

Curriculum Vitae

Saonli Basu

Contact Information

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Education

- 2000 - 2005 Ph.D. in Statistics, Department of Statistics, University of Washington, Seattle.
- 1996 - 1998 M.S. in Statistics, Indian Statistical Institute, Calcutta, India.
- 1993- 1996 B.S. in Statistics, Presidency College, University of Calcutta, India.

Employment

- 2005-present Assistant Professor in the Division of Biostatistics, School of Public Health, University of Minnesota.
- 2001-2005 Research Assistant, Department of Statistics, University of Washington.
- 2000-2001 Teaching Assistant, Department of Statistics, University of Washington.
- 1999 - 2000 Research Associate, Department of Statistics, Indian Statistical Institute.
- 1998-1999 Research Associate, Market Research, ORG MARG, India.

Research Interests

- Development of models for linkage detection in extension pedigrees.
- Develop methods for gene-gene interaction and gene-environment interaction detection in Genome-wide association studies.
- computational statistics, nonparametric inferences and their application in different areas of statistical genetics.

Peer-reviewed Publications

Journal Articles

- He, H. *, Oetting, W. S., Brott, M. J., **Basu, S.**, Power of Multifactor Dimensionality Reduction and Penalized Logistic Regression for Detecting Gene-Gene Interaction In a Case-Control Study. *BMC Medical Genetics* (to appear).
- He, H. *, Oetting, W. S., Brott, M. J., **Basu, S.**, Pair-wise multifactor dimensionality reduction method to detect gene-gene interactions in a case-control study. *Human Heredity* (to appear).
- Thumbigere-Math, V., Sabino, M. C., Gopalakrishnana, R., **Basu, S.**, Huckabay, S., Arkadiusz Z., Michalowicz, B. S., Hughes, P. J., Leach, J. W., Swenson, K. K., Swift, J. W., and Basi, D. L. (2009), Bisphosphonate-Associated Osteonecrosis of the Jaw: Clinical features, risk factors, staging management system and treatment outcomes. *Journal of Oral and Maxillofacial Surgery* (to appear).
- **Basu, S.**, Stephens, M., Pankow, J. S., Thompson, E.A. (2009), A likelihood-based trait-model-free approach for linkage detection of binary trait. *Biometrics* (to appear).
- Dehghan, A., Yang, Q., Peters, A., **Basu, S.**, Bis, J. C., Rudnicka, A. R., Kavousi M., Chen, M-H., Baumert, J., Lowe, G. D. O., McKnight, B., Tang, W., de Maat, M., Larson, M. G., Eyhermendy, S., McArdle, W. L., Lumley, T., Pankow, J. S., Hofman, A., Massaro, J. M., Rivadeneira, F., Kolz, M., Taylor, K. D., van Duijn, C. M., Kathiresan, S., Illig, T., Aulchenko, Y. S., Volcik, K. A., Uitterlinden, A., Tofler, G. H., Gieger, C., Welcome Trust Case Control Consortium, Psaty, B. M., Couper, D. J., Boerwinkle, E., Koenig, W., O'Donnell, C. J., Witteman, J. C., Strachan, D. P., Smith, N. L., Folsom, A. R. (2009), Association of novel genetic loci with circulating fibrinogen levels: A genome-wide association study in six population-based cohorts. *Circulation: Cardiovascular Genetics* (to appear).
- Johnson LA., Oetting WS., **Basu, S.**, Prausa S., Matas A., Jacobson PA. (2008), Pharmacogenetic effect of the UGT polymorphisms on mycophenolate is modified by calcineurin inhibitors. *Eur J Clin Pharmacology* Vol 64(11):1047-56.
- Vallee MC, Conrad HJ, **Basu, S.**, Seong WJ. (2008), Accuracy of friction-style and spring-style mechanical torque limiting devices for dental implants. *Journal of Prosthetic Dentistry* Vol 100(2):86-92.
- **Basu, S.**, Di, Y. and Thompson, E.A. (2008). Exact Trait-Model-Free Tests for Linkage Detection in Pedigrees. *Annals of Human Genetics*. Vol 72(5): 676-682.
- **Basu, S.** (2007). A Robust Approach for linkage detection using pedigrees. *Sankhya*, Vol 69 (3): 405-424.
- Yang, Q., Biernacka J.M., Chen, M., Houwing-Duistermaat, J.J., Bergemann, T.L., **Basu, S.**, Fan, R., Liu, L., Bourgey, M., Clerget-Darpoux, F., Lin, W., Dupuis, J., Elston, R.C., Cupples, L.A. (2007). Group 4: Using Linkage and Association to Identify and Model Genetic Effects. *Genetic Epidemiology*, Vol 31(Suppl 1): S34-42.
- Liebeler, C.L., **Basu, S.**, Jackola, D.R. (2007). Allergen-Specific IgG1 Provides Parsimonious Heritability Estimates For Atopy-Associated Immune Responses To Allergens. *Hum Immunology*, Vol 68(2):113-21.
- Jackola, D.R., **Basu, S.**, Liebeler, C.L., Willaert, R., Luah, S.-S., Oetting, W., King, R.A., Blumenthal, M.N. (2006). CD14 Promoter Polymorphisms in Atopic Families: Implications for Modulated Allergen-Specific Immunoglobulin E and G1 Responses. *Int Arch Allergy Immunol*, Vol 139, 217-224.
- Sieh, W, **Basu, S.**, Fu, Q.A., Rothstein, J.H., Scheet, P.A., Stewart, W., Sung, J.S., Thompson, E.A, Wijsman, E.A. (2005). Comparison of marker types and map assumptions using Markov chain Monte Carlo-based linkage analysis of COGA data. *BMC Genetics*, Vol 6: S11.
- Thompson, E.A. and **Basu, S.** (2003). Genome Sharing in large pedigrees: multiple imputation of ibd for linkage detection. *Human Heredity*, Vol 56, 119-125.
- George, A.W., **Basu, S.**, Li, N., Rothstein, J. H., Sieberts, S.K., Stewart, W., Wijsman, E.M. and Thompson, E.A. (2003). Approaches to Mapping Genetically Correlated Complex Traits. *BMC Genetics*, Vol 4:S71.

Papers under Peer Review

- Smith, N.L., Chen, M-H., Dehghan, A., Strachan, D.P., **Basu, S.**^{**}, Bis, J. C. , de Maat, M., Rumley, A., Kong, X., Yang, Q., Wiggins, K. L., Van Duijn, C., McArdle, W. L., Pankow, J. S., Johnson, A. D., McKnight, B., Uitterlinden, A., Wellcome Trust Case Control Consortium, Aleksic, N., Meigs, J. B., Peters, A., Koenig, W., Cushman, M., Kathiresan, S., Rotter, J. I., Bovill, E. G., Hofman, A., Boerwinkle, E., Tofler, G. H., Psaty, B. M., Leebeek, F., Folsom, A. R., Larson, M. G., Lumley, T., Witteman, J. C., Tang, W., O'Donnell, C. J., Association of multiple novel genetic loci with plasma levels of factor VII, factor VIII, and von Willebrand factor: The CHARGE Consortium. (revision requested)
- Seong, W-J., Kim, H-C., Jeong, S., Song, W-B, Heo, Y., **Basu, S.** The effect of image acquisition control on digital X-ray system on aluminium step wedge equivalent radiodensity quantification of restorative materials.
- Thyagarajan, B., Lindgren, B., **Basu, S.**, Nagaraj, S., Gross, M., Weisdorf, D., Arora, M. Base Excision Repair: a predictor of treatment outcome after hematopoietic stem cell transplantation.
- **Basu, S.** and Pankow, J.S. A likelihood-based Trait-model-free Approach for Linkage Detection for quantitative Trait in Pedigrees.
- Conrad HJ, Jung, J., Barczak, M., **Basu, S.**, Seong WJ. Retrospective cohort study of the predictors of implant failure in the posterior maxilla.

* The first author was a graduate student of Dr. Basu and the paper is a part of the master's thesis dissertation.

** Co first-author in the manuscript.

Invited Presentations

- **Basu, S.**, A likelihood-based Trait-model-free Approach for Linkage Detection for quantitative Trait in Pedigrees. ISI Platinum Jubilee Conference, ICSRRAR-08, 2008.
- **Basu, S.**, Allele-sharing methods for linkage detection using pedigrees, Department of Statistics, University of Minnesota, November 2006.
- **Basu, S.**, Allele-sharing methods for linkage detection, Indian Statistical Institute, Kolkata, India, January 2006.
- **Basu, S.**, A Likelihood-based Trait-model-free Approach for Linkage Detection, Division of Statistical Genetics, University of Alabama, Birmingham, March, 2005.
- **Basu, S.**, A Likelihood-based Trait-model-free Approach for Linkage Detection, Division of Biostatistics, University of Minnesota, February, 2005.
- **Basu, S.**, Allele-sharing methods in large pedigrees, Department of Statistical Genetics & Bioinformatics, North Carolina State University, 2003.

Contributed Presentations

- **Basu, S.**, A likelihood-based approach for Detecting gene-gene interaction in a case-control Study, ENAR meeting, 2009.
- **Basu, S.**, A Likelihood-based Trait-model-free Approach for Linkage Detection of quantitative trait, WNAR meeting, 2007.
- **Basu, S.**, A Likelihood-based Trait-model-free Approach for Linkage Detection, WNAR meeting, 2005.
- Efficient Algorithms for Allele-Sharing Methods to detect linkage using extended pedigrees, ENAR meeting, 2004.
- Allele-sharing methods in large pedigrees, International Genetic Epidemiology Society Meeting, 2002.

Professional Service

- Session Chair: Workshop in Statistical Genetics and Computational Molecular Biology, University of Washington, 2003.
- Reviewer of a NIH/NIDDK K24 grant.
- Referee for journals: Statistics in Medicine, BMC Bioinformatics, JAMA, Journal of Dental Research, Human Heredity.
- Reviewer of AHC seed grants.
- Reviewer of NIH Challenge grants.

Professional Membership

- American Statistical Association
- International Biometric Society
- International Genetic Epidemiology Society

Honor and Awards

- Session Chair: Workshop in Statistical Genetics and Computational Molecular Biology, University of Washington, 2005.
- Travel Award for Rockefeller Advanced Linkage Course, 2004.
- ENAR Distinguished Student Paper Award Winner, 2003.
- Best Student Award, Presidency College, 1996.