

CONTACT

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🌐 ChiaraDG

SKILLS

Statistics and Data Analysis 5+ yrs

R 5+ yrs

Git/Github 5+ yrs

STATA 5+ yrs

Python 3 yrs

SPSS 3 yrs

SQL <1 yr

Tableau <1 yr

CHIARA DI GRAVIO

PhD Candidate - Biostatistics

EDUCATION

PhD Biostatistics

2018 - Now

Vanderbilt University. Nashville (TN), USA

Expected graduation date: 06/2023

Topic: Design and analysis of cost and resource efficient epidemiological studies

Advisers: Jonathan Schildcrout, PhD and Ran Tao, PhD

MSc Statistics

2013 - 2015

The University of British Columbia. Vancouver (BC), Canada

Thesis: "Instrumental variables selection: a comparison between regularization and post-regularization methods"

Adviser: Gabriela Cohen Freue, PhD

MSc Actuarial and Financial Science

2010 - 2013

Sapienza University of Rome. Rome, Italy

Thesis: "Automobile insurance and direct compensation: Italian and French systems"

Adviser: Paola Verico, PhD.

Conferred cum laude

BSc Statistics, Finance and Insurance

2006 - 2009

Sapienza University of Rome. Rome, Italy

Adviser: Paola Verico, PhD.

Conferred cum laude

EXPERIENCE

Research Assistant

6/2019 - now

Vanderbilt University. Nashville (TN), USA

Design and analysis of cost and resource efficient studies for longitudinal data.

Advisers: Jonathan Schildcrout, PhD and Ran Tao, PhD

Integration of Randomized Controlled Trials and Observational Data. Adviser: Amir Asiaee, PhD

Provided statistical analyses for The Vanderbilt Inpatient Cohort Study (VICS).

Advisers: Jonathan Schildcrout, PhD and Sunil Kripalani, MD

Member of the Statistical Innovation in Clinical Trials Working Group

Statistician

9/2015 - 7/2018

MRC Lifecourse Epidemiology Unit. Southampton, UK

Statistician for the "Nutrition, Development and Lifelong Health in Transitioning Populations Programme"

Member of the Epigenetic Mechanisms linking Pre-conceptional nutrition and Health Assessed in India and Sub-Saharan Africa group <http://www.emphasisstudy.org/>.

SOFTWARE

binaryMM

Maintainer

R package to fit flexible marginalised models for binary correlated outcomes

Available on CRAN.

OMTM1

Maintainer

R package to fit flexible marginalised transition models for ordinal correlated outcomes

Available on Github.

PUBLICATIONS

- Schildcrout JS, Harrell F, Heagerty P, Haneuse S, **Di Gravio C**, Garbett S, Rathouz P, Shepherd B (2022). Model-assisted analyses in longitudinal, ordinal outcomes with absorbing stated. *Statistics in Medicine*, 41(4).
- Nongmaithem SS, Beaumont RN, Dedaniya A, Wood AR, Ogunkolade BW, Hassan Z, Krishnaveni GV, Kumaran K, Potdar RD, Sahariah SA, Krishna M, **Di Gravio C**, Mali ID, Sankareswaran A, Hussain A, Biswajit WB, Khan AKA, Knight BA, Frayling TM, Finer S, Fall CHD, Yajnik CS, Freathy RM, Hitman GA, Chandak GR (2022). Babies of South Asian and European Ancestry Show Similar Associations with Genetic Risk Score for Birth Weight Despite the Smaller Size of South Asian Newborns. *Diabetes*, 71(4).
- Antoun E, Issarapu P, **Di Gravio C**, Shrestha S, Betts M, Saffari A, Sahariah SA, Sankareswaran A, Arumalla M, Prentice AM, Fall CHD, Silver M, Chandak GR, Lillycrop K and the EMPHASIS study group (2022). DNA methylation signatures associated with cardiometabolic risk factors in children from India and The Gambia: results from the EMPHASIS study. *Clinical Epigenetics*, 14(1).
- Sahariah SA, Gandhi M, Chopra H, Kehoe SH, Johnson MJ, **Di Gravio C**, Patkar D, Sane H, Coakley PJ, Karkera AH, Bhat DS, Brown N, Margetts BM, Jackson AA, Kumaran K, Potdar RD, Fall CHD (2022). Body composition and cardiometabolic risk markers in children of women who took part in a randomized controlled trial of a pre-conceptional nutritional intervention in Mumbai, India. *The Journal of Nutrition*, 152(4).
- **Di Gravio C**, Tao R, Schildcrout JS (2022). Design and analysis of two-phase studies with multivariate longitudinal outcomes. *Biometrics*. *In press*
- Starnes J, **Di Gravio C**, Irlmeier R, Moore R, Okoth V, Rogers A, Ressler D, Moon T (2021). Characterizing multidimensional poverty in Migori County, Kenya and its association with depression. *PLOS ONE* 16(11): e0259848.
- Banerdt J, Mateyo K, Yan Y, Liu D, Zuo Y, **Di Gravio C**, Thome J, Riviello E, Saylor D, Ely W, Heimbürger D (2021). Risk factors for delirium among hospitalized patients in Zambia. *PLOS ONE* 16(4): e0249097.
- Kostelanetz S, **Di Gravio C**, Schildcrout JS, Roumie C, Conway D, Kripalani S (2021). Should we implement geographic or patient-reported social determinants of health measures in cardiovascular patients? *Ethnicity and Disease*, 31(1).
- Kumaran K, Joshi SM, **Di Gravio C**, Coakley PJ, Lubree H, Joglekar C, Bhat DS, Kinare AS, Bavdekar A, Bhavé SA, Pandit AN, Osmond C, Yajnik CS Fall CHD (2020). Do components of adult height predict body composition and cardiometabolic risk in a young adult South Asian Indian population? Findings from a hospital-based cohort study in Pune: The Pune Children's Study. *BMJ Open*, 10(10).
- Nunn RL, Kehoe SH, Chopra H, Sahariah SA, Gandhi M, **Di Gravio C**, Coakley PJ, Cox VA, Sane H, Shivshankaran D, Marley-Zagar E, Margetts BM, Jackson AA, Potdar RD, Fall CHD (2019). Dietary micronutrient intakes among women of reproductive age in Mumbai slums. *European Journal of Clinical Nutrition*, 73(11).
- **Di Gravio C**, Lawande A, Potdar RD, Sahariah SA, Gandhi M, Brown N, Chopra H, Sane H, Kehoe SH, Marley-Zagar E, Margetts BM, Jackson AA, Fall CHD (2019). The association of maternal age with fetal growth and newborn measures: the Mumbai Maternal Nutrition Project (MMNP). *Reproductive Science*, 26(7).
- **Di Gravio C**, Krishnaveni GV, Somashekara R, Veena SR, Kumaran K, Murali Krishna, Karat SC, Fall CHD (2018). Comparing BMI with skinfolds to estimate age at adiposity rebound and its associations with later cardio-metabolic risk markers. *International Journal of Obesity*, 43(4).

AWARDS

W. S. Gosset Award for Exceptional Research

Vanderbilt University. Department of Biostatistics. Nashville (TN), USA. 2022

Exceptional TA (Teaching Assistant) Award

Vanderbilt University. Data Science Institute. Nashville (TN), USA. 2021

Best Poster Award

19th Annual SNEHA - MRC International Workshop. Pune, India. 2016

UBC Department of Statistics Graduate Entrance Scholarship

University of British Columbia. Vancouver (BC), Canada 2013

Faculty of Graduate Studies, UBC International Partial Tuition Scholarship.

University of British Columbia. Vancouver (BC), Canada 2013 & 2014

Allison Rose Fellowship

Drexel University. Philadelphia (PA), USA. 2011

Student Collaboration Scholarship

Sapienza University of Rome. Rome, Italy. 2009

- Vasan S, Osmond C, Canoy D, Christodoulides C, Neville M, **Di Gravio C**, Fall CHD, Karpe F (2018). Comparison of regional fat measurements by dual-energy X-ray absorptiometry and conventional anthropometry and their association with markers of diabetes and cardiovascular disease risk. *International Journal of Obesity*, 42(4).
- Lawande A, **Di Gravio C**, Potdar RD, Sahariah SA, Gandhi M, Chopra H, Sane H, Kehoe SH, Marley-Zagar E, Margetts BM, Jackson AA, Fall CHD (2018). Effect of a micronutrient-rich snack taken pre-conceptionally and throughout pregnancy on ultrasound measures of fetal growth: the Mumbai Maternal Nutrition Project (MMNP). *Maternal & Child Nutrition Journal*, 14(1).
- Cortina MB, **Di Gravio C**, Osmond C (2017). El problema de todos los cumpleaños. *Laberintos e Infinitos* Numero 45.
- Chandak G, Silver M, Saffari A, Lillycrop K, Shrestha S, Sahariah SA, **Di Gravio C**, Goldberg G, Tomar A, Betts M, Sajjadi S, Acolatse L, James P, Issarapu P, Kumaran K, Potdar RD, Prentice A, Fall CHD and the EMPHASIS study group (2017). Protocol for the EMPHASIS study; epigenetic mechanisms linking maternal pre-conceptional nutrition and children's health in India and Sub-Saharan Africa. *BMC Nutrition*, 3(81).
- Inskip H, Ntani G, Westbury L, **Di Gravio C**, D'Angelo S, Parsons C, Baird J (2017). Getting started with tables. *Archives of Public Health*; 75(14).

TEACHING & MENTORSHIP

Teaching Assistant

Vanderbilt University. Nashville (TN), USA

2019 - Now

BIOS7330 Regression Modelling Strategies - Spring 2022. Instructor: Frank Harrell, PhD

BIOS7632 Advanced Statistical Inference (Statistical Learning) - Spring 2021. Instructor: Matt Shotwell, PhD

DS5440 Data Science Algorithm - Fall 2020, 2021, 2022. Instructor: Diego Mesa, PhD

MSCI Biostatistics II - Spring 2020. Instructors: Thomas Stewart, PhD and Frank Harrell, PhD

BIOS6301 Introduction to Statistical Computing. Instructor: Cole Beck, BSc

BIOS6312 Modern Regression Analysis - Spring 2019. Instructor: Robert Johnson, PhD

Co-supervisor for students in the Statistics with Application in Medicine MSc

University of Southampton. Southampton, UK.

2016 - 2017

Project: The role of the intrauterine environment in the development of childhood obesity: evidence from the Southampton Women Study. Student: Adam Von Ende. Main supervisor: Sarah Crozier, PhD.

Project: Does undernutrition lead to variability in menstrual cycle length? Student: Daniella Gossage. Main supervisor: Clive Osmond, PhD.

Teaching Assistant

The University of British Columbia. Vancouver, BC (Canada)

2013 - 2015

STAT300 Intermediate Statistics for Applications - Fall 2013, 2014. Served as Head TA during Fall 2014. Instructors: Bruce Dunham, PhD and Lang Wu, PhD

STAT200: Elementary Statistics for Applications - Spring 2014, 2015, Summer 2015. Served as Head TA during summer 2015. Instructor: Eugenia Yu, MSc.

PRESENTATIONS

ENAR 2022 Spring Meeting. Houston (TX), USA

3/2022

Oral presentation

Efficient Design and Analysis of a Two-Phase Study with Longitudinal Binary Outcomes [Slides].

Vanderbilt Department of Biostatistics Weekly Seminar.

9/2021

Nashville (TN), USA

Oral presentation

Design and Analysis of Two-Phase Studies with Multivariate Longitudinal Outcomes [Slides].

ENAR 2021 Spring Meeting. Virtual

3/2021

Oral presentation

Design and Analysis of Two-Phase Studies with Multivariate Longitudinal Outcomes [Slides].

ENAR 2020 Spring Meeting. Virtual

3/2020

Oral presentation

Multiple imputation of an expensive covariate in outcome dependent sampling designs for longitudinal data [Slides].

10th World Congress on Development Origins of Health and Disease (DOHaD). Rotterdam, Netherlands

10/2017

Poster presentation

The association of maternal age with fetal growth and newborn measures: the Mumbai Maternal Nutrition Project (MMNP).

61th Annual Scientific Meeting: Society of Social Medicine. Manchester, UK

09/2017

Poster presentation

Comparing BMI with skinfolds to estimate age at adiposity rebound and associations with later cardio-metabolic risk markers.

Nutrition and Nurture in Infancy and Childhood. Grange-over-Sands, UK

06/2017

Poster presentation

A pre-conceptional micronutrient-rich food-based snack for women in Mumbai slums did not increase ultrasound measures of fetal growth.

20th Annual SNEHA - MRC International Workshop. Pune, India

02/2017

Oral presentation

Comparing BMI with skinfolds to estimate age at adiposity rebound and associations with later cardio-metabolic risk markers.

19th Annual SNEHA - MRC International Workshop. Pune, India

02/2016

Poster presentation

A pre-conceptional micronutrient-rich food-based snack for women in Mumbai slums did not increase ultrasound measures of fetal growth.

UBC Department of Statistics Weekly Seminar. Vancouver (BC), Canada

08/2015

Oral presentation

Instrumental variables selection: a comparison between regularisation and post-regularisation methods.

EXTRACURRICULAR ACTIVITIES

Referee

2016 - Now

Peer-reviewed the statistical analysis section of different journals

BMJ Open, Pediatrics, Obesity, International Journal of Epidemiology, JAMA Pediatrics, Journal of Epidemiology and Community Health

Vanderbilt University, Biostatistics Graduate Student Association (BGSA): Treasurer
Nashville (TN), USA

2020-2022

MRC Lifecourse Epidemiology Unit - University of Southampton
Southampton, UK

2016-2018

Organised and led R training session for members of the MRC Lifecourse Epidemiology Unit.

Programme representative to liaise with the MRC Lifecourse Epidemiology Unit publications database team.

Coursera

2015 - Now

Online Learning Platform

Member of the Global Translator Community

Specialisation completed: Python for everybody (University of Michigan), Data science (Johns Hopkins University), Machine learning (University of Washington), Applied data science with Python (University of Michigan).

The University of British Columbia
Vancouver (BC), Canada

2013 - 2015

Organised the 2014 SFU/UBC Statistics Joint Seminar, a biannual seminar intended to give UBC and SFU graduate students a chance to raise awareness about areas of research in statistics, network with other students and faculty members, and share their research

Short term consulting projects (2014 only): *Impacts of the Canadian Stem Cell Network on Career Trajectories*. *Evaluation of Deficit Irrigation Strategies to Accelerate Fruit Ripening in Grapevine Berries*. *Pediatric Hospital Dental Emergency Cases: A Quantitative and Qualitative Analysis*.

Organised weekly Italian classes for beginners at St. John's College UBC (Fall 2013)