

Mark Gerstein

Williams Professor of Biomedical Informatics, Yale
Full CV as of 1 Jan. 2019 (with some sections less current)

Education

Harvard College	AB	1989	Physics (& History of Science)
Cambridge University	PhD	1993	Biophysics/Chemistry
Stanford University	post-doc	1993-1996	Bioinformatics

Positions

2006 -	AL Williams Prof. Biomedical Informatics, Yale U.
2002 -	co-director Yale Computational Biology & Bioinformatics Program
2017 -	co-director (interim) Yale Center for Biomedical Data Science
2006 -	Prof. Molecular Biophysics & Biochemistry, Yale U.
2006 -	Prof. Computer Science, Yale U.
2018 -	Prof. Statistics & Data Science, Yale U.
2001 - 2006	Assoc. Prof. Molecular Biophysics & Biochemistry and Computer Science, Yale U
1997 - 2001	Asst. Prof. Molecular Biophysics & Biochemistry, Yale U.

Honors

2015	ISCB (Intl. Society of Computational Biology) Fellow
2009	AAAS Fellow
1997 - 2001	Young Investigator Awards from Navy & IBM, and PhRMA, Donaghue, & Keck foundations
1993 - 1996	Damon Runyon-Walter Winchell post-doctoral Fellowship
1989 - 1993	Herchel-Smith Scholarship funded PhD at Cambridge
1989	Graduated college <i>summa cum laude</i> & <i>phi beta kappa</i>

Editorial Boards

Genome Research, Molecular Systems Biology, PLoS Comp Bio, GenomeBiology,
BMC Bioinformatics, Molecular & Cellular Proteomics, Protein Science,
Molecular Biology & Evolution, F1000 (co-head Big Data & Analytics Section)

Professional Experience (beyond Yale, but not including “for profits”)

Analysis Working Group co-chair: NHGRI ModENCODE Project ('07-'14), Brainspan Project ('09-),
1000 Genomes Functional Interpretation Group ('11-'15), exRNA consortium ('13-), ENCODE ('17-)
CMG [Centers for Mendelian Genomics] ('13-), PsychENCODE ('14-),
PCAWG-2 [PanCancer Analysis Working Group, non-coding drivers] ('14-),
ENCODE & cancer ('13-'16)

Member Toronto Integrative Biology SAB, Member Cytoscape SAB
NE Big Data Innovation Hub (NSF-sponsored), Governance Committee ('15-)
Program Committee BIBM '09, '12, '15
NIH Human Proteome Meeting Organizing Committee
NSF Workshops on Knowledge Management and Visualization Tools, '08

Teaching (as of 1 Jan. 2019)

Biomedical Data Science: Mining & Modeling

CBB752b, MBB752b, CS752b, MBB452, MBB753, MBB754, S&DS352

Principal instructor responsible for whole-semester course on fundamentals of bioinformatics and biomedical data science taught to advanced undergraduates and graduate students (from Computational Biology, Biophysics, CS and Statistics & Data Science).

Course comprised of 25 lectures of 75', each with weekly section, graded homework and quizzes, midterm and final project.

Taught continuously for 22 iterations (since '98 through '19), usually in Spring. (Name has been changed from Genomics & Bioinformatics, to Bioinformatics to its current name.) Course web site is GersteinLab.org/courses/452

Other Miscellaneous Current Teaching

Responsible Conduct of Research (MBB676b) in the Spring '14 & '15 (1 class)

Evidence Behind Health News (HLTH081) in Fall '16 (1 class)

Science and Politics of Cancer (MCDB 40) in Spring '17 (1 class)

Integrated Workshop (on physics, engineering & biology topics)

(MB&B 591a / ENAS 991a / MCDB 591a / PHYS 991a) in fall '18 (3 classes)

Clinical and Translational Informatics (CBB 740a), upcoming in Fall '19 (2 classes)

Notable Past Courses

Parts of (eg ~6 75' lectures)

1) CS Course "Introduction to Data Mining"

2) Molecular Biophysics course "Macromolecules"

Committee Work (as of 1 Jan. 2019)

Yale Activities in Computational Biology & Biomedical Data Science

Yale Computational Biology & Bioinformatics (CBB) Program

co-DGS & co-director with H Zhao (fall '02-),

(Previous to this was member of the track committee)

Also, member of CBB admissions committee (since '03-)

Yale Center for Biomedical Data Science (CBDS)

(interim) co-director with H Zhao (fall '17-),

Also, member of CBDS steering committee, membership committee & website committee

Medical School Strategic Planning Bridge sub-Committee on Biomedical Data Science

& subsequent Implementation Committee (co-chair, '14-'17)

Member of sub-group preparing data science proposal

for University Science Strategy Committee (USSC, '17-'18)

Thesis Research & Qualifying Exam committees in Comp. Bio. (>5)

Yale CS admissions (ad hoc review of applications in comp. biol., '17)

Yale Center for Research Computing Steering Committee ('15-)

co-director Keck Bioinformatics Resource ('12-'16)

Other University Activities

West Campus Systems Biology Institute Advisory Committee ('12-) & Comp. Biology Search ('15)

University Deputy CIO Search & Sr. Director Research Technologies ('12-'15)

CT Bio-compute Yale lead ('15)

MB&B Space Committee ('17-)

Gerstein Lab Personnel [Name, Role+Comment] (updated 16-Oct-2018)**PI(1)**

Mark Gerstein	Albert L Williams Professor	01/1997
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Laboratory Staff (2)

Mihali Felipe	Systems Administrator	11/2004
Lori Ianicelli	Administrative Assistant	03/2013

Research Scientists (7)

Jing Zhang	Assoc. Res. Sci.	02/2014
Joel Rozowsky	Research Scientist	09/2003
Jonathan Warrell	Assoc. Res. Sci.	09/2016
Prashant Emani	Assoc. Res. Sci.	02/2017
Shaoke Lou	Assoc. Res. Sci.	05/2015
Shuang Liu	Assoc. Res. Sci.	04/2015
Sushant Kumar	Assoc. Res. Sci.	12/2013

Postdoctoral Associates and Fellows (9)

Bian Li		07/2018
Chengfei Yan		11/2016
Fabio Navarro		10/2014
Gamze Gursoy		11/2016
Jinrui Xu		11/2015
Leonidas Salichos		09/2014
Timur Galeev		09/2014
Xu Shi		10/2017
Yucheng T. Yang		01/2018

Graduate Students (11)

Bo Wang	Chemistry	08/2013
Declan Clarke	Chemistry; short postdoc	08/2010
Donghoon Lee	CBB	08/2014
Hussein Mohsen	CBB	08/2016
Jiahao Gao	CBB	09/2017
Mengting Gu	CBB (CS master)	08/2013
Michael R. Schoenberg	MBB (jt. w. M Simon)	08/2012
Paul Muir	MCDB (jt. w. F Isaacs)	08/2013
Tianxiao Li	CBB (CS master)	09/2017
William Meyerson	CBB (MD/PhD)	08/2014
Xiaotong Li	CBB (jt. w. L Pusztai)	09/2014

Undergrads (11)

Amelia Farinas		02/2018
Flynn Chen		02/2018
George Gayed		06/2018
Jason Liu	full-time postgrad	05/2014
Jo-Jo Feng		05/2016
Joy Qiu		04/2018
Lifeng (Alex) Wang		02/2018
Mia Jackson		08/2018
Samuel Berry		04/2018
Sarah Wagner		06/2016
Yu Yan		09/2018

Misc (6)

Ria Rungta	MPH student	10/15/2018
Andrew Loza	Medical Resident	04/2018
Brian Barron	MD student	10/01/2015
Molly Green	full-time postgrad	11/2017
Patrick McGillivray	MD full-time in research year	06/05/2014
Shua Kim	High school student	07/2018

Past Postdoctoral Associates and Fellows (as of 31 Sep. '14, with selective updates on 5 Oct. '18)

Currently Holding a Faculty Position

Hedi Hedyi	1998 – 2000	CEITEC	Group Leader
Jiang Qian	1999 – 2002	Johns Hopkins	Prof.
Yuval Kluger	1999 – 2002	Pathology Dept., Yale U.	Assoc. Prof.
Paul Harrison	1999 – 2004	Biology Dept., McGill U	Tenured Assoc. Prof.
Nicholas Luscombe	2000 – 2004	Univ. College London	Tenured. Prof.
Zhaolei Zhang	2002 – 2004	CCBR, U of Toronto	Tenured. Prof.
John Karro	2003 – 2005	CS Dept., Miami U.	Assoc. Prof.
Olof Emanuelsson	2003 – 2005	Royal Inst. of Technology, Sweden	Asst. Prof.
Alberto Paccanaro	2003 – 2005	CS Dept. Royal Holloway, U of London	Prof.
Yu (Brandon) Xia	2003 – 2006	Bioengineering Dept., McGill U	Assoc. Prof.
Long Lu	2003 – 2006	Cincinnati Children's Hospital	Assoc. Prof.
Deyou Zheng	2003 – 2007	Albert Einstein College of Medicine	Prof.
Philip Kim	2004 – 2008	CCBR, U of Toronto	Tenured Assoc. Prof.
Jan Korbel	2005 – 2007	EMBL	Group Leader
Zhengdong Zhang	2005 – 2010	Albert Einstein College of Medicine	Asst. Prof.
Andrea Sboner	2006 – 2011	Cornell Medical School	Asst. Prof.
Gang Fang	2007 – 2014	NYU (Shanghai)	Asst. Prof.
Zhi (John) Lu	2008 – 2011	Tsinghua University	Asst. Prof.
Chao Cheng	2008 – 2012	Dartmouth University	Asst. Prof.
Alexej Abyzov	2008 – 2014	Mayo Clinic/U of Minnesota	Asst. Prof.
Ekta Khurana	2008 – 2014	Weill Cornell Medical College	Asst. Prof.
Arif Harmanci	2010 – 2017	UTHealth	Asst. Prof.
Cristina Sisu	2011 – 2017	Brunel University London	Asst. Prof.
Yan Zhang	2012 – 2015	Ohio State	Asst. Prof.
Daifeng Wang	2012 – 2016	SUNY – Stony Brook	Asst. Prof.
Daniel Spakowicz	2014 – 2017	The Ohio State University Wexner Medical Center	Asst. Prof.

Working in Industry

Valery Trifonov	1998 – 2004	Goldman Sachs
Ning Lan	2000 – 2002	QVC
Yang Liu	2000 – 2003	Sigma-Aldrich
Ian Laurenzi	2002 – 2004	ExxonMobil
Sambath Chung	2002 – 2004	Genelogic
Ursula Lehnert	2002 – 2004	McKinsey Consulting
Duncan Milburn	2002 – 2005	Business Aspect
Zhiyun (Eric) Yu	2003 – 2006	McKinsey Consulting

Alexander Karpikov	2004 – 2007	Credit Suisse
Rajkumar (Raj) Sasidharan	2004 – 2008	Solvuu
Yongpan (Daniel) Yan	2005 – 2006	Glaxosmithkline
Thayalini Arinaminpathy	2005 – 2007	British Telecom
Can (John) Bruce	2005 – 2007	Sciomix
Anne Burba (Counterman)	2005 – 2009	freelance writing
Ashish Agarwal	2006 – 2010	Solvuu
Nitin Bhardwaj	2007 – 2011	BASF
Baikang Pei	2010 – 2016	Amgen
Renqiang Min	2011 – 2012	NEC
Rob Kitchen	2011 – 2016	Exosome Diagnostics
Wyatt Clarke	2013 – 2014	BioMarin Pharmaceutical
Anurag Sethi	2013 – 2016	Calico Life Sciences
Min Xu	2017 – 2018	XtalPi
Xiangmeng Kong	2017 – 2018	GIC

Others

Chern-Sing Goh	2002 – 2006	
Jochen Junker	2000 – 2002	Oswaldo Cruz Foundation
Roger Alexander	2007 – 2013	Pacific NW Diabetes Research Inst
Koon-Kiu Yan	2008 – 2017	St. Jude Children's Research Hospital

Past PhD students (as of 31 Sep. '14, with selective updates on 5 Oct. '18)

Currently Holding a Faculty Position

Paul Bertone	1998 – 2005	EBI (Cambridge)	Group Leader
Haiyuan Yu	2000 – 2005	Biostat & Comp. Bio., Cornell U	Tenured Assoc. Prof.
Samuel Flores	2004 – 2007	Cell & Mol. Biol., Uppsala U	Asst. Prof.
Kevin Yip	2004 – 2009	The Chinese University of Hong Kong	Asst. Prof

Elsewhere in Academia

Xinmeng Mu	2007 – 2012	Broad Inst./Harvard Med.	Postdoc
Raymond Auerbach	2007 – 2012	Stanford U.	Postdoc
Lucas Lochovsky	2009 – 2018	The Jackson Laboratory	Postdoc
Shantao Li	2012 – 2018	Stanford U.	Postdoc

Working in Industry

Werner Krebs	1996 – 2001	Bank of America
Ronald Jansen	1997 – 2002	Goldman Sachs
Vadim Alexandrov	1998 – 2003	Psychogenics
Rajdeep Das	1998 – 2004	WorldQuant
Dov Greenbaum	1999 – 2004	Pearl Cohen Zedek Latzer
Michael Seringhaus	2001 – 2007	Latham & Watkins
Thomas Royce	2002 – 2007	Illumina
Andrew Smith	2002 – 2007	Bristol-Myers Squibb
Prianka Patel	2004 – 2010	David Yurman
Jiang Du	2004 – 2010	JP Morgan
Chong Shou	2005 – 2011	MF Global
Hugo (Yu Kor) Lam	2005 – 2010	23andme
Rebecca Robilotto	2007 – 2012	Allbirds
Lukas Habegger	2007 – 2012	Regeneron Pharmaceuticals
Jing Leng	2009 – 2012	Illumina
Yao Fu	2010 – 2015	Roche Sequencing Solutions
Jieming Chen	2011 – 2016	Genentech

Other

Ted Johnson	1996 – 2003
Tara Gianoulis	2003 – 2009

Main Scientific Publications

(See footnotes at end of the publication section)

-- 2018 --

- PsychENCODE Consortium (2018). "Revealing the brain's molecular architecture." *Science* 362: 1262-1263.
- D Wang, S Liu, J Warrell, H Won, X Shi, FCP Navarro, D Clarke, M Gu, P Emani, YT Yang, M Xu, MJ Gandal, S Lou, J Zhang, JJ Park, C Yan, SK Rhie, K Manakongtreecheep, H Zhou, A Nathan, M Peters, E Mattei, D Fitzgerald, T Brunetti, J Moore, Y Jiang, K Girdhar, GE Hoffman, S Kalayci, ZH Gumus, GE Crawford, PsychENCODE Consortium, P Roussos, S Akbarian, AE Jaffe, KP White, Z Weng, N Sestan, DH Geschwind, JA Knowles, MB Gerstein (2018). "Comprehensive functional genomic resource and integrative model for the human brain." *Science* 362.
- MJ Gandal, P Zhang, E Hadjimichael, RL Walker, C Chen, S Liu, H Won, H van Bakel, M Varghese, Y Wang, AW Shieh, J Haney, S Parhami, J Belmont, M Kim, P Moran Losada, Z Khan, J Mleczko, Y Xia, R Dai, D Wang, YT Yang, M Xu, K Fish, PR Hof, J Warrell, D Fitzgerald, K White, AE Jaffe, PsychENCODE Consortium, MA Peters, M Gerstein, C Liu, LM Iakoucheva, D Pinto, DH Geschwind (2018). "Transcriptome-wide isoform-level dysregulation in ASD, schizophrenia, and bipolar disorder." *Science* 362.
- M Li, G Santpere, Y Imamura Kawasawa, OV Evgrafov, FO Gulden, S Pochareddy, SM Sunkin, Z Li, Y Shin, Y Zhu, AMM Sousa, DM Werling, RR Kitchen, HJ Kang, M Pletikos, J Choi, S Muchnik, X Xu, D Wang, B Lorente-Galdos, S Liu, P Giusti-Rodriguez, H Won, CA de Leeuw, AF Pardinas, BrainSpan Consortium, PsychENCODE Consortium, PsychENCODE Developmental Subgroup, M Hu, F Jin, Y Li, MJ Owen, MC O'Donovan, JTR Walters, D Posthuma, P Levitt, DR Weinberger, TM Hyde, JE Kleinman, DH Geschwind, MJ Hawrylycz, MW State, SJ Sanders, PF Sullivan, MB Gerstein, ES Lein, JA Knowles, N Sestan (2018). "Integrative functional genomic analysis of human brain development and neuropsychiatric risks." *Science* 362.
- A Amiri, G Coppola, S Scuderi, F Wu, T Roychowdhury, F Liu, S Pochareddy, Y Shin, A Safi, L Song, Y Zhu, AMM Sousa, PsychENCODE Consortium, M Gerstein, GE Crawford, N Sestan, A Abyzov, FM Vaccarino (2018). "Transcriptome and epigenome landscape of human cortical development modeled in organoids." *Science* 362.
- X Kong, M Gerstein (2018). "Text mining systems biology: Turning the microscope back on the observer" *Current Opinion in Systems Biology* 11:117-122.
- W Shi, CKY Ng, RS Lim, T Jiang, S Kumar, X Li, VB Wali, S Piscuoglio, MB Gerstein, AB Chagpar, B Weigelt, L Pusztai, JS Reis-Filho, C Hatzis (2018). "Reliability of Whole-Exome Sequencing for Assessing Intratumor Genetic Heterogeneity." *Cell Rep* 25: 1446-1457.
- A Frankish, M Diekhans, AM Ferreira, R Johnson, I Jungreis, J Loveland, JM Mudge, C Sisu, J Wright, J Armstrong, I Barnes, A Berry, A Bignell, S Carbonell Sala, J Chrast, F Cunningham, T Di Domenico, S Donaldson, IT Fiddes, C Garcia Giron, JM Gonzalez, T Grego, M Hardy, T Hourlier, T Hunt, OG Izuogu, J Lagarde, FJ Martin, L Martinez, S Mohanan, P Muir, FCP Navarro, A Parker, B Pei, F Pozo, M Ruffier, BM Schmitt, E Stapleton, MM Suner, I Sycheva, B Uszczynska-Ratajczak, J Xu, A Yates, D Zerbino, Y Zhang, B Aken, JS Choudhary, M Gerstein, R Guigo, TJP Hubbard, M Kellis, B Paten, A Raymond, ML Tress, P Flicek (2018). "GENCODE reference annotation for the human and mouse genomes." *Nucleic Acids Res.*
- J Lilue, AG Doran, IT Fiddes, M Abrudan, J Armstrong, R Bennett, W Chow, J Collins, S Collins, A Czechanski, P Danecek, M Diekhans, DD Dolle, M Dunn, R Durbin, D Earl, A Ferguson-Smith, P Flicek, J Flint, A Frankish, B Fu, M Gerstein, J Gilbert, L Goodstadt, J Harrow, K Howe, X Ibarra-

Soria, M Kolmogorov, CJ Lelliott, DW Logan, J Loveland, CE Mathews, R Mott, P Muir, S Nachtweide, FCP Navarro, DT Odom, N Park, S Pelan, SK Pham, M Quail, L Reinholdt, L Romoth, L Shirley, C Sisu, M Sjoberg-Herrera, M Stanke, C Steward, M Thomas, G Threadgold, D Thybert, J Torrance, K Wong, J Wood, B Yalcin, F Yang, DJ Adams, B Paten, TM Keane (2018). "Sixteen diverse laboratory mouse reference genomes define strain-specific haplotypes and novel functional loci." *Nat Genet* 50: 1574-1583.

D Greenbaum, M Gerstein (2018). "What's next for humanity?" *Science* 362 (6415):648.

D Greenbaum, M Gerstein (2018). "Human History, Human Genomes" *Cell* 174:1043-1044.

V Onuchic, E Lurie, I Carrero, P Pawliczek, RY Patel, J Rozowsky, T Galeev, Z Huang, RC Altshuler, Z Zhang, RA Harris, C Coarfa, L Ashmore, JW Bertol, WD Fakhouri, F Yu, M Kellis, M Gerstein, A Milosavljevic (2018). "Allele-specific epigenome maps reveal sequence-dependent stochastic switching at regulatory loci." *Science* 361.

BC Carlyle, RR Kitchen, J Zhang, RS Wilson, TT Lam, JS Rozowsky, KR Williams, N Sestan, MB Gerstein, AC Nairn (2018). "Isoform-Level Interpretation of High-Throughput Proteomics Data Enabled by Deep Integration with RNA-seq." *J Proteome Res* 17: 3431-3444.

AP Arkin, RW Cottingham, CS Henry, NL Harris, RL Stevens, S Maslov, P Dehal, D Ware, F Perez, S Canon, MW Sneddon, ML Henderson, WJ Riehl, D Murphy-Olson, SY Chan, RT Kamimura, S Kumari, MM Drake, TS Brettin, EM Glass, D Chivian, D Gunter, DJ Weston, BH Allen, J Baumohl, AA Best, B Bowen, SE Brenner, CC Bun, JM Chandonia, JM Chia, R Colasanti, N Conrad, JJ Davis, BH Davison, M DeJongh, S Devoid, E Dietrich, I Dubchak, JN Edirisinghe, G Fang, JP Faria, PM Frybarger, W Gerlach, M Gerstein, A Greiner, J Gurtowski, HL Haun, F He, R Jain, MP Joachimiak, KP Keegan, S Kondo, V Kumar, ML Land, F Meyer, M Mills, PS Novichkov, T Oh, GJ Olsen, R Olson, B Parrello, S Pasternak, E Pearson, SS Poon, GA Price, S Ramakrishnan, P Ranjan, PC Ronald, MC Schatz, SMD Seaver, M Shukla, RA Sutormin, MH Syed, J Thomason, NL Tintle, D Wang, F Xia, H Yoo, S Yoo, D Yu (2018). "KBBase: The United States Department of Energy Systems Biology Knowledgebase." *Nat Biotechnol* 36: 566-569.

A Harmanci, M Gerstein (2018). "Analysis of sensitive information leakage in functional genomics signal profiles through genomic deletions" *Nat Commun* 9: 2453.

KW Barber, P Muir, RV Szeligowski, S Rogulina, M Gerstein, JR Sampson, FJ Isaacs, J Rinehart (2018). "Encoding human serine phosphopeptides in bacteria for proteome-wide identification of phosphorylation-dependent interactions." *Nat Biotechnol* 36: 638-644.

P McGillivray, D Clarke, W Meyerson, J Zhang, D Lee, M Gu, S Kumar, H Zhou, MB Gerstein (2018). "Network Analysis as a Grand Unifier in Biomedical Data Science" *Annual Review of Biomedical Data Science* Vol. 1.

D Thybert, M Roller, FCP Navarro, I Fiddes, I Streeter, C Feig, D Martin-Galvez, M Kolmogorov, V Janousek, W Akanni, B Aken, S Aldridge, V Chakrapani, W Chow, L Clarke, C Cummins, A Doran, M Dunn, L Goodstadt, K Howe, M Howell, AA Josselin, RC Karn, CM Laukaitis, L Jingtao, F Martin, M Muffato, S Nachtweide, MA Quail, C Sisu, M Stanke, K Stefflova, C Van Oosterhout, F Veyrunes, B Ward, F Yang, G Yazdanifar, A Zadissa, DJ Adams, A Brazma, M Gerstein, B Paten, S Pham, TM Keane, DT Odom, P Flicek (2018). "Repeat associated mechanisms of genome evolution and function revealed by the *Mus caroli*" *Genome Res* 28: 448-459.

P McGillivray, R Ault, M Pawashe, R Kitchen, S Balasubramanian, M Gerstein (2018). "A comprehensive catalog of predicted functional upstream open reading frames in humans." *Nucleic Acids Res* 46: 3326-3338.

T Becker, WP Lee, J Leone, Q Zhu, C Zhang, S Liu, J Sargent, K Shanker, A Mil-Homens, E Cerveira, M Ryan, J Cha, FCP Navarro, T Galeev, M Gerstein, RE Mills, DG Shin, C Lee, A Malhotra (2018). "FusorSV: an algorithm for optimally combining data from multiple structural variation detection methods." *Genome Biol* 19: 38.

MJ Gandal, JR Haney, NN Parikshak, V Leppa, G Ramaswami, C Hartl, AJ Schork, V Appadurai, A Buil, TM Werge, C Liu, KP White, CommonMind Consortium, PsychENCODE Consortium, iPSYCH-BROAD Working Group, S Horvath, DH Geschwind (2018). "Shared molecular neuropathology across major psychiatric disorders parallels polygenic overlap." *Science* 359: 693-697.

MB Gerstein, FCP Navarro (2018). "Gene names can confound most-searched listings." *Nature* 553: 405.

BD Piening, W Zhou, K Contrepolis, H Rost, GJ Gu Urban, T Mishra, BM Hanson, EJ Bautista, S Leopold, CY Yeh, D Spakowicz, I Banerjee, C Chen, K Kukurba, D Perelman, C Craig, E Colbert, D Salins, S Rego, S Lee, C Zhang, J Wheeler, MR Sailani, L Liang, C Abbott, M Gerstein, A Mardinoglu, U Smith, DL Rubin, S Pitteri, E Sodergren, TL McLaughlin, GM Weinstock, MP Snyder (2018). "Integrative Personal Omics Profiles during Periods of Weight Gain and Loss." *Cell Syst* 6: 157-170e8.

-- 2017 --

KE Kaczor-Urbanowicz, Y Kim, F Li, T Galeev, RR Kitchen, M Gerstein, K Koyano, SH Jeong, X Wang, D Elashoff, SY Kang, SM Kim, K Kim, S Kim, D Chia, X Xiao, J Rozowsky, DTW Wong (2017). "Novel approaches for bioinformatic analysis of salivary RNA sequencing data for development." *Bioinformatics* 34: 1-8.

MM Kudron, A Victorsen, L Gevirtzman, LW Hillier, WW Fisher, D Vafeados, M Kirkey, AS Hammonds, J Gersch, H Ammouri, ML Wall, J Moran, D Steffen, M Szykarek, S Seabrook-Sturgis, N Jameel, M Kadaba, J Patton, R Terrell, M Corson, TJ Durham, S Park, S Samanta, M Han, J Xu, KK Yan, SE Celniker, KP White, L Ma, M Gerstein, V Reinke, RH Waterston (2017). "The ModERN Resource: Genome-Wide Binding Profiles for Hundreds of *Drosophila* and *Caenorhabditis elegans* Transcription Factors." *Genetics* 208: 937-949.

BC Carlyle, RR Kitchen, JE Kanyo, EZ Voss, M Pletikos, AMM Sousa, TT Lam, MB Gerstein, N Sestan, AC Nairn (2017). "A multiregional proteomic survey of the postnatal human brain." *Nat Neurosci* 20: 1787-1795.

AMM Sousa, Y Zhu, MA Raghanti, RR Kitchen, M Onorati, ATN Tebbenkamp, B Stutz, KA Meyer, M Li, YI Kawasaki, F Liu, RG Perez, M Mele, T Carvalho, M Skarica, FO Gulden, M Pletikos, A Shibata, AR Stephenson, MK Edler, JJ Ely, JD Elsworth, TL Horvath, PR Hof, TM Hyde, JE Kleinman, DR Weinberger, M Reimers, RP Lifton, SM Mane, JP Noonan, MW State, ES Lein, JA Knowles, T Marques-Bonet, CC Sherwood, MB Gerstein, N Sestan (2017). "Molecular and cellular reorganization of neural circuits in the human lineage." *Science* 358: 1027-1032.

L Lochovsky, J Zhang, M Gerstein (2017). "MOAT: efficient detection of highly mutated regions with the Mutations Overburdening Annotations Tool." *Bioinformatics* 34: 1031-1033.

Q Cao, C Anyansi, X Hu, L Xu, L Xiong, W Tang, MTS Mok, C Cheng, X Fan, M Gerstein, ASL Cheng, KY Yip (2017). "Reconstruction of enhancer-target networks in 935 samples of human primary cells, tissues and cell lines." *Nat Genet* 49: 1428-1436.

S Balasubramanian, Y Fu, M Pawashe, P McGillivray, M Jin, J Liu, KJ Karczewski, DG MacArthur, M Gerstein (2017). "Using ALoFT to determine the impact of putative loss-of-function variants in protein-coding genes." *Nat Commun* 8: 382.

- KK Yan, S Lou, M Gerstein (2017). "MrTADFinder: A network modularity based approach to identify topologically associating domains in multiple resolutions." *PLoS Comput Biol* 13: e1005647.
- SME Sahraeian, M Mohiyuddin, R Sebra, H Tilgner, PT Afshar, KF Au, N Bani Asadi, MB Gerstein, WH Wong, MP Snyder, E Schadt, HYK Lam (2017). "Gaining comprehensive biological insight into the transcriptome by performing a broad-spectrum RNA-seq analysis." *Nat Commun* 8: 59.
- Y Zhang, S Li, A Abyzov, MB Gerstein (2017). "Landscape and variation of novel retroduplications in 26 human populations." *PLoS Comput Biol* 13: e1005567.
- S Kumar, M Gerstein (2017). "Cancer genomics: Less is more in the hunt for driver mutations." *Nature* 547: 40-41.
- P Dhingra, Y Fu, M Gerstein, E Khurana (2017). "Using FunSeq2 for Coding and Non-Coding Variant Annotation and Prioritization." *Curr Protoc Bioinformatics* 57: 15111-15117.
- P Alves, S Liu, D Wang, M Gerstein (2017). "Multiple-Swarm Ensembles: Improving the Predictive Power and Robustness of Predictive Models and Its Use in Computational Biology." *IEEE/ACM Trans Comput Biol Bioinform* 15: 926-933.
- V Despic, M Dejung, M Gu, J Krishnan, J Zhang, L Herzel, K Straube, MB Gerstein, F Butter, KM Neugebauer (2017). "Dynamic RNA-protein interactions underlie the zebrafish maternal-to-zygotic transition." *Genome Res* 27: 1184-1194.
- D Greenbaum, J Rozowsky, V Stodden, M Gerstein (2017). "Structuring supplemental materials in support of reproducibility." *Genome Biol* 18: 64.
- KK Yan, GG Yardimci, C Yan, WS Noble, M Gerstein (2017). "HiC-spector: a matrix library for spectral and reproducibility analysis of Hi-C contact maps." *Bioinformatics* 33: 2199-2201.
- S Li, BM Shuch, MB Gerstein (2017). "Whole-genome analysis of papillary kidney cancer finds significant noncoding alterations." *PLoS Genet* 13: e1006685.
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Notes on Scientific Publications

(As of 1 Jan. 2019)

a) In total, 562 scientific publication.

Not including in press or submitted articles or popular pieces such as 12 published Op-Eds.

b) H-index for M Gerstein is 157

(according to Google Scholar, scholar.google.com/citations?user=YvjuUugAAAAJ)

c) Highly Cited Researchers (HCR) list inclusion.

On Thomson Reuters list, in 2014 to 2016. On succeeding Clarivate list, in 2017 & 2018.

d) Senior Author Status.

In the publication list, if M Gerstein is not a last or first author, he is **not** considered to be a "corresponding" or "senior" author except as noted by the asterisks (*) in the list below:

Li... PsychENCODE Consortium... Sanders, Sullivan,

Gerstein*, Lein*, Knowles*, Sestan* ('18). *Science* 362: 1264

Carlyle... Sestan, **Gerstein***, Nairn* ('18). *J Proteome Res* 17: 3431

Sudmant... 1000 Genomes Project, Mills*, **Gerstein***, Bashir*, Stegle*, Devine*, Lee*, Eichler*,
Korbel* ('15). *Nature* 526: 75

Abyzov... Urban*, **Gerstein***, Vaccarino* ('12) *Nature* 492: 438

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MacArthur... 1000 Genomes Project... **Gerstein***, Tyler-Smith* ('12). *Science* 335: 823

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1000 Genomes Project ('11). *Nature* 470: 59

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Other Writings & Presentations (as of 1 Jan. 2019)

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Recorded Panel Discussions & Interviews

- M Gerstein (2008). "A Great Historical Document - The Human Genome", Futures in Biotech 34 (podcast moderated by M Pelletier)
- "A Closer Look at Personal Genomic Testing", Inforum Genomics Panel, at the Commonwealth Club of California, including L Avey, D Ballon, D Magnus, M Gerstein, J Rae-Dupree (2009)
- "Whose DNA is it?", a panel discussion on Personal Genomics, on the Agenda with Steve Paikin, as part of the Quantum to Cosmos Festival (Q2C) in Waterloo, ON, 21 Oct. 2009
- "Genomics, Proteomics, Cellular Immunity, and Anti-Matter", a panel discussion moderated by M Pelletier, including V Racaniello, A Nantel, M Gerstein, and G Farr. Futures in Biotech 71 (22 Nov. 2010)
- M Gerstein (2011). "Bioinformatics: Essential Gene names Skewed in a Network of Blame", Futures in Biotech 83 (podcast moderated by M Pelletier)
- "6 PhDs Piled High And Deep", a panel discussion moderated by M Pelletier, including G Farr, D Thomas, M Gerstein, S Melov, and J Sanchez. Futures in Biotech 91 (16 Dec. 2011)
- M Gerstein (2014). "What in the World", Sirius XM Radio Canada, 60' on 20 Nov. (Interview by Richard Garner)
- M Gerstein (2015). "What Now? Going Beyond the \$1,000 Genome", Mendelspod, 17 Sept. (podcast moderated by T Timpson)