



INTERNATIONAL GENETIC
EPIDEMIOLOGY SOCIETY

IGES 27th Annual Meeting

October 13-16, 2018

San Diego, CA, USA

Wyndham San Diego Bayside



ANNUAL MEETING AGENDA

Special Programming including
Educational Symposium on Translating Genetic Discoveries into
Clinical and Public Health Practice

and the Joint Symposium with ASHG/ISCB
Working with Big Data in the Cloud:
Research and Privacy

October 16, 2018



IGES 2018 ANNUAL Meeting Agenda

Saturday, October 13

2:00pm-7:00pm	Registration	Pacific Foyer
5:00pm-7:00pm	IGES Board of Directors Meeting	Embarcadero
7:00pm-8:00pm	Welcome Reception	Loma Vista Terrace

Sunday, October 14

7:00am-6:00pm	Registration	Pacific Foyer
7:30am-8:30am	Continental Breakfast	Pacific Foyer
8:30am-9:00am	Welcome and Presidential Address • Chair: Andrew Morris	Pacific D

Session 1: Polygenic Trait Genetics I • Chairs: Andrew Morris and Guillaume Paré

Pacific D

	Presentation	Abstract	Author
9:00am-9:15am	The Role of Human Mitochondrial DNA Variants in Common Complex Phenotypes	145	Ekaterina Yonova-Doing*
9:15am-9:30am	Tissue-wise Sub-typing of Complex Trait Based on Genetics	73	Arunabha Majumdar*
9:30am-9:45am	A New Statistical Method to Detect Novel Disease Associated Genes using Publicly Available GWAS Summary Data	148	Jianjun Zhang*
9:45am-10:00am	JM-SNP: Joint Modeling of Multiple Longitudinal and Multiple Survival Traits to Characterize the Genetic Architecture of Complex Traits	16	Myriam Brossard*
10:00am-10:30am	Refreshment Break		Pacific Foyer

Session 2: Risk Assessment and Personalized Medicine • Chairs: Jaya Satagopan and Robin Beaumont

Pacific D

	Presentation	Abstract	Author
10:30am-11:00am	Keynote Speaker: What African Genomes Tell Us About the Origins of Breast Cancer	87	Olufunmilayo I. Olopade
11:00am-11:15am	Detecting and Correcting for Bias in Mendelian Randomization Analyses using Gene-by-environment Interactions	113	Wes Spiller [^]
11:15am-11:30am	Machine Learning in Multi-omics Data to Assess Longitudinal Predictors of Glycaemic Trait Levels	57	Marika Kaakinen
11:30am-11:45am	Combined Association of a Polygenic Risk Score with 313 Genetic Variants and Established Environmental Risk Factors in Relation to Breast Cancer Risk	76	Pooja Middha
11:45am-12:00pm	Absolute Risk of Pancreatic Cancer in the U.S. General Population	61	Jihye Kim

Sunday, October 14

12:00pm-1:30pm **Lunch on your own**

12:00pm-1:30pm **Young Investigators' Luncheon (Ticketed Event)**

Coast Ballroom

12:00pm-1:30pm **Committee Lunches**

Publications Committee Working Lunch

Captains III

Communications Committee Working Lunch

Captains IV

Session 3: Causal Variants, Genes and Mechanisms I • Chairs: Ching-Ti Liu and James Cook

Pacific D

	Presentation	Abstract	Author
1:30pm-2:00pm	Keynote Presentation: Multiethnic GWAS and Fine-mapping	21	David Conti
2:00pm-2:15pm	Efficient Fine-mapping to Identify Causal Genetic Variants and Quantify their Contribution to Complex Phenotypes	11	Christian Benner
2:15pm-2:30pm	Imputed Gene Associations Identify Replicable <i>Trans</i> -acting and Target Gene Pairs Enriched in Transcription Factor Pathways	134	Heather E. Wheeler
2:30pm-2:45pm	Sparse Canonical Correlation Analysis (sCCA) Significantly Improves Power of Cross-tissue Transcriptome-wide Association Studies (TWAS)	33	Helian Feng [*]
2:45pm-3:00pm	Meta-analysis of ~1.3M Individuals Identifies Rare Variants Associated with Blood Pressure and Implicates Causal Genes	51	Joanna M. M. Howson

3:00pm-3:15pm Session A: Poster Highlights • Chair: Andrew Morris

Pacific D

	Poster	Abstract	Author
	Wavelet Screaming: a Novel Approach to Analyzing GWAS Data	29	William Denault
	ELECTRONIC MEDICAL RECORDS AND GENOMICS (eMERGE) - Using EMR-Linked Biorepositories to Expand Genomic Medicine Research	56	Sheethal Jose
	Hierarchical Regularized Regression for Incorporating External Information in High-Dimensional Prediction Models	133	Garrett M. Weaver
	Genetic Association of Arterial Stiffness Index with Incident Coronary Artery Disease and Congestive Heart Failure	146	Seyedeh Maryam Zekavat
	A Rare Variant Non-parametric Linkage Method for Nuclear and Extended Pedigrees with Application to Exome and Whole Genome Sequence Data	152	Linhai Zhao

3:15pm-4:45pm **Poster Session A and Refreshment Break**

Pacific ABC

Session 4: Rare Variants and Sequence Analysis • Chairs: Inke König and Ekaterina Yonova-Doing

Pacific D

	Presentation	Abstract	Author
4:45pm-5:00pm	A Unified Method for Rare Variant Analysis of GxE Interactions	71	Elise Lim [*]
5:00pm-5:15pm	TRIO_RVEMVS: a Fast Bayesian Variable Selection Method for Trios that Identifies Individual Rare Variants	117	Michael D. Swartz
5:15pm-5:30pm	A Fast Family-based Quantitative Trait Association Test for Nuclear and Extended Pedigrees for the Analysis of Whole Genome Sequence Data	150	Zhihui Zhang
5:30pm-5:45pm	Fast Calling of Copy Number Variations from Cohort-wide High-depth Whole Genome Sequencing	39	Arthur Gilly [*]
5:45pm-6:00pm	Efficient Gene-Environment Interaction Tests for Large-scale Sequencing Studies	131	Xinyu Wang

7:00pm-7:30pm Cocktail Reception

Loma Vista Terrace

Sunday, October 14

7:30pm-10:00pm

Banquet in honor of Newton Morton

Harborside

The IGES Banquet this year will be held in honor of Newton Morton, who sadly passed away in February, to celebrate his life and incredible contributions to genetic epidemiology. Join us as we remember him through stories, images and the impact he had in the field of genetic epidemiology. Dress is business casual.

Monday October 15

7:00am-5:30pm

Registration

Pacific Foyer

7:30am-8:30am

Continental Breakfast

Pacific ABC

Session 5: Causal Variants, Genes and Mechanisms II • Chairs: Sanjay Shete and Arunabha Majumdar

Pacific D

	Presentation	Abstract	Author
8:30am-8:45am	Best Paper Presentation		
8:45am-9:00am	Significance Testing for Allelic Heterogeneity	88	Wei Pan
9:00am-9:15am	Prediction of CpG Methylation Status from SNP Genotype Data	36	James J. Fryett
9:15am-9:30am	Epigenome-wide Association Study of Change in Body Mass Index from Young- to Middle Adulthood in 626 Northern Finland Birth Cohort 1966 Participants	95	Harmen Draisma
9:30am-9:45am	Integration of mQTL Data and Enhancer-promoter Interactions with GWAS Summary Results Identifies Novel Genes	141	Chong Wu

9:45am-10:00am

Session B: Poster Highlights • Chair: Andrew Morris

Pacific D

	Poster	Abstract	Author
	Genetic Architecture of Gene Expression Traits across Diverse Populations	6	Angela Andaleon
	Generalized Linear Discriminant Analysis for High-Dimensional Genomic Data	69	Sisi Li
	Pharmacogenetic Effects in Population-based Metabolic Profiles	84	Martina Müller-Nurasyid
	Next-generation Sequencing Aligned to High-resolution Nuclear Magnetic Resonance (NMR) Measurements Reveal Role of Rare Variation in Circulating Metabolic Biomarkers	101	Fernando Riveros-Mckay Aguilera
	LASSO with Custom Penalization Based on External Information	147	Chubing Zeng

10:00am-11:30am Poster Session B and Refreshment Break

Pacific ABC

Session 6: Polygenic Trait Genetics II • Chairs: Eleanor Wheeler and Iris Heid

Pacific D

	Presentation	Abstract	Author
11:30am-12:00pm	Keynote Presentation: Leveraging Big GWAS Data to Address Question about Selection, Pleiotropy, Assortative Mating and Epidemiology	126	Peter M. Visscher
12:00pm-12:15pm	Population Stratification in the Estonian Biobank and its Confounding with Complex Traits	92	Natalia Pervjakova
12:15pm-12:30pm	Maternal and Fetal Genetic Effects on Birth Weight and their Relevance to Cardio-metabolic Disease	10	Robin N. Beaumont*
12:30pm-12:45pm	Exploring Genotype-environment (GxE) Interactions Phenome-wide	79	Rachel Moore^
12:45pm-1:00pm	Genetic Architecture of the Human Plasma Metabolome	115	Isobel D. Stewart

Monday, October 15

1:00pm-2:30pm	Lunch on your own	
1:00pm-2:30pm	Committee Lunches	
	Program Committee Working Lunch	Captains III
	Education Committee Working Lunch	Captains IV
	Young Investigators' Committee Working Lunch	Captains V
	Genetic Epidemiology Editorial Board Working Lunch	Embarcadero

Session 7: Genomics in Diverse Populations • Chairs: Andrew Morris and Jianjun Zhang

Pacific D


	Presentation	Abstract	Author
2:30pm-2:45pm	Keynote Presentation: Genetic Contribution to Obesity in African Populations: the H3Africa AWI-Gen Study	97	Michèle Ramsay
3:00pm-3:15pm	Identifying Hidden Ancestries in Publicly Available Summary Data	49	Audrey E. Hendricks
3:15pm-3:30pm	Investigation of Post-colonial Demographic Structure within the United States and Implications for Association Analyses	112	Elena Sorokin
3:30pm-3:45pm	Deriving Significance Thresholds for Genome-wide Admixture Mapping Studies	43	Kelsey E. Grinde
3:45pm-4:00pm	Large-scale Trans-ethnic Genome-wide Association Study Reveals Novel Loci, Causal Molecular Mechanisms and Effector Genes for Kidney Function	35	Nora Franceschini
4:00pm-4:30pm	Refreshment Break		Pacific Foyer
4:30pm-5:30pm	Business Meeting and Awards		Pacific D

Tuesday, October 16

Special Programming and Partner Events (separate registration required)

7:00am-1:00pm	Registration	Harbor Foyer
8:30am-11:45am	Education Symposium: <i>Translating Genetic Discoveries into Clinical and Public Health Practice</i> (Continental breakfast provided in Harbor Foyer from 7:30am - 8:30am)	Harborside
10:00am-10:15am	Refreshment Break	Harbor Foyer
1:00pm-4:00pm	IGES/ASHG/ICSB Event: <i>Big Data in the Cloud: a Joint Symposium</i>	San Diego Convention Center, Room 6C, Upper Level



 @genepisociety

 IGES: <https://www.facebook.com/geneticepi>

Young Investigators: <https://www.facebook.com/International-Genetic-Epidemiology-Society-Iges-Next-Generation>

Sunday, October 14

3:15pm-4:45pm		Poster Session A		Pacific ABC			
Poster	Presenter	Poster	Presenter	Poster	Presenter	Poster	Presenter
1	Aghababazadeh, F.A.	27	de Andrade, M.	56	Jose, S.	90	Paul, S.
3	Almli, L.M.	29	Denault, W.	59	Keaton, J.M.	93	Petty, L.E.
5	Anasanti, M.D.	31	Eslami, A.	62	Konigorski, S.	96	Raisky, J.
7	Arbeev, K.G.	34	Fouodo, C.J.K.	64	Lee, Y.	99	Reeve, N.
9	Baneye, A.D.	38	Ghasemi-Dehkordi, P.	66	Lewinger, J.P.	103	Roshandel, D.
13	Bhattacharjee, S.	41	Gola, D.	68	Li, Q.	105	Sabourin, J.A.
15	Bouzigon, E.	44	Grover, S.	70	Li, Y.	107	Schaid, D.
18	Chen, H.-H.	46	Guyatt, A.	74	Manning, A.	109	Shriner, D.
20	Chu, S.	48	Hass, C.B.	77	Middlebrooks, C.D.	111	Smith, J.A.
23	Coombes, B.	52	Hudson, J.	80	Morrison, J.	116	Stiemke, A.B.
25	Darst, B.F.	54	Jiang, L.	82	Moss, L.C.	119	Tekola-Ayele, F.
				86	Nguyen, J.	121	Timpson, N.

Monday, October 15

10:00am-11:30am		Poster Session B		Pacific ABC			
Poster	Presenter	Poster	Presenter	Poster	Presenter	Poster	Presenter
2	Allen, R.	30	Dennis, J.	63	Laabs, B.-H.	98	Rausch, T.K.
4	Almorza, D.	32	Espin-Garcia, O.	67	Lewis, D.	100	Richardson, M.
6	Andaleon, A.	37	Génin, E.	69	Li, S.	101	Riveros-Mckay Aguilera, F.
8	Bailey-Wilson, J.E.	40	Gkatzionis, A.	72	Lipunova, N.	102	Romanescu, R.
12	Berrandou, T.	42	Graham, B.E.	75	Mechanic, L.	104	Saad, M.
14	Blue, E.	45	Günther, F.	78	Miller-Fleming, T.W.	106	Sarnowski, C.
17	Chatzigeorgiou, C.	47	Han, S.	81	Moss, L.C.	108	Shrine, N.
19	Cherlin, S.	50	Howey, R.	83	Mukhopadhyay, I.	110	Singh, A.
22	Cook, J.	53	Jiang, G.	84	Müller-Nurasyid, M.	114	Staley, J.
24	Daley, D.	55	Jiang, R.	85	Musolf, A.M.	118	Takeuchi, F.
26	Das, S.	58	Karhunen, V.	89	Pathak, G.A.	120	Thiele, D.
28	Dejenie, T.	60	Khan, S.A.	91	Pereira, M.	122	Tounkara, F.
				94	Pileckyte, E.	124	Ullah, E.

Poster	Presenter
125	Viel, R.
128	Wan, J.Y.
130	Wang, Q.
133	Weaver, G.
136	Willems, E.L.
138	Wilson, C.
140	Workalemahu, T.
143	Yadav, A.
146	Zekavat, S.M.
149	Zhang, M.
152	Zhao, L.

Poster	Presenter
127	Ullah, E.
129	Wang, J.
132	Wang, X.
135	Wijsman, E.M.
137	Williams, A.T.
139	Woodbury-Smith, M.
142	Xu, H.
144	Yasmeen, S.
147	Zeng, C.
151	Zhang, Z.
153	Zhu, X.

Poster set-up hours
 Saturday, October 13, 8:00am - 8:00pm
 Sunday, October 14, 7:00am - 10:00am

Poster removal hours
 Monday, October 15, 11:30am - 1:30pm

Pacific ABC

Pacific ABC

17	18	53	54	89	93	122	133
15	19	52	55	90	91	130	124
14	20	50	56	85	96	120	136
13	22	48	58	86	94	128	127
12	23	47	59	84	99	118	138
9	24	46	60	82	98	125	129
F&B							
8	25	45	62	83	103	114	140
7	26	44	63	80	100	121	132
6	27	42	64	81	105	110	143
5	28	41	67	77	101	119	135
4	29	40	66	78	107	108	146
3	30	38	69	74	102	116	137
2	31	37	68	75	109	106	149
1	32	34	72	70	104	111	139
F&B							
147							
151							
144							
152							
142							
153							

ENTRANCE ————— ENTRANCE



**Mark Your Calendar for
28th IGES Annual Meeting!**

**October 13-15, 2019
Houston, Texas, USA**



Hilton
AMERICAS-HOUSTON
1600 Lamar Street, Houston, TX



Dr. David Conti

Dr. Conti is Professor in the Division of Biostatistics in the Department of Preventive Medicine and the Norris Cancer Center at USC. He was trained in Genetic Epidemiology and Biostatistics at Case Western Reserve University and was awarded the 2001 Roger Williams award from the International Genetic Epidemiology Society (IGES). His methodological research focuses on the application of hierarchical models and Bayes model averaging to genetic association studies with a specific interest in multilocus analysis and the integration of biological knowledge in statistical modeling.



Olufunmilayo I. Olopade, MD, FACP, OON

Dr. Olufunmilayo I. Olopade is the Walter L. Palmer Distinguished Service Professor of Medicine and Human Genetics, Dean for Global Health, and Director of the Center for Innovation in Global Health at the University of Chicago. Professor Olopade develops innovative strategies for comprehensive cancer risk assessment and prevention based on evolving understanding of genetic and nongenetic factors in individual patients, with a focus on women of African ancestry across the Diaspora. She is an elected member of the Association of American Physicians, National Academy of Medicine, American Academy of Arts and Sciences, and the American Philosophical Society.



Michèle Ramsay, PhD

Dr. Michele Ramsay is the Director of the Sydney Benner Institute for Molecular Bioscience at the University of the Witwatersrand, Johannesburg, Professor in Human Genetics and South African Research Chair holder in Genomics and Bioinformatics of African Populations. She leads the AWI-Gen study on the genetic and environmental contributions to obesity and cardiometabolic disease risk in six centres across four African countries. Her research aims to shed light on the role of African population genomic variation in susceptibility to diseases, given the ethnolinguistic and environmental diversity across the continent.



Peter Visscher, PhD

Dr. Peter Visscher's postdoctoral in Melbourne (Australia) was followed to Edinburgh, where he developed methods to map genetic loci underlying complex traits. He moved to a faculty position at the Institute of Evolutionary Biology of the University of Edinburgh, developing gene mapping methods and software tools, with practical applications in livestock and human populations. In 2011, he moved to the University of Queensland where he is Professor of Quantitative Genetics and Director of the Program in Complex Trait Genomics. Visscher is a Senior Principal Research Fellow of the Australian National Health and Medical Research Council and was elected a Fellow of the Australian Academy of Science in 2010.

Educational Symposium Speakers



Marylyn Ritchie, PhD

Director of the Center for Translational Bioinformatics, Associate Director for Bioinformatics in the Institute for Biomedical Informatics at the University of Pennsylvania-School of Medicine, Associate Director for the Penn Center for Precision Medicine
Exploring the World of Phenomics



Josh Peterson, MD, PhD

Director of the Center for Translational Bioinformatics, Associate Professor of Biomedical Informatics, Associate Professor of Medicine school of Medicine at Vanderbilt University
Generating evidence for pharmacogenomics through implementation and pragmatic studies



Caroline Fox, MD

Vice President and Head, Genetics and Pharmacogenomics at Merck Research Labs
Using Human Genetics to Drive Drug Discovery: the Industry Perspective



Gillian Hooker, PhD, ScM, LCGC

Vice President of Clinical Development
Concert Genetics
Clinical Genetic Testing in the Genome Era: A View Across the U.S. Landscape



Jessica Ezzell Hunter, PhD

Investigator, Center for Health Research
Kaiser Permanente Northwest
The impact and implementation of genetics and genomics: looking towards the future