# Shih-Han Sean Chang

**Curriculum Vitae** 

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Duke University

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Durham, NC 27708 USA

Website: Linkedin

RESEARCH INTEREST Bayesian Statistics. Statistical & Mathematical Modeling.

EDUCATION **Duke University**, Durham, NC, U.S.A. **Est.2015** 

Doctor of Philosophy, Statistical Science.

Field: Bayesian Statistics. Advisor: Prof. Jim Berger

Master of Science, Mathematics. 2011-2012

Qualifying Exam Topics: Probability Theory & Real Analysis.

Committee: Prof. Richard Durrett, Michael Reed

National Taiwan University, Taipei, Taiwan 2006-2010

Bachelor of Science, Mathematics.

Independent Studies: Differential Geometry.

AWARDS AND Dean's Award, National Taiwan University, June 2010.

HONORS Study Abroad Scholarship, Ministry of Education, Taiwan 2011

ACADEMIC EXPERIENCE

# Statistical and Applied Mathematical Science Institute (SAMSI), NC

June 2013

Modern Statistical and Computational Methods for Analysis of Kepler Data: A 3-week workshop with statisticians, NASA scientists and astronomers leading by Prof. Eric Ford on developing new analysis techniques of high dimensional exoplanet data from Kepler mission.

*Industrial Math & Stat. Modeling Workshop*: Modeling trend and incidence rates of Sexual Transmitted Diseases (STD) in the US with Bayesian hierarchical model and spatial statistics. supervised by prof Dr. Simone Gray (CDC) and Dr. Howard Chang (Emory).

Low-dimensional Structure in High-dimensional Systems summer school

### Department of Mathematics, Duke University, Durham, NC

Fall 2012

*Instructor*: Taught Laboratory Calculus (Math111L), managed the work of teaching assistants and a grader.

## **Department of Mathematics, National Taiwan University**

2009-2010

Teaching Assistant: Led recitation session once a week of Multivariable Calculus (I)(II) given by Prof. C.N. Tsai.

# Institute of Mathematics, Academia Sinica, Taipei, Taiwan

Aug 2007

*REU*: Participated in Summer School lectures by Prof. Ming-Chia Li. Studied the behavior of periodic points in Dynamical Systems.

#### **PUBLICATIONS**

- 1. (With J. Berger) Multiple Testing and Multiplicity Correction (in preparation).
- 2. (With A. Brouwer, et al.) Burden of Chlamydia in the United States: Trend Analysis of Incidence Rates. IMSM report.

#### **EXPERTISE**

#### Mathematics:

• Applied Mathematics, Probability Theory, Stochastic Processes, Real and Complex Analysis, Differential Geometry, Partial Differential Equations.

#### Statistics:

 Markov Chain Monte Carlo, Bayesian Data Analysis, Multivariate Statistics, Generalized Linear Models, Time Series, Principle Component Analysis.

## Programming Languages:

• Proficient in Matlab, R, S-Plus, JAGS, WinBUGS, C++, LATEX.

PROFESSIONAL
MEMBERSHIPS

Institute of Mathematical Statistics (IMS), Student member Society for Industrial and Applied Mathematics (SIAM), Student member 2013-present 2013-present

## SELECTIVE ACTIVITIES

Varsity Table Tennis Team, National Taiwan University National Service, Taiwan

2006-2008 2010-2011

# REFERENCES AVAILABLE TO CONTACT

Dr. Jim Berger (e-mail: berger@stat.duke.edu; phone: +1-919-684-4531)

- The Arts and Sciences Professor, Department of Statistical Science, Duke University
- ♦ Department of Statistical Science Duke University, Durham, NC 27708, USA
- ★ Dr. Berger is my current doctoral advisor.

# **Dr. Richard Durrett** (e-mail: rtd@math.duke.edu; phone: +1-919-660-6970)

- James B. Duke Professor, Departmet of Mathematics, Duke University
- ♦ Mathematics Department, Duke University, Durham, NC 27708, USA
- \* Dr. Durrett was in my oral Qualifying Exam committee.

### Dr. Michael Reed (e-mail: reed@math.duke.edu; phone: +1-919-660-2808)

- Professor, Department of Mathematics, Duke University
- ♦ Mathematics Department, Duke University, Durham, NC 27708, USA
- \* Dr. Reed was in my oral Qualifying Exam committee.

## Dr. Howard H. Chang (e-mail: howard.chang@emory.edu; phone: +1-404-712-4627)

- Assistant Professor, Department of Biostatistics and Bioinformatics, Emory University
- Rollins School of Public Health, Emory University 1518 Clifton Road, NE, Mailstop: 1518-002-3AA. Atlanta, Georgia 30322, U.S.A.
- \* Dr. Chang was the supervisor of IMSM workshop.