

# Pacific Symposium on Biocomputing (PSB) 2021 Schedule

January 5-7, 2021 (Times are listed in Pacific Time)

## Tuesday, January 5, 2021

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### Announcements

8:00-8:10 Welcome

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### Session 1 [Computational Challenges and Artificial Intelligence in Precision Medicine](#)

[Olga Afanasiev](#), [Joanne Berghout](#), [Steven Brenner](#), [Martha L. Bulyk](#), [Dana Crawford](#), [Jonathan H. Chen](#), [Roxana Daneshjou](#), [Łukasz Kidziński](#)

8:10-8:20 Introduction

8:20-8:35 *AeQTL: eQTL Analysis Using Region-Based Aggregation of Rare Genomic Variants*  
[Guanlan Dong](#), [Michael C. Wendl](#), [Bin Zhang](#), [Li Ding](#), [Kuan-lin Huang](#)

8:35-8:50 *TrueImage: A Machine Learning Algorithm to Improve the Quality of Telehealth Photos*

[Kailas Vodrahalli](#), [Roxana Daneshjou](#), [Roberto A. Novoa](#), [Albert Chiou](#), [Justin M. Ko](#), [James Zou](#)

8:50-9:05 *CheXclusion: Fairness Gaps in Deep Chest X-ray Classifiers*

[Laleh Seyyed-Kalantari](#), [Guanxiong Liu](#), [Matthew McDermott](#), [Irene Y. Chen](#), [Maryzeh Ghassemi](#)

9:05-9:20 *Drug Response Pharmacogenetics for 200,000 UK Biobank Participants*

[Gregory McInnes](#), [Russ B. Altman](#)

9:20-9:35 *Incorporation of DNA Methylation into eQTL Mapping in African Americans*

[Anmol Singh](#), [Yizhen Zhong](#), [Layan Nahlawi](#), [C. Sehwan Park](#), [Tanima De](#), [Cristina Alarcon](#), and [Minoli A. Perera](#)

9:35-10:35 Discussion

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### Session 2 [Achieving Trustworthy Biomedical Data](#)

10:35-10:45 Introduction

10:45-11:00 *Differential Privacy Protection Against Membership Inference Attack on Machine Learning for Genomic Data*

[Junjie Chen](#), [Wendy Hui Wang](#), [Xinghua Shi](#)

11:00-11:15 *Selection of Trustworthy Crowd Workers for Telemedical Diagnosis of Pediatric Autism Spectrum Disorder*

[Peter Washington](#), [Emilie Leblanc](#), [Kaitlyn Dunlap](#), [Yordan Penev](#), [Maya Varma](#), [Jae-Yoon Jung](#), [Brianna Chrisman](#), [Min Woo Sun](#), [Nathaniel Stockham](#), [Kelley Marie Paskov](#), [Haik Kalantarian](#), [Catalin Voss](#), [Nick Haber](#), [Dennis P. Wall](#)

11:15-11:45 Discussion

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11:45-12:00 Break

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### Poster Session 1

12:00-1:00 Posters with EVEN number assignments

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*End Day 1*

# Pacific Symposium on Biocomputing (PSB) 2021 Schedule

January 5-7, 2021 (Times are listed in Pacific Time)

## Wednesday, January 6, 2021

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### Announcements

8:00-8:05 Morning Remarks

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### Session 3 [Pattern Recognition in Biomedical Data for Discovery](#)

Anurag Verma, Christian Darabos, Dokyoon Kim, Brett Beaulieu-Jones, Shilpa Nadimpalli Kobren

8:05-8:15 Introduction

8:15-8:30 *Topological Feature Extraction and Visualization of Whole Slide Images Using Graph Neural Networks*

[Joshua Levy](#), Christian Haudenschild, Clark Barwick, Brock Christensen, Louis Vaickus

8:30-8:45 *Cross-modal Representation Alignment of Molecular Structure and Perturbation-Induced Transcriptional Profiles*

Samuel G. Finlayson, [Matthew B.A. McDermott](#), Alex V. Pickering, Scott L. Lipnick, Isaac S. Kohane

8:45-9:00 *A Multi-Scale Integrated Analysis Identifies KRT8 as a Pan-Cancer Early Biomarker*

[Madeleine K. D. Scott](#), Michael G. Ozawa, Pauline Chu, Maneesha Limaye, Viswam S. Nair, Steven Schaffert, Albert C. Koong, Robert West, Purvesh Khatri

9:00-10:00 Discussion

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### Session 4 [What about the environment? Leveraging multi-omic datasets to characterize the environment's role in human health](#)

Kristin Passero, Shefali Verma, Kimberly McAllister, Arjun Manrai, Chirag Patel, Molly A Hall

10:00-10:10 Introduction

10:10-10:25 *How Much Does the (Social) Environment Matter? Using Artificial Intelligence to Predict COVID-19 Outcomes with Socio-demographic Data*

[Christos A. Makridis](#), Anish Mudibe, Gil Alterovitz

10:25-10:40 *Semi-automated NMR Pipeline for Environmental Exposures: New Insights on the Metabolomics of Smokers versus Non-smokers*

[Morris A. Aguilar](#), John McGuigan, Molly A. Hall

10:40-11:10 Discussion

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### Session 5 [Advanced Methods for Big Data Analytics in Women's Health](#)

Graciela Gonzalez-Hernandez, Karin Verspoor, Maricel G Kann, Su Golder, Lisa Levine, Mary Regina Boland, Natalia Villanueva-Rosale, Karen O'Connor

11:10-11:20 Introduction

11:20-11:35 *Intimate Partner Violence and Injury Prediction from Radiology Reports*

[Irene Y. Chen](#), Emily Alsentzer, Hyesun Park, Richard Thomas, Babina Gosangi, Rahul Gujrathi, and Bharti Khurana

11:35-11:50 *Co-occurrence Patterns of Intimate Partner Violence*

Ahmet Hacialiefendioglu, Serhan Yilmaz, Mehmet Koyuturk, [Gunnur Karakurt](#)

# Pacific Symposium on Biocomputing (PSB) 2021 Schedule

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## Wednesday, January 6, 2021 continued

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Session 5      Advanced Methods for Big Data Analytics in Women's Health (continued)

11:50-12:20    Discussion

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12:20-12:30    Break

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Poster Session 2

12:30-1:30     Posters with ODD number assignments

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*End Day 2*

# Pacific Symposium on Biocomputing (PSB) 2021 Schedule

January 5-7, 2021 (Times are listed in Pacific Time)

## Thursday, January 7, 2021

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### Announcements

8:00-8:05 Closing Remarks

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### Session 6 [Biocomputing and AI for infectious disease modelling and therapeutics](#)

8:05-8:15 Introduction

8:15-8:30 *TreeFix-TP: Phylogenetic Error-Correction for Infectious Disease Transmission Network Inference*

[Samuel Sledzieski](#), [Chengchen Zhang](#), [Ion Mandoiu](#), [Mukul S. Bansal](#)

8:30-8:45 *Characterization of Anonymous Physician Perspectives on COVID-19 Using Social Media Data*

[Katherine J. Sullivan](#), [Marisha Burden](#), [Angela Keniston](#), [Juan M. Banda](#), [Lawrence E. Hunter](#)

8:45-9:00 *Protein Sequence Models for Prediction and Comparative Analysis of the SARS-CoV-2-Human Interactome*

[Meghana Kshirsagar](#), [Nure Tasnina](#), [Michael D. Ward](#), [Jeffrey N. Law](#), [T. M.](#)

[Murali](#), [Juan M. Lavista Ferres](#), [Gregory R. Bowman](#), [Judith Klein-Seetharaman](#)

9:00-10:00 Discussion

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### Workshop 1 [Bioinformatics of Corals](#)

[Lenore J. Cowen](#), [Judith Klein-Seetharaman](#), [Hollie Putnam](#)

10:00-2:00

### Workshop 2 [Translational Bioinformatics](#)

[Jason Moore](#), [Ju Han Kim](#), [Dokyoon Kim](#)

10:00-1:00

### Workshop 3 [Making Tools that People Will Use: User-Centered Design in Computational Biology Research](#)

[Mary Goldman](#), [Nils Gehlenborg](#)

10:00-1:00

### Workshop 4 [Raising the Stakeholders: Improving Patient Outcomes Through Interprofessional Collaborations in AI for Healthcare](#)

[Carly A. Bobak](#), [Kristine A. Giffin](#), [Marek Svoboda](#), [Jason Moore](#), [Dennis P. Wall](#)

10:00-1:00

### Workshop 5 [Establishing the Reliability of Algorithms in Biomedical Informatics](#)

[Lara Mangravite](#), [Sean Mooney](#), [Iddo Friedberg](#), [Justin Guinney](#)

10:00-1:00

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***PSB over--see you next year!***

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