

William M. Briggs, PhD
Professor & Statistical Consultant
300 E. 71st Apt. 3R, New York, NY 10021
matt@wmbriggs.com
917-392-0691

1. EXPERIENCE

- (1) 2004-PRESENT ADJUNCT PROFESSOR OF STATISTICAL SCIENCE, CORNELL UNIVERSITY, ITHACA, NEW YORK

I teach and advise mid-career students in the Masters Professional Studies program. Main focus: philosophy of science, epistemology, foundational Bayesian theory and methods.

- (2) 2001-present Chief Analytics Officer, Edgehogs.com.

Mined NFL, NCAA, and Mixed Martial Arts historical performance and betting data and designed and coded the “X-Rating”, a measure of predictive skill of sports predictions. Log on and try your hand at picking sports!

- (3) 1998-PRESENT. STATISTICAL CONSULTANT, VARIOUS COMPANIES

General examples I co-designed and created the *Wall Street Journal's* undergraduate college rankings, based on a nation-wide recruiter survey; see the 13 September 2010 *WSJ*, or ask me for more information. Created predictive (time-series) housing prices model for brokerage firm, a decision model incorporating planned renovations; data mining on proprietary housing sales database. Built model to forecast if and when transformers will fail, based on data taken from transformer maintenance, weather, and load. Advised law firms about “cancer cluster” claims, and physicians falsely accused of Medicare fraud. Directed internet company in the penny-auction market. Programmed a real-time reverse mortgage clock.

- (4) 2003-2010. RESEARCH SCIENTIST, NEW YORK METHODIST HOSPITAL, NEW YORK

I teach a course to the Emergency Medicine and Surgical residents in basic probability and statistics, and I consult on departmental research projects and maintain several of their study databases. I sit on the Institutional Review Committee as a guest member to review the statistics of proposed research. Helped in the preparation and submission of grants to the NIH and for-profit entities.

- (5) 2007, 2010 VISITING PROFESSOR OF STATISTICS, DEPARTMENT OF MATHEMATICS, CENTRAL MICHIGAN UNIVERSITY, MT. PLEASANT, MI

- (6) 2003-2007, ASSISTANT PROFESSOR STATISTICS, WEILL MEDICAL COLLEGE OF CORNELL UNIVERSITY, NEW YORK, NEW YORK

My research interests are prediction and forecast accuracy and usefulness; skill and cognitive biases in prediction; practical decision analysis; data mining; dynamical and ensemble forecasting; graphical data display; climate variability; philosophy of statistics and probability; Bayesian foundations and the nature of evidence; Bayesian probability as it's used in physics and atmospheric science; and the adoption of Open Source software for statistics, particularly the development of the DRCLAMP web-based database.

I teach courses in statistics, emphasizing both Bayesian and classical methods, and I consult and perform analyses on the department's wide array of studies.

Assisted in the preparation and submission of many, many grants to various private and public institutions. I wrote design and data analysis plans plus co-wrote the methods sections. Became honorary *Santa Claus* mathematician (see wmbriggs.com). Santa uses ensembles!

I teach various statistics courses (introductory and advanced levels), and I mentored several Masters students.

- (7) 2002-2003. GOTHAM RISK MANAGEMENT, NEW YORK
A start up then, after Enron's shenanigans, a start down. We set future weather derivative and weather insurance contract prices that incorporated information from medium- and long-range weather and climate forecasts. A white paper is available on my web page.
- (8) 1998-2002. DOUBLECLICK, NEW YORK
I built an expensive and huge optimization engine for a web-based ad matching network, the details of which are terribly dull. Short version: click-through optimization, enormous database with about 10^8 names, updated daily, clever modelling and scoring, all heavy-duty computational statistics.
- (9) 1993-1998. GRADUATE STUDENT, CORNELL UNIVERSITY
Started studying how long-range climate forecasts interacted with a crop model in the Atmospheric Science group, then switched to full time statistics. Was involved in the long-running environmental statistics consulting group, did work in tensor product splines and image analysis, then finished with practical decision analysis work. Was Vice Chair of the graduate student government.
- (10) 1992-1993. NATIONAL WEATHER SERVICE, SAULT STE. MARIE, MI
Forecast storms o' the day and launched enormous balloons in the name of science. My proudest moment came when I was able to convince an ancient IBM-AT machine to talk to an *analog*, 110 baud, phone-coupled (!) modem, all using BASIC.
- (11) 1992-1993. SAULT STE. MARIE. *Evening News*
I wrote a free-lance science column for which I received free papers. And I was grateful for them.
- (12) 1989-1992. UNDERGRADUATE STUDENT, CENTRAL MICHIGAN UNIVERSITY
Basic undergraduate meteorology degree, with an emphasis on dynamics and math. Started the local student meteorology group, which is now affiliated with the AMS. Was involved with an FAA experiment of de-icing fluids. Spent a summer at U Michigan in a NSF REU program playing with a lidar used to model boundary layer dynamics. Won the Howard T. Orville scholarship from the AMS.
- (13) 1983-1989. UNITED STATES AIR FORCE
Cryptography and other secret stuff. Shot things, learned pinocle. I adopted and became proficient with fascinating and versatile military vocabulary. Ask me for examples. TS/SCI+ security clearance (now inactive).

2. ACTIVITIES

- (1) DRCLAMP, PH.P. open-source project creator & leader. The primary purpose of Dr. Clamp is to have one web site to manage and enter data, track progresss, view reports, draw graphs, and analyze statistics. It was primarily designed for clinical trials, but it works for any study where the data are best entered through a web page.
- (2) *Monthly Weather Review*: Associate Editor (through 2011).
- (3) *American Meteorological Society*: Member of the Probability and Statistics Committee (through 2011). Plan for short courses and regular meetings. Helped draft the AMS's statement on probability forecasts.
- (4) **R.** Development work on the `verification` package, which is maintained by Matt Pocernich at the National Center for Atmospheric Research, who has done 99.99% of the work. I wrote the (outline of) skill function. Go to `cran.r-project.org` to download.
- (5) *Data Safety and Monitoring Boards* and other similar activities. Current board member for a Columbia study involving medication adherence in hypertension patients.
- (6) *Consultant*—standard statistics consulting. Listed as a consultant on several active and pending grant submissions for studies at Columbia and New York Methodist Hospital.
- (7) *Reviewer J American Statistical Association, Statistics in Medicine, Monthly Weather Review, Weather and Forecasting, J Geophysical Research, Journal of Applied Meteorology and Climatology*, National Science Foundation, others.

3. EDUCATION

- (1) Ph.D., 2004, Cornell University. Statistics.
- (2) M.S., 1995, Cornell University. Atmospheric Science.
- (3) B.S., Summa Cum Laude, 1992, Central Michigan University. Meteorology and Math.

4. PUBLICATIONS

4.1. Scientific work.

4.1.1. Books.

- (1) Briggs, WM., 2008 *Breaking the Law of Averages: Real Life Probability and Statistics in Plain English*. LULU Press, New York. Text for undergraduates.
- (2) Briggs, WM., 2012? *The Logic of Probability and Statistics*. Probability from a logical, constructivist viewpoint. In preparation!

4.1.2. Draft papers (partial).

- (1) Briggs, WM, 2012. On Probability Leakage. arxiv.org/abs/1201.3611.
- (2) Briggs, WM, 2010. The optimal combination of probabilistic forecasts to maximize skill. Awaiting a home.
- (3) Briggs, WM, and R Zaretski, 2009. Induction and falsifiability in statistics. arxiv.org/abs/math/0610859.

- (4) Briggs, WM, and R Zaretzki, 2009. A new look at inference for the Hypergeometric Distribution. Awaiting a home.
- (5) Briggs, WM, 2007. Changes in number and intensity of world-wide tropical cyclones *arxiv.org/physics/0702131*.
- (6) Briggs, WM, 2007. On the non-arbitrary assignment of equi-probable priors *arxiv.org/math.ST/0701331*.

4.1.3. Peer-reviewed methods papers.

- (1) Briggs, WM, 2012. It is Time to Stop Teaching Frequentism to Non-statisticians. *American Statistician*. In review.
- (2) Briggs, WM, 2010. Discussion to A Gelman. Why Tables are Really Much Better than Graphs. *Journal Computational and Graphical Statistics*. In press.
- (3) Zaretzki R, Gilchrist MA, Briggs WM, 2010. MCMC Inference for a Model with Sampling Bias: An Illustration using SAGE data. *Statistics in Medicine*. In review.
- (4) Zaretzki R, Gilchrist MA, Briggs WM, and Armagan A, 2010. Bias correction and Bayesian analysis of aggregate counts in SAGE libraries. *BMC Bioinformatics*, 11:72doi:10.1186/1471-2105-11-72.
- (5) Zaretzki, R, Briggs, W, Shankar, M, Sterling, M, 2009. Fitting distributions of large scale power outages: extreme values and the effect of truncation. *International Journal of Power and Energy Systems*. DOI: 10.2316/Journal.203.2009.1.203-4374.
- (6) Briggs, WM, 2007. On the changes in number and intensity of North Atlantic tropical cyclones *Journal of Climate*. **21**, 1387-1482.
- (7) Briggs, WM, Positive evidence for non-arbitrary assignments of probability, 2007. Edited by Knuth et al. Proceedings 27th International Workshop on Bayesian Inference and Maximum Entropy Methods in Science and Engineering. American Institute of Physics. 101-108.
- (8) Briggs, WM, R Zaretzki, 2007. The Skill Plot: a graphical technique for the evaluating the predictive usefulness of continuous diagnostic tests. *With Discussion. Biometrics*. **64(1)**, 250-6; discussion 256-61. PMID: 18304288.
- (9) Briggs, WM, and D Ruppert, 2006. Assessing the skill of yes/no forecasts for Markov observations. *Monthly Weather Review*. **134**, 2601-2611.
- (10) Briggs, WM, M Pocernich, and D Ruppert, 2005. Incorporating misclassification error in skill assessment. *Monthly Weather Review*, **133(11)**, 3382-3392.
- (11) Briggs, WM, 2005. A general method of incorporating forecast cost and loss in value scores. *Monthly Weather Review*, **133(11)**, 3393-3397.
- (12) Briggs, WM, and D Ruppert, 2005. Assessing the skill of Yes/No Predictions. *Biometrics*. **61(3)**, 799-807.
- (13) Briggs, WM, 2004. Discussion to T Gneiting, LI Stanberry, EP Gritmit, L Held, NA Johnson, 2008. Assessing probabilistic forecasts of multivariate quantities, with an application to ensemble predictions of surface winds. *Test*. **17**, 240-242.
- (14) Briggs, WM, 2004. Discussion to Gel, Y, AE Raftery, T Gneiting, and V.J. Berrocal, 2004. Calibrated Probabilistic Mesoscale Weather Field Forecasting: The Geostatistical Output Perturbation (GOP) Method. *J. American Statistical Association*. **99 (467)**: 586-587.

- (15) Mozer, JB, and Briggs, WM, 2003. Skill in real-time solar wind shock forecasts. *J. Geophysical Research: Space Physics*, **108 (A6)**, SSH 9 p. 1-9, (DOI 10.1029/2003JA009827).
- (16) Briggs, W.M., and R.A. Levine, 1997. Wavelets and Field Forecast Verification. *Monthly Weather Review*, **25 (6)**, 1329-1341.
- (17) Briggs, WM, and DS Wilks, 1996. Estimating monthly and seasonal distributions of temperature and precipitation using the new CPC long-range forecasts. *Journal of Climate*, **9**, 818-826.
- (18) Briggs, WM, and DS Wilks, 1996. Extension of the CPC long-lead temperature and precipitation outlooks to general weather statistics. *Journal of Climate*, **9**, 3496-3504.

4.1.4. *Reviews.*

- (1) Briggs, WM, 2012. Why do statisticians answer questions no one ever asks? *Significance*. In press.
- (2) Legates, DR, W Soom, WM Briggs, 2011. Learning and teaching climate science: the perils of consensus knowledge using agnotology. *J. Geography*. In review.
- (3) Briggs, WM, Soon, W, Legates, D, Carter, R, 2011. A Vaccine Against Arrogance. *Water, Air, & Soil Pollution: Volume 220, Issue 1 (2011)*, Page 5-6
- (4) Briggs, WM, 2007. Review of *Statistical Methods in the Atmospheric Sciences* (second edition, 2006) by Wilks, D.S. *Journal of the American Statistical Association*, **102**, 380.
- (5) Briggs, WM, 1999. Review of *Forecasting: Methods and Applications* (third edition, 1998) by Makridakis, Wheelwright, and Hyndman; and *Elements of Forecasting* (first edition, 1998) by Diebold. *Journal of the American Statistical Association*, **94**, 345-346.

4.1.5. *Peer-reviewed collaborative papers.*

- (1) Elizabeth Haines, Gerardo Chiricolo, Kresimir Aralica, William Briggs, Robert Van Amerongen, Andrew Laudenbach, Kevin O'Rourke, and Lawrence Melniker MD, 2012. Derivation of a Pediatric Growth Curve for Inferior Vena Caval Diameter in Healthy Pediatric Patients. *Critical Ultrasound Journal* In review.
- (2) Wei Li, Piotr Gorecki, Elie Semaan, William Briggs, Anthony J. Tortolani, Marcus D'Ayala, 2011. Concurrent Prophylactic Placement of Inferior Vena Cava Filter in gastric bypass and adjustable banding operations: An analysis of the Bariatric Outcomes Longitudinal Database (BOLD). *J. Vascular Surg.* Accepted.
- (3) Yuliya Borisovna Goldsmith, MD; Ijaz Ahmad; Vishnu Sing; Marcus D'Ayala; Igor Klem; William M Briggs; Mohammed Ahmed; Munawar Hayat; Terrence J Sacchi; John F. Heitner, 2011. Serum Biomarkers and Traditional Risk Factors as Predictors of Peripheral Arterial Disease Assessed by Magnetic Resonance Angiography. *PLoS ONE*. In review.
- (4) Ziad Y.Fayad, Elie Semaan, Bashar Fahoum, W. Matt Briggs, Anthony Tortolani, and Marcus D'Ayala, 2011. Aortic mural thrombus in the normal or minimally atherosclerotic aorta: A systematic review and meta-analysis of the available literature. In review.

- (5) Pace NL, Eberhart LHJ, Briggs WM, Kranke P, 2010. External Validation of Prognostic Predictors: Methods and Pitfalls. *Anesthesia & Analgesia*. In review.
- (6) Goldsmith YB, Ahmad I, Sing V, D' Ayala M, Klem I, Briggs WM, Ahmed M, Hayat M, Brenner SJ, Sacchi TJ, Heitner JF, 2010. Serum Biomarkers and Traditional Risk Factors as Predictors of Peripheral Arterial Disease Assessed by Magnetic Resonance Angiography. In review.
- (7) Robert B, Haines E, Wen W, Lakshmi R, Briggs W, Datillo P, 2010. "Estimating the Clinical Impact of Bringing a Multi-Marker Cardiac Panel to the Bedside in the Emergency Department. *Academic Emergency Medicine*. In review.
- (8) Krystyna A, Safi T, Briggs WM, Schwalb MD, 2010. Reclassifying Transrectal Ultrasound Guided Prostate Biopsy as a Contaminated Case: Making the Case Against Fluoroquinolone-Only Prophylaxis. *Brazilian Journal of Urology*. Accepted.
- (9) Krystyna A, Safi T, Briggs WM, Schwalb MD, 2010. Higher morbidity in prostate cancer patients after transrectal ultrasound guided prostate biopsy with 3-day oral ciprofloxacin prophylaxis, independent of number of cores. *Brazilian Journal of Urology*. Mar-Apr;37(2):223-9; discussion 230. PMID:21557839.
- (10) Muniyappa R, Briggs WM, 2010. Limited Predictive Ability of Surrogate Indices of Insulin Sensitivity/Resistance in Asian Indian Men: A Calibration Model Analysis. *AJP - Endocrinology and Metabolism*. 299(6):E1106-12. PMID: 20943755.
- (11) Birkhahn RH, Haines E, Wen W, Reddy L, Briggs WM, Datillo PA., 2011. Estimating the clinical impact of bringing a multimarker cardiac panel to the bedside in the ED. *Am J Emerg Med*. Sep;29(7):813-4. PMID: 21872104.
- (12) Birkhahn RH, Blomkalns A, Klausner H, Nowak R, Raja AS, Summers R, Weber JE, Briggs WM, Arkun A, Diercks D. The association between money and opinion in academic emergency medicine. *West J Emerg Med*. 2010 May;11(2):126-32. PMID: 20823958.
- (13) Arkun A, Briggs WM, Patel S, Datillo PA, Bove J, Birkhahn RH, 2010. Emergency department crowding: factors influencing flow *West J Emerg Med*. Feb;11(1):10-5. PMID: 20411067.
- (14) Li W, D' Ayala M, Hirshberg A, Briggs W, Wise L, Tortolani A, 2010. Comparison of conservative and operative treatment for blunt carotid injuries: analysis of the National Trauma Data Bank. *J Vasc Surg.* Mar;51(3):593-9, 599.e1-2. PMID: 20206804.
- (15) D' Ayala M, Huzar T, Briggs W, Fahoum B, Wong S, Wise L, Tortolani A, 2010. Blood transfusion and its effect on the clinical outcomes of patients undergoing major lower extremity amputation. *Ann Vasc Surg.*, May;24(4):468-73. Epub 2009 Nov 8. PMID: 19900785
- (16) Loizzo JJ, Peterson JC, Charlson ME, Wolf EJ, Altemus M, Briggs WM, Vahdat LT, Caputo TA, 2010. The effect of a contemplative self-healing program on quality of life in women with breast and gynecologic cancers. *Altern Ther Health Med.*, May-Jun;16(3):30-7. PMID: 20486622.
- (17) Tavakol M, Hassan KZ, Abdula RK, Briggs W, Oribabor CE, Tortolani AJ, Sacchi TJ, Lee LY, Heitner JF., 2009. Utility of brain natriuretic peptide

- as a predictor of atrial fibrillation after cardiac operations. *Ann Thorac Surg.* Sep;88(3):802-7.PMID: 1969990.
- (18) Zandieh SO, Gershel JC, Briggs WM, Mancuso CA, Kuder JM., 2009. Revisiting predictors of parental health care-seeking behaviors for nonurgent conditions at one inner-city hospital. *Pediatr Emerg Care.*, Apr;25(4):238-243.PMID: 19382324.
 - (19) Birkhahn RH, Blomkalns AL, Klausner HA, Nowak RM, Raja AS, Summers RL, Weber JE, Briggs WM, Arkun A, Diercks D., 2008. Academic emergency medicine faculty and industry relationships. *Acad Emerg Med.*, Sep;15(9):819-24.PMID: 19244632.
 - (20) Westermann H, Choi TN, Briggs WM, Charlson ME, Mancuso CA, 2008. Obesity and exercise habits of asthmatic patients. *Ann Allergy Asthma Immunol.* Nov;101(5):488-94.PMID: 19055202.
 - (21) Charlson ME, Charlson RE, Marinopoulos S, McCulloch C, Briggs WM, Hollenberg J, 2008. The Charlson comorbidity index is adapted to predict costs of chronic disease in primary care patients. *J Clin Epidemiol.* Dec;61(12):1234-40. PMID: 18619805
 - (22) Rosenzweig JS, Van Deusen SK, Okpara O, Datillo PA, Briggs WM, Birkhahn RH, 2008. Authorship, collaboration, and predictors of extramural funding in the emergency medicine literature. *Am J Emerg Med.* **26(1)**, 5-9. PMID: 18082774
 - (23) Mancuso CA, Westermann H, Choi TN, Wenderoth S, Briggs WM, Charlson ME, 2008. Psychological and somatic symptoms in screening for depression in asthma patients. *J. Asthma.* **45(3)**, 221-5. PMID: 18415830
 - (24) Boutin-Foster C., Ogedegbe G., Peterson J., Briggs M., Allegrante J., Charlson ME., 2008. Psychosocial mediators of the relationship between race/ethnicity and depressive symptoms in Latino and white patients with coronary artery disease. *J. National Medical Association.* **100(7)**, 849-55. PMID: 18672563
 - (25) Charlson, M, Peterson J., Syat B, Briggs WM, Kline R, Dodd M, Murad V, Dione W, 2007. Outcomes of Community Based Social Service Interventions in Homebound Elders *Int. J. Geriatric Psychiatry.* **23(4)**, 427-32. PMID: 17918183
 - (26) Charlson ME, Peterson F, Boutin-Foster C, Briggs WM, Ogedegbe G, McCulloch C, et al., 2008. Changing health behaviors to improve health outcomes after angioplasty: a randomized trial of net present value versus future value risk communication.. *Health Education Research.* **23(5)**, 826-39. PMID: 18025064
 - (27) Ullery, BW, JC Peterson, FM, WM Briggs, LN Girardi, W Ko, AJ Tortolani, OW Isom, K Krieger, 2007. Cardiac Surgery in Nonagenarians: Should We or Shouldn't We? *Annals of Thoracic Surgery.* **85(3)**, 854-60. PMID: 18291156
 - (28) Charlson ME, Boutin-Foster C., Mancuso C., Ogedegbe G., Peterson J., Briggs M., Allegrante J., Robbins L., Isen A., 2007. Using positive affect and self affirmation to inform and to improve self management behaviors in cardiopulmonary patients: Design, rationale and methods. *Controlled Clinical Trials.* November 2007 (Vol. 28, Issue 6, Pages 748-762).

- (29) Hogle NJ, Briggs WM, Fowler DL, 2007. Documenting a learning curve and test-retest reliability of two tasks on a virtual reality training simulator in laparoscopic surgery. *J Surg Educ.* **64(6)**, 424-30. PMID: 18063281
- (30) Mancuso, CA, T Choi, H Westermann, WM Briggs, S Wenderoth, 2007. Patient-reported and Physician-reported Depressive Conditions in Relation to Asthma Severity and Control. *Chest.* **133(5)**, 1142-8. PMID: 18263683.
- (31) Mancuso, CA, T Choi, H Westermann, WM Briggs, S Wenderoth, 2007. Measuring physical activity in asthma patients: two-minute walk test, repeated chair rise test, and self-reported energy expenditure. *J. Asthma.* **44(4)**, 333-40. PMID: 17530534.
- (32) D'Ayala, M, C Martone, R M Smith, WM Briggs, M Potouridis, J S Deitch, and L Wise, 2006. The effect of systemic anticoagulation in patients undergoing angioaccess surgery. *Annals of Vascular Surgery.* **22(1)**, 11-5. PMID: 18055171
- (33) Charlson ME, Charlson RE, Briggs W, Hollenberg J, 2007. Can disease management target patients most likely to generate high costs? The impact of comorbidity. *J Gen Intern Med.* **22(4)**, 464-9. PMID: 17372794
- (34) Charlson ME, Peterson F, Krieger K, Hartman GS, Hollenberg J, Briggs WM, et al., 2007. Improvement of outcomes after coronary artery bypass II: a randomized trial comparing intraoperative high versus customized mean arterial pressure. *J. Cardiac Surgery.* **22(6)**, 465-72. PMID: 18039205
- (35) Charlson ME, Boutin-Foster C, Mancuso CA, Peterson F, Ogedegbe G, Briggs WM, Robbins L, Isen A, Allegrante JP, 2006. Randomized Controlled Trials of Positive Affect and Self-affirmation to Facilitate Healthy Behaviors in Patients with Cardiopulmonary Diseases: Rationale, Trial Design, and Methods. *Contemporary Clinical Trials.* **28(6)**, 748-62. PMID: 17459784.
- (36) Charlson ME, Charlson RE, Briggs WM, Hollenberg J, 2006. Can disease management target patients most likely to generate high costs. *J. General Internal Medicine.* **22(4)**, 464-9.
- (37) Birkhahn, WM Briggs, PA Datillo, SK Van Deusen, TJ Gaeta, 2006. Classifying patients suspected of appendicitis with regard to likelihood. *American Journal of Surgery,* **191(4)**, 497-502. PMID: 16531143
- (38) Milla F, Skubas N, Briggs WM, Girardi LN, Lee LY, Ko W, Tortolani AJ, Krieger KH, Isom OW, Mack CA, 2006. Epicardial beating heart cryoablation using a novel argon-based cryoclamp and linear probe. *J Thorac Cardiovasc Surg.,* **131(2)**, 403-11.
- (39) Milling, TJ, C Holden, LA Melniker, WM Briggs, R Birkhahn, TJ Gaeta, 2006. Randomized controlled trial of single-operator vs. two-operator ultrasound guidance for internal jugular central venous cannulation. *Acad Emerg Med.,* **13(3)**, 245-7.
- (40) Birkhahn, SK Van Deusen, O Okpara, PA Datillo, WM Briggs, TJ Gaeta, 2006. Funding and publishing trends of original research by emergency medicine investigators over the past decade. *Annals of Emergency Medicine,* **13(1)**, 95-101
- (41) Melniker LA, Leibner E, McKenney MG, Lopez P, Briggs WM, Mancuso CA., 2006. Randomized Controlled Clinical Trial of Point-of-Care, Limited Ultrasonography (PLUS) for Trauma in the Emergency Department: The

- First Sonography Outcomes Assessment Program (SOAP-1) Trial. *Annals of Emergency Medicine*. **48(3)**, 227-235.
- (42) Milling, TJ, J Rose, WM Briggs, R Birkhahn, TJ Gaeta, JJ Bove, and LA Melniker, 2005. Randomized, controlled clinical trial of point-of-care limited ultrasonography assistance of central venous cannulation: the Third Sonography Outcomes Assessment Program (SOAP-3) Trial. *Crit Care Med*. **33(8)**, 1764-9.
- (43) Garfield JL, Birkhahn RH, Gaeta TJ, Briggs WM, 2004. Diagnostic Delays and Pathways on Route to Operative Intervention in Acute Appendicitis. *American Surgeon*. **70(11)**, 1010-1013.
- (44) Birkhahn RH, Gaeta TJ, Tloczkowski J, Mundy TA, Sharma M, Bove JJ, Briggs WM, 2003. Emergency medicine trained physicians are proficient in the insertion of transvenous pacemakers. *Annals of Emergency Medicine*. **43 (4)**, 469-474

4.2. Preprints and abstracts (partial list only).

- (1) Wei Li, Piotr Gorecki, Robert Autin, William Briggs, Elie Semaan, Anthony J. Tortolani, Marcus D'Ayala, 2011. Concurrent Prophylactic Placement of Inferior Vena Cava Filter (CPPOIVCF) in Gastric Bypass and Adjustable Banding Operations: An analysis of the Bariatric Outcomes Longitudinal Database. Eastern Vascular Society 25th Annual Meeting, 2011.
- (2) Wei Li, Jo Daniel, James Rucinski, Syed Gardezi, Piotr Gorecki, Paul Thodiyil, Bashar Fahoum, William Briggs, Leslie Wise, 2010. FACSFactors affecting patient disposition after ambulatory laparoscopic cholecystectomy (ALC) cheanalysis of the National Survey of Ambulatory Surgery (NSAS). American College of Surgeons.
- (3) Wei Li, Marcus D'Ayala, et al., William Briggs, 2010. Coronary bypass and carotid endarterectomy (CEA): does a combined operative approach offer better outcome? - Outcome of different management strategies in patients with carotid stenosis undergoing coronary artery bypass grafting (CABG). Vascular Annual Meeting.
- (4) Briggs, WM, 2007. On equi-probable priors, MAX ENT 2007, Saratoga Springs, NY.
- (5) Briggs, WM, and RA Zaretski, 2006. On producing probability forecasts (from ensembles). 18th Conf. on Probability and Statistics in the Atmospheric Sciences, Atlanta, GA, Amer. Meteor. Soc.
- (6) Briggs, WM, and RA Zaretski, 2006. Improvements on the ROC Curve: Skill Plots for Forecast Evaluation. *Invited*. Joint Research Conference on Statistics in Quality Industry and Technology, Knoxville, TN.
- (7) Briggs, WM, and RA Zaretski, 2005. Skill Curves and ROC Curves for Diagnoses, or Why Skill Curves are More Fun. Joint Statistical Meetings, American Stat. Soc., Minneapolis, MN.
- (8) Briggs W.M., 2005. On the optimal combination of probabilistic forecasts to maximize skill. *International Symposium on Forecasting* San Antonio, TX. International Institute of Forecasters.
- (9) Briggs, WM, and D Ruppert, 2004. Assessing the skill of yes/no forecasts for Markov observations. 17th Conf. on Probability and Statistics in the Atmospheric Sciences, Seattle, WA, Amer. Meteor. Soc.

- (10) Melniker, L, E Liebner, B Tiffany, P Lopez, WM Briggs, M McKenney, 2004. Randomized clinical trial of point-of-care limited ultrasonography (PLUS) for trauma in the emergency department. *Annals of Emergency Medicine*, **44**.
- (11) Birkhahn RH, Gaeta TJ, Van Deusen SK, Briggs WM, 2004. Classifying patients suspected of appendicitis with regard to likelihood. *Annals of Emergency Medicine*, **44** (4): S17-S17 51 Suppl. S.
- (12) Zandieh, SO, WM Briggs, JM Kuder, and CA Mancuso, 2004. Negative perceptions of health care among caregivers of children auto-assigned to a Medicaid managed care health plan. Ambulatory Pediatric Association Meeting, San Francisco, CA; and National Research Service Award Trainees Conference, San Diego, CA.
- (13) Melniker, L, E Liebner, B Tiffany, P Lopez, M Sharma, WM Briggs, M McKenney, 2003. Cost Analysis of Point-of-care, Limited Ultrasonography (PLUS) in Trauma Patients: The Sonography Outcomes Assessment Program (SOAP)-1 Trial. *Academic Emergency Medicine*, **11**, 568.
- (14) Melniker, LA, WM Briggs, and CA Mancuso, 2003. Including comorbidity in the assessment of trauma patients: a revision of the trauma injury severity score. *J. Clin Epidemiology*, Sep., **56(9)**, 921. PMID: 14505784.
- (15) Briggs, WM, and RA Levine, 1998. Comparison of forecasts using the bootstrap. 14th Conf. on Probability and Statistics in the Atmospheric Sciences Phoenix, AZ, Amer. Meteor. Soc., 1-4.
- (16) Briggs, WM, and R Zaretski, 1998. The effect of randomly spaced observations on field forecast error scores. 14th Conf. on Probability and Statistics in the Atmospheric Sciences Phoenix, AZ, Amer. Meteor. Soc., 5-8.
- (17) Briggs, WM, and RA Levine, 1996. Wavelets and image comparison: new approaches to field forecast verification. 13th Conf. on Probability and Statistics in the Atmospheric Sciences, San Francisco, CA, Amer. Meteor. Soc., 274-277.
- (18) Briggs, WM, and DS Wilks, 1996. Modifying parameters of a daily stochastic weather generator using long-range forecasts. 13th Conf. on Probability and Statistics in the Atmospheric Sciences, San Francisco, CA, Amer. Meteor. Soc., 243-2246.

5. COURSES TAUGHT

- (1) Introductory Statistics. Define probability, randomness, and statistics. The difference between Classical and Bayesian statistics is emphasized, particularly in how evidence is measured. The student will, by the end of the class, be able to read and broadly understand many of the results contained in the statistics section of non-statistical journals.
- (2) Intermediate Statistics. A hands-on course. Exploratory data analysis and the importance of graphical methods. Categorical data and contingency table analysis. Practical linear and logistic regression. I use the R software to teach the course and maintain a web site for students to download code and data. Seems to work well.
- (3) Advanced Statistics. Multivariate statistical methods: factor, cluster, and discriminant analysis. Practical survival analysis and proportional hazards

regression. Hierarchical and linear mixed models, generalized estimating equations, likelihood, and Bayesian Markov chain Monte Carlo methods.

- (4) Calculus. General undergraduate math sequence.

6. LANGUAGES

R, S-PLUS, SAS, SPSS, PHP, Perl, Matlab, Octave, Fortran (yes, really, but rustily), C, SQL, DHTML, some Java and Javascript, Unix and Linux scripting (by no means not an expert), and of course \LaTeX .

7. MEMBERSHIPS

- (1) American Statistical Association
- (2) Institute of Mathematical Statistics
- (3) American Meteorological Society
- (4) American Geophysical Union
- (5) American Association for the Advancement of Science

8. CONTACT

- (1) 917-392-0691
- (2) wmbriggs.com
- (3) drclamp.com
- (4) mattstat@gmail.com
- (5) K2JM (amateur radio call sign)