design and analyses of lutein bioavailability trials. 2003.

Consultant to **ABT Associates** in project entitled *Evaluation of the School Breakfast Program Pilot Project.* 2001.

**Department of Public Safety, Oklahoma.** Analysis of traffic stop, warning, and citation data by the special drug interdiction units, to investigate whether troopers in certain special operations units engage in racially motivated stops and citations. 2000 – 2001.

Collaboration with Dr. Hank Harris, **School of Veterinary Medicine, Iowa State University**, Dr. Scot Hurd, National Animal Disease Center, USDA, and Dr. Barry Weisman, Nextran, on estimation of the risk of public health impacts of xeno-transplantations. The work involved estimation of risks, elicitation of expert opinion, and combination of expert opinions into a probability model. 1999 – 2000.

Consulting for **Nutrition Research Group**, 1999. Analysis of boron intake data. Using boron intake data collected by Nutrition Research Group, we estimated usual boron intake distributions for various gender/age groups. Report written.

Consulting for **Environ**, 1999 – 2002. Analyses of iron, vitamin A, copper, and zinc intake data, and iron and vitamin A blood biomarker data. Using data from the two major nationwide dietary surveys, we assessed the nutritional and health status of all gender/age groups. Report written.

**National Pork Producers Council**, Des Moines, Iowa. Statistical analyses of marketing data and data arising from taste panel tests. 1997 – 1999. Two reports written.

**National Center for Health Statistics, Centers for Disease Control and Prevention.** 1996 – 1999. Analysis of the Third National Health and Nutrition Examination Survey and of the Supplementary Survey of Older Americans. Work has included research on non-response patterns and imputation for the surveys, assessment of the nutritional status of populations, estimation of prevalence of nutrient inadequacy, and development of statistical methods to estimate distribution of usual nutrient intakes with limited data on individual daily intakes. Various reports, several MSc Creative Components (Y. Liu, G. Camaño) and two manuscripts have resulted from this project.

**Affiliate, Law and Economics Consulting Group**, San Francisco, California. Statistical analyses of financial data, including derivatives in the S&P500, and foreign exchange spot, futures, and options returns. 1994 – 1997. Two reports written. One published paper resulted from this work as well.

**United States Environmental Protection Agency (USEPA)**, Office of Policy Analysis. 1992 – 1995. Development of an objective system to evaluate the environmental and economic impacts of livestock production. Statistical aspects of the project include sampling, experimental design, design of computer experiments, and model fitting. Various reports written under this project. One published manuscript resulted from this work.

Consulting for the **United States Environmental Protection Agency (USEPA)**, Washington, DC, USA. 1991 – 1995. Assessment of risks from ground water, surface water, and air contamination from agriculture non-point source pollution. One published manuscript resulted from this project.

Consulting for the **United States Department of Agriculture**, Human Nutrition Information Service, Washington, DC, USA. January 1990 to 1998. Estimation of distributions of usual intake of nutrients, and of the proportion of individuals in the (sub)populations deficient in those nutrients. Various reports, three published manuscripts, various MSc creative components (B. Bai, J. Goyeneche, K. Dodd) and one doctoral dissertation (K. Dodd) resulted from this work.