CURRICULUM VITAE

Jing Ma, Ph.D.

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PERSONAL DATA

Place of Birth	Henan, China
Citizenship	China
Work Address	Fred Hutchinson Cancer Center Division of Public Health Sciences 1100 Fairview Ave. N PO Box 19024 - M3-B232 Seattle, WA 98109-1024
Email	jingma@fredhutch.org
Website	https://drjingma.com/

EDUCATION

2006-2010	Fudan University, Shanghai, China, B.S., Mathematics with University Distinction (Highest)
2010-2015	University of Michigan, Ann Arbor, MI, Ph.D., Statistics Advisor: Prof. George Michailidis

POSTGRADUATE TRAINING

2015-2017	Postdoctoral Research Fellow, Department of Biostatistics and Epidemiology & Department of Statistics, University of Pennsylvania.

FACULTY POSITIONS

2017-	Fred Hutchinson Cancer Center, Division of Public Health Sciences. Assistant Professor of Biostatistics, 2017-2023 Affiliate Assistant Professor of Biostatistics, University of Washington, 2019- Associate Professor of Biostatistics, 2023-
2019-2023	Texas A&M University, Department of Statistics. Assistant Professor, 2019-2020 Adjunct Assistant Professor, 2020-2023

HOSPITAL POSITIONS

Not Applicable.

HONORS

National Awards

2008	National Merit Scholarship from Ministry of Education of China
2015	Travel Award, National Science Foundation
2018	Travel Award, Data Science Innovation Lab

2018 Travel Award, The Jayne Koskinas Ted Giovanis Foundation for Health and Policy

Department/University Awards

2010 College Graduate Excellence Award of Shanghai
2011 Outstanding First Year Ph.D. Student Award
2011-2012 Rackham International Students Fellowship
2012-2013 Graduate Student Instructor Excellence in Teaching Award
2012-2015 Rackham School of Graduate Studies Conference Travel Grant

BOARD CERTIFICATION

Not Applicable.

LICENSURE

Not Applicable.

PROFESSIONAL ORGANIZATIONS

2010- Member of American Statistical Association
2014- Member of International Chinese Statistical Association
2016-2017 Member of Eastern North American Region International Biometric Society

TEACHING RESPONSIBILITIES

Instructor at the University of Michigan

- STAT250: Introduction to Statistics and Data Analysis (Lab Instructor). Fall 2010 & Winter 2011
- Applied Qualifying Exam. Summer 2012, 2013 & 2014
- Linear Algebra Bootcamp. Summer 2013 & 2014

Graduate Student Instructor at the University of Michigan

- English Language Institute. Summer 2011
- STAT600: Applied Statistics and Data Analysis. Fall 2011 & 2012
  - *GSI Excellence in Teaching Award*
- STAT425: Introduction to Probability and Statistics. Fall 2011 & Winter 2012
- STAT601: Multivariate and Categorical Data Analysis. Winter 2012

Instructor at Texas A&M University

- STAT312: Statistics for Biology. Fall 2019

Postdoctoral Fellows

2018-2020 Yue Wang, PhD in Biostatistics, UNC Chapel Hill (joint with Ali Shojaie).
First position: Assistant Professor of Statistics at Arizona State University.
Current position: Assistant Professor of Biostatistics & Informatics at the University of Colorado Anschutz Medical Campus
2021-2022 Ilias Moysidis, PhD in Statistics, Pennsylvania State University.

Current/First position: Researcher at Centre for Research & Technology - Hellas, Greece.

Graduate Students

2017-2019	Kun Yue, UW Biostatistics PhD student, joint with Ali Shojaie. *Current position*: Data and Applied Scientist at Microsoft
2020-2022	Kristyn Pantoja, Texas A&M Statistics PhD student, joint with David Jones. *Current position*: Principal Biostatistician at Novartis
2022-2024	Xinyi Xie, UW Statistics MS student.
2022-2024	Wenjie Guan, UW Statistics MS student. *Current position*: PhD student in Statistics at Cornell University
2023-2024	Zichun Xu, UW Biostatistics PhD student.
2024-	Paizhe Xie, UW Statistics MS student.
2024-	Bumjun Park, UW Biostatistics PhD student.
2024-	Mohamad Daniel Bairakdar, UW Biostatistics PhD student.

Undergraduate Students

2021-2022	Lakshin Kumar, UW Biochemistry undergraduate student, joint with Daniel Promislow.
2022-2023	Antoinette Fang, University of Chicago Mathematics undergraduate student.

Student Collaborator

2017-2018	Nanxun Ma, UW Biostatistics PhD student, working with Michael Wu.
2018-2020	Michael Hellstern, UW Statistics MS student, working with Ali Shojaie.
2020-2021	Yunbi Nam, UW Biostatistics MS student, working with the Dog Aging Project.

MS and PhD Committees in Non-Chair Role

2018-2019	Arjun Sondhi, UW Biostatistics PhD student (advisor: Ali Shojaie).
2022-2023	Pearl Liu, UW Biostatistics PhD student (advisor: Michael Wu).
2022-2023	Fang Nan, UW Biostatistics MS student (advisor: Chongzhi Di).
2024-	Jordan Jackson, UW Molecular Medicine and Mechanisms of Disease PhD student (advisor: Neel Dey)

Independent Study Students

2020	Yuan Tian, UW Biostatistics MS student.
2022-2023	Yinsheng Wang, UW Operations Research PhD student.
2023	Jordan Jackson, UW Molecular Medicine and Mechanisms of Disease PhD student.

Invited Talks at Conferences and Symposia

06/14 International Chinese Statistical Association/Korean International Statistical Society Joint Applied Statistics Symposium, Portland, OR

06/16 International Chinese Statistical Association Applied Statistics Symposium, Atlanta, GA

06/17 International Chinese Statistical Association Applied Statistics Symposium, Chicago, IL

03/18 Fred Hutch Microbiome Symposium, Seattle, WA

06/18 Data Science Innovation Lab: Mathematical Challenges of Single Cell Dynamics, Bend, OR

07/18 The 12th International Vilnius Conference on Probability Theory and Mathematical Statistics / 2018 IMS Annual Meeting on Probability and Statistics, Vilnius, Lithuania (Organizer: Hongzhe Li)

07/18 Joint Statistical Meetings, Vancouver, Canada (Topic-contributed session; Organizer: Ni Zhao)

12/18 The 11th International Conference of the ERCIM WG on Computational and Methodological Statistics, Pisa, Italy (Invited session; Organizer: Yin Xia)

02/19 The Role of Genomics and Metagenomics in Human Health: Recent Developments in Statistical and Computational Methods, Banff, Canada (Organizer: Hongzhe Li)

07/19 International Chinese Statistical Association Conference, Tianjin, China

12/19 The 12th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK (Invited session; Organizer: Ni Yang)

08/20 (Virtual) Joint Statistical Meetings, Philadelphia, PA (Topic-contributed session; Organizer: Sandipan Roy)

02/22 (Virtual) IMSI Workshop – Multiscale Microbial Communities: Dynamical Models, Ecology, and One Health, Chicago, IL (Organizers: Hongzhe Li, Pamela Martinez, Shulei Wang)

07/22 (Virtual) International Chinese Statistical Association Conference, Xi'an, China (Invited session; Organizer: Gen Li)

12/22 (Virtual) The 14th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK (Invited session; Organizer: Aaron Molstad)

06/23 International Chinese Statistical Association Applied Statistics Symposium, Ann Arbor, MI (Invited session; Organizer: Wen Zhou)

06/24 International Chinese Statistical Association Applied Statistics Symposium, Nashville, TN (Invited session; Organizer: Qian Wu)

09/24 Royal Statistical Society 2024 Conference, Brighton, UK (Contributed session)

Invited Seminars and Colloquia

10/16 (Virtual) Department of Mathematics and Statistics, Lancaster University, Lancaster, UK

01/17 Department of Statistics, University of Warwick, Coventry, UK.

02/17 Biostatistics Program, Public Health Sciences Division, Fred Hutchinson Cancer Research Center, Seattle, WA.

01/18 Department of Biostatistics, University of Washington, Seattle, WA.

01/18 Department of Statistics, University of Florida, Gainesville, FL

01/18 Biostatistics/ATME Joint Seminar, Public Health Sciences Division, Fred Hutchinson Cancer Research Center, Seattle, WA

02/18 Statistical Learning Applied to Biology Lab Seminar, Department of Biostatistics, University of Washington, Seattle, WA

02/18 Mini-TED Talk at Translational Research Program, Public Health Sciences Division, Fred Hutchinson Cancer Research Center, Seattle, WA

11/18 Department of Statistics, Texas A&M University, College Station, TX

09/19 University of Michigan 50th Anniversary Symposium, Ann Arbor, US

12/19 (Virtual) The Dog Aging Project Science Seminar Series, Texas A&M University, College Station, TX

10/20 (Virtual) Hanash Lab Meeting, The University of Texas MD Anderson Cancer Center

01/21 (Virtual) Gut Origins of Latino Diabetes (GOLD) Monthly Meeting, Albert Einstein College of Medicine, New York, NY

03/21 (Virtual) Translational Data Science Seminar Series, Fred Hutchinson Cancer Research Center, Seattle, WA

11/21 (Virtual) Biostatistics Seminar Series, Fred Hutchinson Cancer Research Center, Seattle, WA

11/21 (Virtual) ASA Section of Statistics in Genomics and Genetics (SSGG) Webinars

07/22 (Virtual) Guest Speaker at Wellcome Genome Course on "Genetic Analysis of Mendelian and Complex Disorders"

09/22 (Virtual) Gut Origins of Latino Diabetes (GOLD) Monthly Meeting, Albert Einstein College of Medicine, New York, NY

10/22 Mini-TED Talk at Public Health Sciences Division Faculty Meeting, Fred Hutchinson Cancer Center, Seattle, WA

10/22 (Virtual) Fred Hutch-UW Rigor, Reproducibility and Transparency Seminar Series, Seattle, WA

04/23 (Virtual) Fred Hutch Microbiome Research Initiative Seminar Series, Seattle, WA

05/23 (Virtual) Fred Hutch Data of Cancer Research Seminar Series, Seattle, WA

06/23 Fred Hutch Public Health Sciences Promotion Seminar, Seattle, WA

04/24 Fred Hutch Public Health Sciences All Staff Seminar, Seattle, WA

04/24 UW STAT/BIOST 111 Undergraduate Seminar Series, Seattle, WA

07/24 Fred Hutch SeattleStatGROWS Scientific Talk, Seattle, WA

EDITORIAL RESPONSIBILITIES

None.

SPECIAL NATIONAL RESPONSIBILITIES

Grant Review

02/2022	NIH Biodata Management and Analysis (BDMA) Study Section
03/2023	NIH Small Business: Computational, Modeling, and Biodata Management (MCST-14) Study Section
03/2024	NIH Special Emphasis Panel ZRG1

Committee

2023	Member of 2023 WNAR Conference Organizing Committee
2024-	Chair of ASA Section on Genomics and Genetics Student Paper Award Committee

Conference Review

2016	Reviewer for International Conference on Information Systems
2016	Reviewer for Conference on Neural Information Processing Systems (NeurIPS)
2018	Judge for ASA Section on Genomics and Genetics Student Paper Competition
2018	Reviewer for Conference on Neural Information Processing Systems (NeurIPS)

2019	Judge for ASA Section on Genomics and Genetics Student Paper Competition
2020	Judge for ASA Section on Genomics and Genetics Student Paper Competition
2022	Judge for ICSA Student Paper Competition
2023	Judge for ASA Section on Genomics and Genetics Student Paper Competition
2024	Judge for ASA Section on Genomics and Genetics Student Paper Competition

Referee Service

Annals of Applied Statistics,
Bioinformatics,
Biometrika,
Biometrical Journal,
Biometrics,
Biostatistics,
BMC Bioinformatics,
Electronic Journal of Statistics,
Frontiers in Genetics,
Gut Microbes,
IEEE Access,
Journal of Computational Biology,
Journal of the American Statistical Association – Applications & Case Studies,
Journal of the American Statistical Association – Theory & Methodology,
Journal of Machine Learning Research,
Journal of Multivariate Analysis,
Molecular & Cellular Proteomics,
Nucleic Acids Research,
Nature Communications,
Optimization and Engineering,
PLOS Computational Biology,
Scientific Reports,
Statistics in Biosciences,
Statistics in Medicine,
Structural Equation Modeling,
Wiley Interdisciplinary Reviews: Computational Statistics

SPECIAL LOCAL RESPONSIBILITIES

Grant Review

2020	Fred Hutch Translational Data Science Integrated Research Center Pilot Grant
2020	UW Institute of Translational Health Sciences Research Innovation Award
2020	Fred Hutch Division of Public Health Sciences Bid & Proposal Projects
2021	Fred Hutch Translational Data Science Integrated Research Center Pilot Grant
2024	Fred Hutch Translational Data Science Integrated Research Center Pilot Grant

University of Michigan

2011-2012	Coordinator of Reading Group on Statistical Modeling and Analysis of Networks, Department of Statistics
2011-2013	Co-Chair, Graduate Student Statistical Topics Seminar Series, Department of Statistics
2012-2013	Student committee member of the Seventh Michigan Student Symposium for Interdisciplinary Statistical Sciences

Fred Hutchinson Cancer Center & University of Washington

03/18	Organizing committee member of the 2018 Fred Hutch Microbiome Symposium
03/18	Faculty host for UW Biostatistics Prospective PhD Student Visit Days
2019	Chair of Biostatistics Seminar Series
03/21	Faculty host for UW Biostatistics Prospective PhD Student Visit Days
10/21	Panelist for Fred Hutch Biostatistics Post-doc faculty recruitment meeting
03/22	UW MSTP Prospective MD/PhD Student Interview
03/22	Fred Hutch PHS Biostatistician/Clinical Trialist Faculty Search Interview
05/22	Judge for Fred Hutch Joint Microbiome Research Initiative & Pathogen-Associated Malignancies IRC Retreat Lightning Talks and Posters
10/22-11/22	Organizing committee member of the 2022 Fred Hutch Biostatistics Program Faculty Retreat
03/23	Faculty host for UW Biostatistics Prospective PhD Student Visit Days
05/23	Reviewer for Fred Hutch PHS Research Staff Appreciation Award
01/24-04/24	Organizing committee member of the 2024 Fred Hutch PHS Faculty Retreat Fred Hutch PHS Biostatistics Program Head Search Interview
05/24	Fred Hutch PHS Epidemiology Junior Faculty Search Interview
05/24 -	Fred Hutch Chen Hu Endowed Trainee Travel Award Committee

Texas A&M University

2019-2020	Chair of grants writing committee

RESEARCH FUNDING

Current projects as Principal Investigator

2022-2027 NIH R01 GM145772
Title: *Statistical Methods for Network-based Integrative Analysis of Microbiome Data*
Total costs: $1,838,548
FTE: 25%

2022-2024 Fred Hutch Translational Data Science Integrated Research Center Pilot Award
Title: *Systems biology analysis of the immunomodulatory influence of circulating gut microbe-derived metabolites after transplantation*
Role: Contact PI; MPI with Kate Markey
Total costs: $100,000
FTE: 15%

Current projects as Co-Investigator

2020-2024 NIH R01 GM133848 (PI: Shojaie A; Sub PI)
Title: *Novel Statistical Inference for Biomedical Big Data*
Total costs (subaward): $193,903

FTE: 10%

2018-2024 NIH R01 CA217970 (PI: Phipps A)
Title: *Bacterial Correlates of Colorectal Cancer Subtypes and Survival*
Total costs (subaward): $2,839,982
FTE: 5%

2023-2027 NIH R01 GM151301 (PI: Wu M)
Title: *Statistical Methods for Enhanced Mapping of Microbiome Relationships*
FTE: 5%

Completed projects as Principal Investigator

2021-2022 Fred Hutch Pathogen-Associated Malignancies Integrated Research Center / Microbiome Research Initiative Pilot Award
Title: *Statistical Methods for Network-based Analysis of the Colorectal Cancer Microbiome*
Total costs: $75,000
FTE: 15%

Completed projects as Co-Investigator

2016-2018 NIH R21 AI129712 (PI: Roxby A; Sub: Fredricks D)
Title: *DMPA Use and Vaginal Bacterial Diversity among African Women*
Total costs (subaward): $240,924
FTE: 4%

2016-2021 NIH R01 ES025796 (PI: Self S)
Title: *The Impact of Prenatal Exposure to Persistent Organic Pollutants on Kinetics of Immune Response to Vaccines and Seroprotection in Infants*
Total costs: $2,940,493
FTE: 10%

2018-2022 NIH R01 GM129512 (PI: Wu M)
Title: *Joint Analysis of Microbiome and Other Genomic Data Types*
Total costs: $1,584,000
FTE: 15%

2018-2023 NIH U19 AG057377 (PI: Promislow D; Sub PI: Schwartz S)
Title: *The Dog Aging Project: The Genetic and Environmental Determinants of Healthy Aging in Companion Dogs*
Role: Co-Investigator; Data and Analysis Core Co-Lead
Total costs (subaward): $1,077,911
FTE: 10%

BIBLIOGRAPHY

[* indicates five most significant publications.]
[† indicates alphabetical ordering authorship.]
[✉ indicates corresponding author.]
[Names underlined indicates student or postdoc mentored.]

a). Publications in Refereed Journals

1. **Ma J**, Shojaie A and Michailidis G. Network-based pathway enrichment analysis with incomplete network information. *Bioinformatics*. 32(20):3165–3174, 2016. [**original methodology**]

2. ***Ma J** and Michailidis G. Joint structural estimation of multiple graphical models. *Journal of Machine Learning Research*. 17:1–48, 2016. [**original methodology**]

3. von Rundstedt, F, Kimal, R, **Ma, J**, Arnold, J, Gohlke, J, Putluri, V, Krishnapuram, R, Piyarathna, D, Lotan, Y, Godde, D, Roth, S, Storkel, S, Levitt, J, Michailidis, G, Lerner, S, Coarfa, C, Sreekumar, A, Putluri, N. Integrated pathway analysis of a metabolic signature in bladder cancer - a linkage to The Cancer Genome Atlas project and prediction of survival. *Journal of Urology*. 195(6):1911–1919, 2016. [**original work**]

4. †Cai TT, **Ma J** and Zhang L. CHIME: clustering of high-dimensional Gaussian mixtures with EM algorithm and its optimality. *Annals of Statistics*. 47(3):1234–1267, 2019. [**original methodology**]

   - L. Zhang was a recipient of ASA Biopharmaceutical Section Student Paper Award at the 2017 ICSA Applied Statistics Symposium.

5. *†Cai TT, Li H, **Ma J**✉, and Xia Y. Differential Markov random field analysis with applications to detecting differential microbial community networks. *Biometrika*. 106(2):401–416, 2019. [**original methodology**]

6. ***Ma J**, Karnovsky A, Afshinnia F, Wigginton J, Feldman H, Rader D, Shama K, Porter A, Rahman M, He J, Hamm L, Shafi T, Pennathur S, Michailidis G. Differential network-based enrichment analysis of lipid pathways altered in Chronic Kidney Disease progression. *Bioinformatics*. 35(18):3441–3452, 2019. [**original methodology**]

7. **Ma J**✉, Shojaie A and Michailidis G. A comparative study of topology-based pathway enrichment analysis methods. *BMC Bioinformatics*. 20 (546). 2019. [**review**]

8. Wang Y, Randolph T, Shojaie A and **Ma J**✉. The generalized matrix decomposition biplot and its application to the microbiome data. *mSystems*. 4:e00504-19. 2019. [**original methodology**]

   - Selected as **Editor's pick**.

9. Vantaku V, Putluri V, Bader D, Maity S, **Ma J**, $\cdots$, Sreekumar A and Putluri N. Epigenetic loss of AOX1 expression via EZH2 leads to metabolic deregulation in bladder cancer. *Oncogene*. 39:6265–6285, 2020. [**original work**]

10. ***Ma J**. Joint microbial and metabolite network estimation with the censored Gaussian graphical model. *Statistics in Biosciences*. 13:351–372, 2021. [**original methodology**]

11. Hellstern M, **Ma J**, Yue K and Shojaie A. netgsa: Fast computation and interactive visualization for topology-based pathway enrichment analysis. *PLoS Computational Biology*. 17(6): e1008979, 2021. [**original work**]

12. Yue K, **Ma J**, Thornton T and Shojaie A. REHE: fast variance components estimation for linear mixed models. *Genetic Epidemiology*. 45(8):891–905, 2021. [**original methodology**]

    - Kun Yue was a recipient of the Best Student Paper Award at the 2021 WNAR meeting.

13. Creevy KE, Akey JM, Kaeberlein M, Promislow DE, and Dog Aging Project Consortium (..., **Ma J**, ...). An open science study of ageing in companion dogs. *Nature*. 602:51–57, 2022. [**collaboration**]

14. Schwartz SM, Urfer SR, White M, Megquier K, Shrager S, Dog Aging Project Consortium (..., **Ma J**, ...), Akey JM, Benton B, Borenstein E, Castelhano MG, Coleman AE. Lifetime prevalence of malignant and benign tumors in companion dogs: cross-sectional analysis of Dog Aging Project baseline survey. *Veterinary and Comparative Oncology*. 20(4):797–804, 2022. [**collaboration**]

15. Bray EE, Zheng Z, Tolbert MK, McCoy BM, Dog Aging Project Consortium (..., **Ma J**, ...), Kaeberlein M, Kerr KF. Once-daily feeding is associated with better health in companion dogs: results from the Dog Aging Project. *GeroScience*. 44:1779–1790, 2022. [**collaboration**]

16. Lee H, Collins D, Creevy K, Promislow DE, and Dog Aging Project Consortium (..., **Ma J**, ...). Age and physical activity levels in companion dogs: results from the Dog Aging Project. *The Journals of Gerontology: Series A*. 77(10):1986–1993, 2022. [**collaboration**]

17. Hoffman JM, Tolbert MK, Promislow DE, Dog Aging Project Consortium (..., **Ma J**, ...). Demographic factors associated with joint supplement use in dogs from the Dog Aging Project. *Frontiers in Veterinary Science*. 9:906521, 2022. [**collaboration**]

18. Yarborough S, Fitzpatrick A, Schwartz SM, and Dog Aging Project Consortium (..., **Ma J**, ...). Evaluation of cognitive function in the Dog Aging Project: associations with baseline canine characteristics. *Scientific Reports*. 12:13316, 2022. [**collaboration**]

19. Praczko D, Tinkle AK, Arkenberg CR, McClelland RL, Creevy KE, Tolbert MK, Barnett BG, Chou L, Evans J, McNulty KE, Dog Aging Project Consortium (..., **Ma J**, ...), and Levine JM. Development and evaluation of a survey instrument to assess veterinary medical record suitability for multi-center research studies. *Frontiers in Veterinary Science*. 9:941036, 2022. [**collaboration**]

20. Collins D, Lee H, Dunbar MD, Crowder K, and Dog Aging Project Consortium (..., **Ma J**, ...). Associations between neighborhood disadvantage and dog walking among participants in the Dog Aging Project. *International Journal of Environmental Research and Public Health*. 9(18):11179, 2022. [**collaboration**]

21. Bray EE, Raichlen DA, Forsyth KK, Promislow DE, Alexander GE, MacLean EL, and Dog Aging Project Consortium (..., **Ma J**, ...). Associations between physical activity and cognitive dysfunction in older companion dogs: results from the Dog Aging Project. *GeroScience*. 45(2):645–661, 2023. [**collaboration**]

22. *Wang Y, Shojaie A, Randolph T, Knight P, and **Ma J**. Generalized matrix decomposition regression: estimation and inference for two-way structured data. *The Annals of Applied Statistics*. 17(4): 2944–2969, 2023. [**original methodology**]

23. McNulty KE, Creevy KE, Fitzpatrick A, Wilkins V, Barnett BG, Dog Aging Project Consortium (..., **Ma J**, ...), and Ruple A. The Dog Aging Project End of Life Survey: development and validation of a novel instrument to capture companion dog mortality data. *Journal of the American Veterinary Medical Association*. 261(9):1326–1336, 2023. [**collaboration**]

24. Xue D, Collins D, Kauffman M, Dunbar M, Crowder K, Schwartz SM, Dog Aging Project Consortium (..., **Ma J**, ...) and Ruple A. Big data from small animals: integrating multi-level environmental data into the Dog Aging Project. *Scientific and Technical Review*. 42:65–74, 2023. [**collaboration**]

25. McCoy BM, Brassington L, Jin K, Dolby GA, Shrager S, Collins D, Dunbar M, Snyder-Mackler N, Dog Aging Project Consortium (..., **Ma J**, ...). Social determinants of health and disease in companion dogs: A cohort study from the Dog Aging Project. *Evolution, Medicine, and Public Health*. 11(1):187–201, 2023. [**collaboration**]

26. Forsyth KK, McCoy BM, Schmid SM, Promislow DE, Snyder-Mackler N, Dog Aging Project Consortium (..., **Ma J**, ...) and Creevy KE. Lifetime prevalence of owner-reported medical conditions in the 25 most common dog breeds in the Dog Aging Project pack. *Frontiers in Veterinary Science*. 10:1140417, 2023. [**collaboration**]

27. Pearson EB, Hoffman JM, Melvin RL, McNulty KE, Creevy KE, Dog Aging Project Consortium (..., **Ma J**, ...), and Ruple A. Analysis of 2570 responses to Dog Aging Project End of Life Survey demonstrates that euthanasia is associated with cause of death but not age. *Journal of the American Veterinary Medical Association*. 262(2):1–10, 2024 [**collaboration**]

28. Nam Y, White M, Karlsson EK, Creevy KE, Promislow DE, McClelland RL, and Dog Aging Project Consortium (..., **Ma J**, ...). Dog size and patterns of disease history across the canine age spectrum: results from the Dog Aging Project. *PLoS One*. Jan 2024 [**collaboration**]

29. Schmid SM, Hoffman JM, Prescott J, Ernst H, Promislow, DE, Dog Aging Project Consortium (..., **Ma J**, ...), and Creevy KE. The companion dog as a model for inflammaging: a cross-sectional pilot study. Submitted to *GeroScience*. Jun 2024. [**collaboration**]

b) Book Chapters

1. Li H and **Ma J**. Graphical models in genetics, genomics and metagenomics. In *Handbook of Graphical Models.* Editors: Mathias Drton, Steffen Lauritzen, Marloes Maathuis, Martin Wainwright. Chapman & Hall / CRC, 2018.
2. **Ma J**, Yue K and Shojaie A. Networks for compositional data. In *Statistical Analysis of Microbiome Data.* Editors: Subharup Guha, Somnath Datta. Springer, 2021

c) Published Software

- **CHIME**: Matlab code for clustering high-dimensional Gaussian mixtures with the EM algorithm. On GitHub.
- **DNEA**: R code for differential network-based enrichment analysis. On GitHub.
- **GMDecomp**: R package for generalized matrix decomposition (GMD) and GMD-biplots. On GitHub.
- **JSEM**: R code for joint structural estimation of multiple Gaussian graphical models. On GitHub.
- **KPR**: R package for kernel penalized regression and inference. On GitHub.
- **metaMint**: R package for joint estimation of metabolite and microbial interaction networks. On GitHub.
- **netgsa**: R package for network-based pathway enrichment analysis.
  - Stable release on CRAN.
  - Development version on GitHub.
- **REHE**: R code for fast variance component estimation in linear mixed models. On GitHub.
- **slr**: R package for regression and classification analysis of compositional data. On GitHub.
- **TestBMN**: R package for testing high-dimensional binary Markov networks. On GitHub.

d) Other Publications

1. **Ma, J.** Estimation and Inference in High-Dimensional Gaussian Graphical Models with Structural Constraints. University of Michigan. 2015. [PhD Thesis]

e) Manuscripts Submitted

1. Wang Y, **Ma J** and Shojaie A. Direct estimation of differential Granger causality between two high-dimensional time series. https://arxiv.org/abs/2109.07609. [**original methodology**]
2. **Ma J**✉, Pantoja K, and Jones DE. Regression and classification of compositional data via supervised log ratios. https://arxiv.org/abs/2304.00143. [**original methodology**]
3. Hargrave S, Bray E, McGrath S, Alexander G, Block T, Chao N, Darvas M, Douglas L, Galante J, Kennedy B, Kusick B, Moreno J, Promislow D, Raichlen D, Switzer L, Tees L, Aguilar MU, Urfer S, Dog Aging Project Consortium (..., **Ma J**, ...) and MacLean E. Characterizing Dog Cognitive Aging Using Spontaneous Problem-Solving Measures: Development of a Battery of Tests from The Dog Aging Project. Submitted to *GeroScience*. Jan 2024. [**collaboration**]

4. Dog Aging Project Consortium (..., **Ma J**, ...). Silicone tags as an effective method of monitoring environmental contaminant exposures in a geographically diverse sample of dogs from the Dog Aging Project. Submitted to *Frontiers in Veterinary Science*. Feb 2024. [**collaboration**]
5. Hill C, ..., **Ma J**, ... Fusobacterium nucleatum enrichment in colorectal tumor tissue: Associations with tumor characteristics and survival outcomes. Submitted to *Gastroenterology*. Jul 2024. [**collaboration**]