

Hee Cheol Chung

CONTACT INFORMATION	Department of Statistics Texas A&M University 3143 TAMU, College Station, TX 77843	Phone: +1-678-713-1727 E-mail: hcchung@tamu.edu
RESEARCH INTERESTS	Bayesian Analysis, Data integration, Graphical models, High dimensional data analysis Small area estimation, Statistical learning	
ACADEMIC POSITION	Postdoctoral Research Associate, Texas A&M Institute of Data Science Postdoctoral Program Texas A&M University, College Station, TX Supervisors: Raymond J. Carroll, Irina Gaynanova and Yang Ni	Jun. 2020-Present
EDUCATION	Ph.D. in Statistics, University of Georgia, Athens, GA Under the direction of Gauri Sankar Datta and Jeongyoun Ahn	May 2020
	M.A. in Applied Statistics, Yonsei University, Seoul, Korea	Feb. 2014
	B.A. in Applied Statistics and B.S. in Physical Education, Yonsei University, Seoul, Korea	Aug. 2009
PUBLICATIONS	<ul style="list-style-type: none">[1] Chung, H. C., Ahn, J. (2020+) “Subspace rotations for high dimensional outlier detection”, <i>Journal of Multivariate Analysis</i> (to appear).[2] Ahn, J., Chung, H. C., Jeon, Y. (2020) “Trace ratio optimization for high-dimensional multi-class discrimination”, <i>Journal Computational and Graphical Statistics</i>, https://doi.org/10.1080/10618600.2020.1807352[3] Bell, W. R., Chung, H. C., Datta, G. S., Franco, C. (2019) “Measurement error in small area estimation: functional versus structural versus naïve models”, <i>Survey Methodology</i>, 45, 61-80.[4] Chung, H. C., Datta, G. S., Maples, J. (2019) “Estimation of median incomes of the American states: Bayesian estimation of means of subpopulations,” in <i>Opportunities and Challenges for Development: Essays for Sarmila Banerjee</i>, ed. Bandyopadhyay, S. and Dutta, M., Springer International, Chap. 23, pp. 505-518.[5] Markley, S., Hafley T., Allums C., Holloway S., Chung, H. C. (2020) “The limits of homeownership: Racial capitalism, black wealth, and the appreciation gap in Atlanta”, <i>International Journal of Urban and Regional Research</i>, 44, 310-328.[6] Fang, X., Sun, W., Jeon J., Azain M., Kinder H., Ahn J., Chung, H.C., Filipov, N., Zhao, Q., Rayalam S., and Park, H. (2020) “Perinatal docosahexaenoic acid	

supplementation improves cognition and alters brain functional organization in piglets”, *Nutrient*, 12

- [7] Fang, X., Jeon, J., Kinder, H., Azain, M., Zhao, Q., Ahn, J., **Chung H. C.**, Park, H. J. (2019). “The effect of maternal supplementation of lutein and docosa-hexaenoic acid on behavior and brain structures in offspring in a pig model (P11-005-19). *Current Developments in Nutrition*, 3 (Abstract publication in a conference proceeding).

MANUSCRIPT IN
PREPARATION

- [8] **Chung, H. C.**, Datta, G. S. (2020+) “Hierarchical Bayesian spatial models for small area estimation” (in review)
- [9] **Chung, H. C.**, Ahn, J. “Dimension reduction for high-dimensional regression via trace ratio optimization” (Soon to be submitted)
- [10] **Chung, H. C.**, Yang, N., Gaynanova, I. “Discriminant analysis based on truncated Gaussian copula”
- [11] **Chung, H. C.**, Gaynanova, I., Yang, N. “Phylogenetically informed Bayesian truncated copula graphical models for microbial association networks”
- [12] Lee, J., Datta, G. S., **Chung, H. C.** “Small area estimation using summary information”

HONORS AND
AWARDS

- Graduate School Travel Award**,
University of Georgia, Department of Statistics, Athens, GA 2019
- Richard G. Neal, Jr. Graduate Support Fund**
University of Georgia, Department of Statistics, Athens, GA 2019
- Outstanding Student Paper Award**,
Korean International Statistical Society, Portland, OR 2017
- RDC Travel Grant**,
University of Georgia, Department of Statistics, Athens, GA 2017
- Best Beginning Ph.D. Student**,
University of Georgia, Department of Statistics, Athens, GA 2016
- Graduate Inductee**,
Mu Sigma Rho: The National Statistical Honorary Society 2016
- Graduate School Assistantship** (fellowship equivalent),
University of Georgia, Graduate School, Athens, GA 2014-2016
- Jinli Scholarship** (Merit-based),
Yonsei University, Seoul, Korea 2006

PRESENTATIONS

- Computational and Methodological Statistics (CMStatistics 2020) Dec. 2020
“Phylogenetically informed Bayesian truncated copula graphical models for microbial association networks” (invited)

Joint Statistical Meeting, Denver, CO, USA	Jul. 2019
<i>“Subspace rotations for high-dimensional outlier detection” (contributed)</i>	
Deep Learning Group Meeting, Athens, GA	Jul. 2018
<i>“MCMC in deep learning”</i>	
Joint Statistical Meeting, Vancouver, BC, Canada	Jul. 2018
<i>“Random dual rotation: generalized permutation test for high dimension, low sample size data” (poster)</i>	
UGA/Clemson Joint Seminar, Athens, GA	Jul. 2018
<i>“Random dual rotation: generalized permutation test for high dimension, low sample size data” (poster)</i>	
RTI, Research Triangle Park, NC	Jun. 2017
<i>“Bayesian computation with R” (invited)</i>	
Centers for Disease Control and Prevention, Atlanta, GA	Apr. 2017
<i>“Bayesian computation in small area estimation with Stan” (invited)</i>	
Recent Developments in Statistical Science and Its Applications, Chung-Ang University, Seoul, Korea	Jul. 2016
<i>“Outlier detection for HDLSS data via random dual rotation” (invited)</i>	

ACADEMIC
EXPERIENCES

Research Assistantship

Department of Statistics, University of Georgia	Fall 2019 – Spring 2020
Building a public-use small area panel price index database using scanner data. (Funded by USDA National Institute of Food and Agriculture)	
Supervisors: Chen Zhen and Gauri Sankar Datta	
Department of Statistics, University of Georgia	Fall 2016 – Spring 2017
Small area estimation model and statistical software development for analysis of publicly available census, health survey, and surveillance data for improving district-level estimation of HIV prevalence in South Africa, (Funded by Centers for Disease Control and Prevention)	
Supervisor: Gauri Sankar Datta	
Department of Applied Statistics, Yonsei University	Fall 2013
Development for sufficient dimension reduction methods for Bernoulli predictors	
Supervisor: Hakbae Lee	

Statistical Consulting

Abt Associates, Cambridge, MA	Jan. – Mar. 2018
Provide advices for hierarchical Bayesian modeling and statistical computing	

Invited Referee

The American Statistician	Jan. 2018
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Teaching Assistantship

Department of Statistics, University of Georgia	
STAT6800 – Tools for Statistical Theory (graduate)	Fall 2019

- Guest lecturer

MSIT3000 – Statistical Analysis for Business (undergraduate) Summer 2019
 • Leading a discussion session (online)

STAT8530 – Advanced Statistical Inference (graduate) Spring 2019
 • Grading and solution preparation

STAT6820 – Statistical Inference (graduate) Spring 2019
 • Leading discussion session, grading and solution preparation

STAT8210 – Multivariate: Theory and Methods (graduate) Fall 2018
 • Grading, lecture material and solution preparation

Statistics Bootcamp for new graduate students Summer 2017, 2018, 2019
 • Leading discussion session on Mathematical Analysis and Linear Algebra

STAT4220 – Experimental Design (undergraduate) Fall 2017
 • Grading and leading discussion session

STAT2000 – Introductory Statistics (undergraduate)
 • Computer lab lecturing (3 hours per week) Spring 2018, Summer 2018
 • Computer lab lecturing (2 hours per week) Fall 2014, Spring 2015

Department of Applied Statistics, Yonsei University

STA1001 - Introduction to Statistics (undergraduate) 2009, 2012
 • Leading problem solving sessions (1 hour per week)

Middle School Teaching Internship

College of Sciences in Education, Yonsei University
 EDU4102 - Educational Field Research (Daeshin Middle School)
 • 4 weeks of teaching practice (physical education) Oct. 2008

Instructor

Department of Physical Education, Yonsei University
 PED1122 - Winter Sports Camp (graduate and undergraduate)
 • Snowboard instructor Spring 2005

PROGRAMMING SKILL Bash (Unix shell), C++, Java, Matlab, Python, R, SAS, Stan

PROFESSIONAL AFFILIATIONS American Statistical Association (ASA) 2015 – Present
 International Biometric Society (IBS) 2015 – Present
 Institute of Mathematical Statistics (IMS) 2015 – Present
 Korean International Statistical Society (KISS) 2018 – Present

PERSONAL EXPERIENCES **Martial Arts**
 Purple Belt in Brazilian Jiu-Jitsu under Adam and Rory Singer July. 2017

Military Service

Sergeant, Army Cadet Military School, Republic of Korea Army	2010 – 2012
An Exemplary Soldier, Republic of Korea Army	March. 2011

Snowboarding

AFRO Snowboard Camp, Gangwon, Korea Halfpipe Main Coach	Winter 2006 – 2008
Jisan Open Big Air Championship, Gyeonggi, Korea Big Air 6th place	Winter 2007
Innsbruck Winter Universiade Snowboard National Team of Korea Halfpipe 19th place	Jan. 2005
Snowboard Halfpipe National B Team of Korea	2000 – 2005
High-School Snowboard Championship, Korean Broadcasting System Halfpipe 1st place (Junior)	Jan. 2002
Snowboard National Championship, Korea Ski Association Halfpipe 2nd place (Junior)	Jan. 2002
Snowboard National Championship, Korea Ski Association Giant-Slalom 3rd place (Junior)	Jan. 2001
Sponsorship	
Nitro Snowboard	2001 – 2007
Grenade Gloves	2005 – 2007