

CURRICULUM VITAE
The Johns Hopkins University School of Medicine

Peng Huang, PhD

Date of version

DEMOGRAPHIC INFORMATION

Current Appointments:

Associate Professor

Department of Oncology, Biostatistics and Bioinformatics Division, School of Medicine;
Department of Biostatistics, Bloomberg School of Public Health;
Johns Hopkins University, Baltimore, MD

Research Interest

Cancer early diagnosis through imaging texture analysis
Machine learning, deep learning, and artificial intelligent
Clinical trial design and data analysis with multiple endpoints,
Nonparametric global statistical test for Behrens-Fisher problem,

Education

Ph.D. in statistics, University of Rochester
MA in statistics, University of Rochester
MS in quality control and applied statistics, Rochester Institute of Technology
Master certificate in probability and mathematical statistics, Peking University, China
BS in mathematics, Peking Institute of Technology, China

Editorial Board appointments

1999 Book Reviewer, *Springer-Verlag*
2002-2006 Associate editor, *Modern Applied Statistical Methods*
2006-present Advisory Board, *Scientific Journals International*
2007 Book Reviewer, *Springer-Verlag*
2008-2010 Statistical reviewer in editorial board, *Annals of Internal Medicine*
2008- Editorial Board Member, *The Open Statistics & Probability Journal*
2010 Review Editor, *Frontiers in Clinical Trials in Neurology*
2013- Associate Editor of Biostatistics, *Journal of OncoPathology*
2013- Editorial Board, *International Journal of Cancer Research and Diagnosis*
2014- Editorial Board, *Austin Biometrics and Biostatistics*
2015-present Editorial Board, *BMC Cancer*
2019-present Associate Editor, Molecular Carcinogenesis
2019-2020 Associate Editor, *Frontiers in Oncology*, Section of Cancer Imaging and Image-directed Interventions

SELECTED PUBLICATIONS

More information is available from Google Scholar:

<https://scholar.google.com/citations?user=OpYRrQAAAAJ&hl=en&oi=sra>

1. **Huang P**, Chen D, Voelkel JO, Minimum aberration two-level split plot design. *Technometrics* 1998; 40(4): 314-326.

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2. **Huang P**, Dragalin V, Hall WJ, Asymptotic design of symmetric triangular tests for the drift of Brownian motion. Sequential Analysis: Design Methods and Applications 2000; 19 (4):143-160.
3. **Huang P**, Existence of a minimax group sequential test. Sequential Analysis: Design Methods and Applications 2000; 19(4):193-204.
4. **Huang P**. Stochastic Models in Reliability. Technometrics. 2000 August 01; 42(3):314-315.
5. Yakir B, **Huang P**, Hall WJ, Completeness for Brownian motion with piecewise linear stopping boundaries. Sequential Analysis 2001; 20(3):201-208. DOI: 10.1081/SQA-100106056
6. Chen D, **Huang P**, Cheng X. A concrete statistical realization of Kleinberg's stochastic discrimination for pattern recognition, Part I. Two-class classification. Annals of Statistics 2003;31(5):1393-1412.
7. **Huang P**. Asymptotic design of general triangular stopping boundaries for Brownian motion. IMS Lecture Notes -- Monograph Series, Crossing Boundaries: Statistical Essays in Honor of Jack Hall J. Kolassa and D. Oakes (editors), 2003; 43:29-46. Stable URL: <http://www.jstor.org/stable/4356261>
8. **Huang P.**, Tilley B, Woolson R, and Lipsitz S, Adjusting O'Brien's test to control type I error for the generalized nonparametric Behrens-Fisher problem. Biometrics 2005; 61:532-539.
9. **Huang P**, Woolson RF, O'Brien PC. A rank-based sample size method for multiple outcomes in clinical trials. Statistics in Medicine. 2008; 27(16):3084-3104. PMID: 18189338, PMCID: PMC3163145
10. **Huang P.**, Woolson RF., Granholm A. The use of a global statistical approach for the design and data analysis of clinical trials with multiple primary outcomes, Experimental Stroke 2009;1:100-109.
11. **Huang P**, Goetz CG, Woolson RF, Tilley B, Kerr D, Palesch Y, Elm J, Ravina B, Bergmann KJ, Kiebertz K; Parkinson Study Group. Using global statistical tests in long-term Parkinson's disease clinical trials. Movement Disorders. 2009;24(12):1732-9. PMCID: PMC2813508
12. **Huang P.**, Chen M-H, Sinha D. A latent model approach to define event onset time in the presence of measurement error. Statistics and its Interface. 2009; 2:425-435 PMCID: PMC2996051.
13. **Huang P**, Ou A., Piantadosi S, Tan M. Formulating Appropriate Statistical Hypotheses for Treatment Comparison in Clinical Trial Design and Analysis. Contemporary Clinical Trials. 2014; 39:294-302.
14. **Huang P**, Tan M. Multistage nonparametric tests for treatment comparisons in clinical trials with multiple primary endpoints. Statistics and its Interface. 2016; 9(3):343-354.
15. Yan RK, Ashrafinia S, Park S, Lee J, Chu LC, Lin CT, Hussien A, Malguria N, Steingrimsson J, Rahmim A, **Huang P**. The Use of Low-Dose CT Intra- and Extra-Nodular Image Texture Features to Improve Small Lung Nodule Diagnosis in Lung Cancer Screening. 2017 IEEE Nuclear Science Symposium and Medical Imaging Conference (NSS/MIC), Atlanta, GA, 2017, pp. 1-4. PubMed PMID: WOS:000455836200066.
16. **Huang P**, Park S, Yan R, Lee J, Chu LC, Cheng TL, Hussien A, Rathmell J, Thomas B, Chen C, Hales R, Steingrimsson J, Ettinger DS, MD, Brock M, Hu P, Fishman EK, Gabrielson E, Lam S. Added Value of Computer-aided CT Image Features for Early Lung Cancer Diagnosis with Small Pulmonary Nodules: A Matched Case-Control Study. Radiology. 2018 Jan;286(1):286-295. Epub 2017 Sep 5. <https://doi.org/10.1148/radiol.2017162725> PMID: 28872442.
17. **Huang, P.**, Lin, C. T., Li, Y., Tammemagi, M. C., Brock, M. V., Atkar-Khattra, S., Xu, Y., Hu, P., Mayo, J. R., Schmidt, H., Gingras, M., Pasian, S., Stewart, L., Tsai, S., Seely, J. M., Manos, D., Burrowes, P., Bhatia, R., Tsao, M. S., & Lam, S. Prediction of lung cancer risk at follow-up screening with lowdose CT: a training and validation study of a deep learning method. The Lancet Digital Health 2019;7(1):E353- E362 [https://www.thelancet.com/journals/landig/article/PIIS2589-7500\(19\)30159-1/fulltext](https://www.thelancet.com/journals/landig/article/PIIS2589-7500(19)30159-1/fulltext)
18. Lu Z, Zou J, Li S, Topper MJ, Tao Y, Zhang H, Jiao X, Xie W, Kong X, Vaz M, Li H, Cai Y, Xia L, **Huang P**, Rodgers K, Lee B, Riemer JB, Day CP, Yen RC, Cui Y, Wang Y, Wang Y, Zhang W, Easwaran H, Hulbert A, Kim K, Juergens RA, Yang SC, Battafarano RJ, Bush EL,

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Broderick SR, Cattaneo SM, Brahmer JR, Rudin CM, Wrangle J, Mei Y, Kim YJ, Zhang B, Wang KK, Forde PM, Margolick JB, Nelkin BD, Zahnow CA, Pardoll DM, Housseau F, Baylin SB, Shen L, Brock MV. Epigenetic therapy inhibits metastases by disrupting premetastatic niches. DOI: <https://doi.org/10.1038/s41586-020-2054-x> *Nature*, 579, pages 284–290(2020)

Patent

Pub. No.: WO/2013/012781 **International Application No.:** PCT/US2012/046868
Publication Date: 24.01.2013 **International Filing Date:** 16.07.2012
IPC: *C12Q 1/68* (2006.01), *C12N 15/11* (2006.01), *G01N 33/574* (2006.01)
Application: THE JOHNS HOPKINS UNIVERSITY [US/US]; 3400 North Charles Street Baltimore, Maryland 21218 (US)
Title: GENOME-WIDE METHYLATION ANALYSIS AND USE TO IDENTIFY GENES SPECIFIC TO BREAST CANCER HORMONE RECEPTOR STATUS AND RISK OF RECURRENCE

Grant awards

03/01/2003 – 02/28/2005 Global Statistical Tests in Parkinson's Disease Studies
1R21NS043569-01 PI: Huang,
Role: Principal Investigator

07/01/2005 – 06/30/2009 Dual-hit Hypothesis of aging-related DA dysfunction
1P01AG023630-9002NIH/NIA
Role: PI of Biostatistics Core

07/01/2008 – 06/30/2009 Development of Global Treatment Effect Assessment Method for Clinical Trials
with Multiple Endpoints
Cigarette Restitution Fund Program, FHA05CRF
Role: Principal Investigator

09/30/2009 – 09/29/2011 Breast Cancer SPORE
NIH/NCI 5P50CA088843-089006
Role: PI of Biostatistics and Bioinformatics Core

07/01/2011 – 06/30/2016 Johns Hopkins In Vivo Cellular and Molecular Imaging Center (ICMIC)
NCI P50CA103175
Role: PI of Biostatistics Core

7/1/2015 – 6/30/2016 Lung Cancer Early Diagnosis Using Biomarkers from Multiple Platforms
Johns Hopkins University Discovery Award
Role: Principal Investigator

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4/1/2017 – 3/31/2019 Allegheny Health Network Cancer Research Fund. "Develop and validate nodule probability of malignancy score P_m for lung cancer early diagnosis". Role: Principal Investigator.

9/18/18 – 7/31/23 Biostatistics Core, SPORE in ovarian cancer
1P50CA228991-01, Sub-Project ID: 8873
Role: Principal Investigator.

Other approved projects as the principal investigator

7/20/2017 – 7/1/2020 Identifying lethal lung cancers from non-lethal disease using CT and pathology image markers

Sponsor: NIH/NCI, project number: EEMS-2017-9001

7/2016 – 6/2019

Predicting overall survival using CT and pathological image features

Sponsor: NIH/NCI, project number: NLST-214