

YU-RU SU

Biostatistics Unit, Kaiser Permanente Washington Health Research Institute
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EDUCATION

University of California, Davis, Davis, California, USA
Ph.D. in Biostatistics 09/2011
• Dissertation: Survival analysis for incomplete data
• Advisor: Jane-Ling Wang

National Tsing-Hua University, Hsin-Chu City, Taiwan
M.S. in Statistics 06/2005

National Tsing-Hua University, Hsin-Chu City, Taiwan
B.S. in Mathematics 06/2003

PROFESSIONAL POSITIONS

Kaiser Permanente Washington Health Research Institute, Seattle, Washington, USA
Biostatistics Unit
Scientific Investigator 09/2019 - Present

Fred Hutchinson Cancer Research Center, Seattle, Washington, USA
Biostatistics, Public Health Sciences Division
Staff Scientist 04/2016 - 08/2019
Post-Doctoral Research Fellow 09/2013 - 03/2016

National Cheng Kung University, Tainan City, Taiwan
Department of Statistics
Assistant Professor 09/2011 - 08/2013

University of California, Davis, Davis, California, USA
Department of Statistics
Research Assistant 04/2008 - 07/2011
Teaching Assistant 09/2006 - 07/2011

Academia Sinica, Taipei, Taiwan
Institute of Statistical Science
Post-Master Trainee in the Graduate Training Program 07/2005 - 06/2006

PROFESSIONAL HONORS

Not applicable

MEMBERSHIPS

American Statistical Association; International Chinese Statistical Association

ORGANIZATIONAL SERVICE

Not applicable

OTHER PROFESSIONAL SERVICE

Not applicable

SPECIAL NATIONAL RESPONSIBILITIES

Not applicable

EDITORIAL RESPONSIBILITIES

Reviewers for 10 statistical, 1 epidemiological, 1 genetic, and 1 clinical journals

RESEARCH FUNDING

Current Funding

BCSC-PCORI SCC. PCS-1504-30370. Patient-Centered Outcomes Research Institute, 2016-2021. Direct Costs: \$1,260,996. Key personnel/Biostatistician. 30% FTE

BCSC BIOSTAT CORE SCC. P01 CA154292. National Cancer Institute, 2017-2022. Direct Costs: \$1,803,148. Key personnel/Biostatistician. 10% FTE

MUSE 1A Phase II. LTD10120. Syneos Health, 2016-2020. Direct Costs: \$8,447,266. Key personnel/Biostatistician. 10% FTE

AD and Eye Disease. 1R01AG060942-01A1. National Institute on Aging, 2019-2024. Direct Costs: \$3,895,328. Key personnel/Biostatistician. 20% FTE

AcuOA. UG3 AT010739. NCCIH, 2019-2023. Direct Costs: \$7,519,473. Key personnel/Biostatistician. 10% FTE

TEACHING AND MENTORING RESPONSIBILITIES

Mentee

Xinyuan Dong, PhD student at Biostatistics, University of Washington.
Independent Research Project

PUBLICATIONS

In refereed journals

- X. Wang, **Y.-R. Su**, P. Peterson, A. T. Chan, D. Albanes, S. Bien, S. I. Berndt, H. Brenner, P. T. Campbell, G. Casey, and others (2019). Exploratory genome-wide interaction analysis of non-steroidal anti-inflammatory drugs and predicted gene expression on colorectal cancer risk. Accepted by *Cancer Epidemiology, Biomarkers & Prevention*
- S. McNabb, T. Harrison, D. Albanes, S. Berndt, H. Brenner, B. Caan, P. Campbell, Y. Cao, J. Chang-Claude, A. Chan, ..., **Y.-R. Su**, and others (2019). Meta-analysis of 16 studies of the association of alcohol with colorectal cancer. *International Journal of Cancer*, <https://doi.org/10.1002/ijc.32377>.
- S. A. Bien, **Y.-R. Su (Co-first author)**, D. V. Conti, T. A. Harrison, C. Qu, X. Guo, Y. Lu, D. Albanes, P. L. Auer, B. L. Banbury, and others (2019). Genetic variant predictors of gene expression provide new insight into risk of colorectal cancer. *Human Genetics*, 138(4), 307-326.
- J. R. Huyghe, S. A. Bien, T. A. Harrison, H. M. Kang, S. Chen, S. L. Schmit, D. V. Conti, C. Qu, J. Jeon, C. K. Edlund, ..., **Y.-R. Su**, and others (2019). Discovery of common and rare risk loci for colorectal cancer. *Nature Genetics*, 51(1), 76-87.
- Y.-R. Su**, C.-Z. Di, S. Bien, L. Huang, X. Dong, G. Abecasis, S. Berndt, S. Bezieau, H. Brenner, B. Caan, and others (2018). A mixed-effects model for powerful association tests in integrative functional genomics. *The American Journal of Human Genetics*. 102(5):904-919.
- Y.-R. Su**, C.-Z. Di, L. Hsu (2017). Hypothesis testing in functional linear models. *Biometrics*. 73(2):551-561.
- Y.-R. Su**, C.-Z. Di, L. Hsu, Genetics and Epidemiology of Colorectal Cancer Consortium (2017). A unified powerful set-based test for sequencing data analysis of GxE interactions. *Biostatistics*. 18(1):119-131.
- Y.-R. Su** and J.-L. Wang (2016). Semiparametric efficient estimation for shared-frailty models with doubly-censored clustered data. *The Annals of Statistics*, 44, 1298-1331.
- J. R. Carey, P. Liedo, C. Xu, J.-L. Wang, H.-G. Muller, Y.-R. Su, J. W. Vaupel (2016). Diet Shapes Mortality Response to Trauma in Old Tephritid Fruit Flies. *PLoS One* 11(7):e0158468.
- Y.-K. Tseng, **Y.-R. Su**, M. Mao, J.-L. Wang (2015). An extended hazard model with longitudinal covariates. *Biometrika*, 102, 135-150.
- W.-T. Chang, W.-H. Lee, W.-T. Lee, P.-S. Chen, **Y.-R. Su**, P.-Y. Liu, Y.-W. Liu, W.-C. Tsai (2015). Left ventricular global longitudinal strain is independently associated with mortality in septic shock patients. *Intensive Care Med.*, 41(10), 1791-1799.
- J.-M. Sung, C.-T. Su, Y.-T. Chang, **Y.-R. Su**, W.-C. Tsai, S.-P. Wang, C.-S. Yang, L.-M. Tsai, J.-H. Chen, Y.-W. Liu (2014). Independent value of cardiac troponin T and left ventricular global longitudinal strain in predicting all-cause mortality among stable hemodialysis patients with preserved left ventricular ejection fraction. *BioMed Research International* 2014:217290.
- Y.-W. Liu, C.-T. Su, Y.-T. Chang, W.-C. Tsai, **Y.-R. Su**, S.-P. Wang, C.-S. Yang, L.-M. Tsai, J.-H. Chen, J.-M. Sung (2014). Elevated serum interleukin-18 level is associated with all-cause mortality in stable hemodialysis patients independently of cardiac dysfunction. *PLoS One* 9(3):e89457.
- Y.-W. Liu, C.-T. Su, J.-M. Sung, S.-P. Wang, **Y.-R. Su**, C.-S. Yang, L.-M. Tsai, J.-H. Chen, W.-C. Tsai (2013). Association of left ventricular longitudinal strain with mortality among stable hemodialysis patients with preserved left ventricular ejection fraction. *Clinical Journal of the American Society of Nephrology* 8(9), 1564-1674.

Y.-R. Su and J.-L. Wang (2012). Modeling left-truncated and right-censored survival data with longitudinal covariates. *The Annals of Statistics* 40(3), 1465-1488.

J.-F. Wu, **Y.-R. Su (Co-first author)**, C.-C. Chen, H.-L. Chen, Y.-H. Ni, H.-Y. Hsu, J.-L. Wang, M.-H. Chang (2012). Predictive effect of serial serum alanine aminotransferase levels on spontaneous HBsAg seroconversion in Children. *Journal of Pediatric Gastroenterology and Nutrition* 54(1), 97-100.

N. Kouloussis, N. Papadopoulos, B. Katsoyannos, H.-G. Müller, J.-L. Wang, **Y.-R. Su**, F. Molleman, and J. R. Carey (2011). Seasonal trends in *Ceratitidis capitata* reproductive potential derived from live-caught females in Greece. *Entomologia Experimentalis et Applicata* 140, 181-188.

Published Abstracts from Professional Conferences

X. Wang, **Y.-R. Su**, A. T. Chan, S. A. Bien, S. I. Bernt, H. Brenner, G. Casey, J. Chang-Claude, S. J. Gallinger, R. W. Haile, and others (2018). Functionally informed genome-wide interaction analysis of nonsteroidal anti-inflammatory drugs on colorectal cancer risk. *Cancer Research* 2965-2965.

P. S. Petersen, **Y.-R. Su**, S. I. Berndt, S. A. Bien, H. Brenner, G. Casey, A. T. Chan, J. Chang-Claude, J. C. Figueiredo, S. J. Gallinger, and others (2018). Interactions between genetic predictors of gene expression and dietary factors associated with risk of colorectal cancer. *Cancer Research* 5268-5268.

S. A. Bien, X. Guo, **Y.-R. Su**, T. A. Harrison, C. Qu, Y. Lu, J. Long, S. Chen, A. T. Chan, D. V. Conti, and others (2017). Genetic predictors of gene expression associated with risk of colorectal cancer. *Cancer Research* 1300-1300.

INVITED TALKS & ORGANIZED CONFERENCE SESSIONS

Recent developments in integrating multiple-omics data in complex diseases

- Invited session, Joint Statistical Meeting 2018. 08/2018
- Role: organizer and chair

Unified powerful set-based tests for genetic associations

- University of Washington, Department of Biostatistics. 11/2019
- Topic contributed session, Joint Statistical Meeting 2018. 08/2018

Hypothesis testing in functional linear models.

- Invited session, 1st International Conference on Econometrics and Statistics. 06/2017

A unified powerful set-based test for sequencing data analysis of GxE interactions.

- Invited session, The 2017 ICSA Applied Statistical Symposium. 06/2017
- Biostatistics and Biomathematics, Public Health Science Division, Fred Hutchinson Cancer Research Center. 03/2016

An extended hazard model with longitudinal covariates.

- Invited session, Joint Statistical Meeting 2015. 08/2015

Hypothesis testing for functional linear models with scalar responses.

- Invited session, The 4th International Biostatistics Symposium. 07/2016
- University of California, Davis, Department of Statistics. 06/2014

Modeling left-truncated and right-censored survival data with longitudinal covariates.

- Topic-contributed session, Joint Statistical Meeting 2014. 08/2014
- Topic-contributed session, The 3rd IMS Asia Pacific Rim Meeting. 07/2014
- Invited session, The 9th ICSA international conference. 12/2013
- Fred Hutchinson Cancer Research Center, Biostatistics Program. 11/2013

Nonparametric MLE for doubly-censored data with frailty

