Welcome to PSB 2018!

We have prepared this program book to give you quick access to information you need for PSB 2018.

Enclosed you will find

- Logistics information
- Menus for PSB hosted meals
- Full conference schedule
- Call for Session and Workshop Proposals for PSB 2019
- Poster/abstract titles and authors
- Participant List

Conference materials are also available online at http://psb.stanford.edu/conference-materials/.

PSB 2018 gratefully acknowledges the support the Institute for Computational Biology, a collaborative effort of Case Western Reserve University, the Cleveland Clinic Foundation, and University Hospitals; Pfizer; the Institute for Informatics (I2), Washington University School of Medicine; the National Institutes of Health (NIH); and the International Society for Computational Biology (ISCB). If you or your institution are interested in sponsoring, PSB, please contact Tiffany Murray at psb.hawaii@gmail.com

If you have any questions, the PSB registration staff (Tiffany Murray, Kasey Miller, BJ Morrison-McKay, and Cindy Paulazzo) are happy to help you.

Aloha!

Russ Altman
Keith Dunker
Larry Hunter
Teri Klein
MaryIn Ritchie

The PSB 2018 Organizers
SPEAKER INFORMATION
Oral presentations of accepted proceedings papers will take place in Salon 2 & 3. *Speakers are allotted 10 minutes for presentation and 5 minutes for questions for a total of 15 minutes. Instructions for uploading talks were sent to authors with oral presentations.* If you need assistance with this, please see Tiffany Murray or another PSB staff member.

POSTER INFORMATION
Please set up your poster upon arrival. Please use the easel marked with the same number that your poster abstract has been assigned in abstract book (e.g., if your abstract is on page 50 of the book, use the easel marked #50). Once your poster is displayed, please make sure that the number is still visible. *Please remove your poster by 8:00pm, Saturday, January 6.*

The poster session is on Friday, January 5 12:00-2:30.
12:30-1:30: Posters on ODD numbered boards presented.
1:30-2:30: Posters on EVEN numbered boards presented.

The poster session is centered around lunch. Please eat, talk, and network.

INTERNET CONNECTIVITY
*Please help keep the PSB wireless network stable: Do not download large data files due to limited bandwidth.*

PSB is connected to the Internet via a secure wireless network for the conference. For transferring your data/presentations or technical difficulties with the network, please see PSB IT/AV staff members Al Conde, Ryan Whaley, or Paul Murray.

To connect to the PSB wireless network, you will need to explicitly join the “PSB” SSID, and use the passphrase “orcpsb123” with WPA2-Personal security type and AES encryption.

PSB’s wireless Internet access (802.11b/g/n) is available in the Salons 1, 2, 3, the Plaza Ballroom, and the Ballroom Courtyard of the Fairmont Orchid.
PSB 2018 HOSTED RECEPTIONS & MEALS

**Wednesday, January 3**
7:30-8:30pm  23rd Anniversary Reception, Kilohana Room (near Concierge)
*Sponsored by Case Western Reserve University, the Cleveland Clinic Foundation, and University Hospitals*

**Thursday, January 4**
7:30-8:30am  Continental Breakfast, Ballroom Courtyard
11:45-1:00pm  PSB Hosted Lunch, Ballroom Courtyard

**Friday, January 5**
7:30-8:30am  Continental Breakfast, Ballroom Courtyard
12:00-2:30pm  Poster Session with Lunch, Salon 1 and Ballroom Courtyard

**Saturday, January 6**
7:30-8:30am  Continental Breakfast, Ballroom Courtyard
5:30-7:30pm  Hawaii Loa Luau, Plantation Estate

**Sunday, January 7**
7:30-8:30am  Continental Breakfast, Ballroom Courtyard

*Please remember to wear your PSB nametag & lanyard at all PSB functions.*

Enjoy the conference!
Wednesday, January 3

23rd Anniversary Reception (7:30-8:30pm, Kilohana Room)
Wine, beer, champagne, soft drinks, coffee & tea service
Chocolate Chantilly Cake, Coconut Whipped Cream, Hawaiian Sea Salt Caramel
Island Pineapple Crumble Tart, Koloa Rum Sauce
Local Seasonal Tropical Fruits

Thursday, January 4

Breakfast (7:30am-8:30am, Ballroom Courtyard)
Orange Juice, Guava Juice & Pineapple Juice
Selection of Sliced Seasonal Fruits
Island Breakfast Scones: Papaya Ginger, Pineapple Vanilla & Kabocha Pumpkin
Sweet Cream Butter & Tropical Fruit Preserves
Selection of Dry Cereals, Muesli, with Fat Free Milk, Soy & Almond Milk, Raisins, Brown Sugar
Kohala Muffin: Sausage, Egg, American Cheese, English Muffin (vegetarian option available)
Coffee, Decaffeinated Coffee & Fairmont Signature Teas

Lunch (11:45am-1:00pm, Ballroom Courtyard)
Island Field Green Salad: Crisp Cucumber, Vine Ripened Tomato, Shaved Maui Onion
Papaya Seed Dressing, Yuzu Soy Vinaigrette
Waimea Tomato, Marinated Artichoke Salad

Dim Sum Station: Char Siu Bao, Island Style Chicken Pot stickers, Edamame Pot Stickers, Pork Siu Mai,
Shrimp Siu Mai
Micro Steam Buns & Hoisin Kalua Pork
Island Seafood Skewers with Shrimp, Scallops, Fresh Catch, Thai Basil-Curry Sauce
Herb-Garlic Marinated Beef Tenderloin Medallions, Ali‘i Mushroom-Red Wine Jus
Roasted Kabocha, Grilled Asparagus Tips, Olive Oil Roasted Tomatoes, Mac Nut Pesto
Kim Chee & Vegetable Fried Rice

Dark Chocolate Brownies
Angel Food Cake, Waimea Strawberries
Mango Ginger Crumble
Freshly Brewed Iced Tea and Lemonade

Friday, January 5

Breakfast (7:30am-8:30am, Ballroom Courtyard)
Orange Juice, Guava Juice & Pineapple Juice
Island Fruit Breads, Freshly Baked Croissants, Danishes, Muffins
Assorted Sliced Bread, Bagels, Cream Cheese
Tropical Fruit Preserves, Butter
Selection of Sliced Seasonal Fruits
Selection of Dry Cereals, Muesli, with Fat Free Milk, Soy & Almond Milk, Raisins, Brown Sugar
Yogurt Bar with Assorted Fruit Yogurts, Mango, Strawberries, Bananas, Mac Nut Granola
Macadamia Nut Pancakes
Chicken Sausage
Cherrywood Smoked Bacon
Coffee, Decaffeinated Coffee & Fairmont Signature Teas

Lunch (12:00pm-2:30pm, Ballroom Courtyard)
Island Romaine, Croutons, Shaved Parmesan, Caesar Dressing
Seasonal Tropical Fruit Display
Waimea Green Bean, Roasted Pepper Salad
Pineapple, Cabbage Slaw
Roasted Onion, Bacon, Sweet Potato Salad
Cheddar Cheese Corn Muffins, Butter
Kiawe Smoked Brisket, Lilikoi Barbeque Sauce, Lime Cilantro Wasabi Cream
Huli Huli Chicken, Mango Glaze, Scallions
Teriyaki Glazed Grilled Island Catch, Edamame, Grilled Pineapple Salsa
Warm Soba Noodles, Charred Brussels Sprouts, Pickled Hamakua Mushrooms, Crispy Tofu
Paniolo Braised Beans, Portuguese Sausage, Molasses
Double Stuffed Baked Potato, Cheddar Cheese, Green Onions
Grilled Seasonal Vegetables

Assorted Haagen Dazs Ice Cream Bars and Frozen Fruit Bars
Freshly Brewed Iced Tea & Lemonade
Beer and wine

**Saturday, January 6**

**Breakfast (7:30am-8:30am, Ballroom Courtyard)**
Orange Juice, Guava Juice & Pineapple Juice
Selection of Sliced Seasonal Fruits
Malasadas: Plain, Guava, Chocolate
Sweet Cream Butter & Tropical Fruit Preserves
Selection of Dry Cereals, Muesli, with Fat Free Milk, Soy Milk & Almond Milk, Raisins, Brown Sugar
Hilo Sunrise Wrap: Egg, Chorizo, Cheddar Cheese & Cilantro served with Mango-Pineapple Salsa
(vegetarian option available)
Coffee, Decaffeinated Coffee & Fairmont Signature Teas

**Keynote Refreshments (11-11:30am in Salon 2&3)**
Mimosas
Crispy Chips, Mango-Pineapple Salsa & Pico de Gallo Salsa

**Hawaii Loa Luau (5:30-7:30pm, Plantation Estate)**

*Sample Menu*
Green Papaya Salad, Cilantro Chili Vinaigrette
Oka - Marinated Ono in a Coconut Lime Sauce
Seafood Lu’au: Medley of Seafood with Taro Leaves, Roasted Taro and a Coconut Sauce
Poisson Cru - Sesame Lime marlin, Oyster Sauce Tuna, Wasabi Tuna
Papaya Ginger Roast Chicken, Charred Papaya and Onions with a Mango Glaze
Kalua Pork - Shredded Hawaiian Style Roast Pork
Fresh Traditional Kauai Poi, Pounded Hanalei Taro Root
Marinated Mushroom Salad, Artichokes & Tarragon Vinaigrette
Macadamia Nut Crusted Mahi-Mahi, Caramelized Banana Emulsion
Taste of Polynesia Dessert Buffet
Molten Chocolate Lava Cake, Warm Hilo Vanilla sauce

**Sunday, January 7**

**Breakfast (7:30am-8:30am, Ballroom Courtyard)**
Fresh Orange Juice, Guava Juice, Pineapple Juice
Selection of Sliced Seasonal Fruits
Island Fruit Breads, Freshly Baked Croissants, Danishes, Muffins
Assorted Sliced Bread, Bagels, Cream Cheese
Tropical Fruit Preserves, Butter
Selection of Dry Cereals, Muesli, Raisins, Brown Sugar, Skim Milk, 2% Milk, Soy Milk
Yogurt Bar with Assorted Fruit Yogurts, Mango, Strawberries, Bananas, Macadamia Nut Granola
Scrambled Eggs
Waimea Vegetarian Egg Scramble
Cherrywood Smoked Bacon
Portuguese Sausage
Artichoke & Red Bliss Potato
Regular, Decaffeinated Coffee & Fairmont Signature Teas
## Pacific Symposium on Biocomputing (PSB) 2018 Schedule

January 3-7, 2018, Big Island of Hawaii

### Wednesday, January 3, 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>7:30-9:30</td>
<td>Registration</td>
<td>Ballroom Prefunction</td>
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<tr>
<td>12:00-2:00</td>
<td>Registration</td>
<td>Ballroom Prefunction</td>
</tr>
<tr>
<td>7:30-8:30</td>
<td>Registration</td>
<td>Kilohana</td>
</tr>
<tr>
<td>9:00-12:00</td>
<td><strong>Workshops</strong>&lt;br&gt;Machine Learning and Deep Analytics for Biocomputing: Call for Better Explainability&lt;br&gt;Organizers: Dragutin Petkovic, Lester Kobzik, Christopher Re</td>
<td>Salon 2&amp;3</td>
</tr>
<tr>
<td>12:00-1:30</td>
<td>Lunch on own</td>
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<tr>
<td>1:30-4:30</td>
<td><strong>Workshop</strong>&lt;br&gt;Integrating Community-level Data Resources for Precision Medicine Research&lt;br&gt;Organizers: Dana C. Crawford, William S. Bush</td>
<td>Salon 2&amp;3</td>
</tr>
<tr>
<td>1:30-4:30</td>
<td>Methods for Examining Data Quality in Healthcare Integrated Data Repositories&lt;br&gt;Organizers: Vojtech Huser, Michael Kahn, and Jeffrey Brown</td>
<td>Plaza</td>
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<tr>
<td>4:30-7:30</td>
<td>Dinner on own</td>
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<tr>
<td>7:30-8:30</td>
<td><strong>Reception</strong>&lt;br&gt;23rd Anniversary Reception</td>
<td>Kilohana</td>
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*Please wear your PSB name tag and lanyard for admission to all events and hosted meals.*
### Thursday, January 4, 2018

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<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>7:30-9:00</td>
<td>Registration</td>
<td>Ballroom Prefunction</td>
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<tr>
<td>10:30-11:30</td>
<td>Registration</td>
<td>Ballroom Prefunction</td>
</tr>
<tr>
<td>12:00-1:00</td>
<td>Registration</td>
<td>Ballroom Prefunction</td>
</tr>
<tr>
<td>7:30-8:30</td>
<td>PSB Breakfast</td>
<td>Ballroom Courtyard</td>
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<tr>
<td>8:30-8:40</td>
<td>Welcome</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>8:40-8:50</td>
<td>Introduction</td>
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<tr>
<td>8:50-9:10</td>
<td>Invited Talk: Rick Dewey</td>
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<tr>
<td>9:10-9:25</td>
<td>Large-scale integration of heterogeneous pharmacogenomic data for identifying drug mechanism of action</td>
<td>Salon 2&amp;3</td>
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<td></td>
<td>Yunan Luo, Sheng Wang, Jinfeng Xiao, Jian Peng</td>
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<td>9:25-9:40</td>
<td>Cell-specific prediction and application of drug-induced gene expression profiles</td>
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<td>Rachel Hodos, Ping Zhang, Hao-Chih Lee, Qiaonan Duan, Zichen Wang, Neil R. Clark, Avi Ma’ayan, Fei Wang, Brian Kidd, Jianying Hu, David Sontag, Joel Dudley</td>
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<tr>
<td>9:40-9:55</td>
<td>Characterization of drug-induced splicing complexity in prostate cancer cell line using long read technology</td>
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<td></td>
<td>Xintong Chen, Sander Houten, Kimaada Allette, Robert P. Sebra, Gustavo Stolovitzky, Bojan Losic</td>
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<tr>
<td>9:55-10:10</td>
<td>Chemical Reaction Vector Embeddings: Towards Predicting Drug Metabolism in the Human Gut Microbiome</td>
<td>Salon 2&amp;3</td>
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<td></td>
<td>Emily K. Mallory, Ambika Acharya, Stefano E. Rensi, Peter J Turnbaugh, Roselie A. Bright, Russ B. Altman</td>
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<tr>
<td>10:10-10:25</td>
<td>Extracting a Biologically Relevant Latent Space from Cancer Transcriptomes with Variational Autoencoders</td>
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<td>Gregory P. Way, Casey S. Greene</td>
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<tr>
<td>10:25-10:45</td>
<td>Break</td>
<td></td>
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<tr>
<td>10:45-11:45</td>
<td>Improving Healthcare through Biomedical Data Science</td>
<td>Salon 2&amp;3</td>
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<td>Carlos Bustamante with introduction by Russ Altman</td>
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<tr>
<td>11:45-1:00</td>
<td>PSB Hosted Lunch</td>
<td>Ballroom Courtyard</td>
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Please wear your PSB name tag and lanyard for admission to all events and hosted meals.
**Thursday, January 4, 2018 continued**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Details</th>
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<tbody>
<tr>
<td>1:00-1:10</td>
<td>Introduction</td>
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<tr>
<td>1:10-1:30</td>
<td>Invited Talk:</td>
<td>Mert Sabuncu</td>
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<tr>
<td>1:30-1:45</td>
<td>Codon Bias Among Synonymous Rare Variants Is Associated with Alzheimer's Disease Imaging Biomarker</td>
<td>Jason E. Miller, Manu K. Shivakumar, Shannon L. Risacher, Andrew J. Saykin, Seunggeun Lee, Kwangsik Nho, Dokyoon Kim</td>
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<tr>
<td>1:45-2:00</td>
<td>Deep Integrative Analysis for Survival Prediction</td>
<td>Chenglong Huang, Albert Zhang, Guanghua Xiao</td>
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<tr>
<td>2:00-2:15</td>
<td>Discriminative Bag-of-Cells for Imaging-Genomics</td>
<td>Benjamin Chidester, Minh N. Do, Jian Ma</td>
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<tr>
<td>2:15-2:30</td>
<td>Genotype-Phenotype Association Study via New Multi-Task Learning Model</td>
<td>Zhouyuan Huo, Dinggang Shen, Heng Huang</td>
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<tr>
<td>2:30-3:00</td>
<td>Parasite &amp; Symbiont Awards</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>3:00-4:00</td>
<td>Imaging Genomics</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>4:00-5:00</td>
<td>Applications of Genetics, Genomics and Bioinformatics in Drug Discovery</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>5:00-5:30</td>
<td>ISCB Meeting</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>5:30</td>
<td>Dinner on own</td>
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Please wear your PSB name tag and lanyard for admission to all events and hosted meals.

December 13, 2017
Pacific Symposium on Biocomputing (PSB) 2018 Schedule
January 3-7, 2018, Big Island of Hawaii

Friday, January 5, 2018

Registration
7:30-8:30  Registration

Breakfast
7:30-8:30  PSB Breakfast

Announcements
8:30-8:40  Morning Announcements

Session 3  Precision Medicine: from diplotypes to disparities towards improved health and therapies
Co-chairs: Bruce Aronow, Steven E. Brenner, Dana C. Crawford, Joshua C. Denny, Alexander A. Morgan
8:40-8:45  Introduction
8:45-9:05  Invited Talk: Vence Bonham
9:05-9:20  Considerations for automated machine learning in clinical metabolic profiling: altered homocysteine plasma concentration associated with metformin exposure
  Alena Orlenko, Jason H. Moore, Patryk Orzechowski, Randal S. Olson, Junmei Cairns, Pedro J. Caraballo, Richard M. Weinshilboum, Liewei Wang, Matthew K. Breitenstein
9:20-9:35  Analyzing metabolomics data for association with genotypes using two-component gaussian mixture distributions
  Jason Westra, Nicholas Hartman, Bethany Lake, Gregory Shearer, Nathan Tintle
9:35-9:50  Single subject transcriptome analysis to identify functionally signed gene set or pathway activity
  Joanne Berghout, Qike Li, Nima Pouladi, Jianrong Li, Yves A Lussier
9:50-10:05 Emergence of pathway-level composite biomarkers from converging gene set signals of heterogeneous transcriptomic responses
  Samir Rachid Zaim, Qike Li, A. Grant Schissler, Yves A. Lussier
10:05-10:20 Coalitional game theory as a promising approach to identify candidate autism genes
  Anika Gupta, Min Woo Sun, Kelley M. Paskov, Nate T. Stockham, Jae-Yoon Jung, Dennis P. Wall
10:20-10:35 Using simulation and optimization approach to improve outcome through warfarin precision treatment
  Chih-Lin Chi, Lu He, Kourosh Ravvaz, John Weissert, Peter J. Tonellato
10:35-10:50 Addressing vital sign alarm fatigue using personalized alarm thresholds
  Sarah Poole, Nigam Shah

Discussion Session
11:00-12:00 Precision Medicine: from diplotypes to disparities towards improved health and therapies phenotypes

Please wear your PSB name tag and lanyard for admission to all events and hosted meals.

December 13, 2017
**Pacific Symposium on Biocomputing (PSB) 2018 Schedule**

**January 3-7, 2018, Big Island of Hawaii**

**Friday, January 5, 2018** continued

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<tr>
<th>Time</th>
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<tr>
<td>12:00-2:30</td>
<td>Poster Session with Lunch (Posters on ODD numbered boards presented from 12:30-1:30) (Posters on EVEN numbered boards presented from 1:30-2:30)</td>
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**Session 4** Democratizing Health Data for Translational Research

Co-chairs: Philip Payne, Nigam Shah, Jessie Tenenbaum, Lara Mangravite

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<tbody>
<tr>
<td>2:30-2:40</td>
<td>Introduction</td>
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<tr>
<td>2:40-3:00</td>
<td>Invited Talk: Joe Corkery</td>
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<tr>
<td>3:00-3:20</td>
<td>Invited Talk: John Wilbanks</td>
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<tr>
<td>3:20-3:35</td>
<td><strong>ClinGen Cancer Somatic Working Group – Standardizing and Democratizing Access to Cancer Molecular Diagnostic Data to Drive Translational Research</strong></td>
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<tr>
<td>3:35-3:50</td>
<td><strong>Best Practices and Lessons Learned from Reuse of 4 Patientderived Metabolomics Datasets in Alzheimer’s Disease</strong></td>
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<td>Jessica D. Tenenbaum, Colette Blach</td>
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<tr>
<td>3:50-4:05</td>
<td><strong>A Heuristic Method for Simulating Open-Data of Arbitrary Complexity that Can Be Used to Compare and Evaluate Machine Learning Methods</strong></td>
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<td>Jason H. Moore, Maksim Shestov, Peter Schmitt, Randal S. Olson</td>
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**Discussion Session**

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<th>Time</th>
<th>Event</th>
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<tr>
<td>4:10-5:10</td>
<td>Democratizing Health Data for Translational Research</td>
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**Break**

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<th>Time</th>
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<tr>
<td>5:10-</td>
<td>Dinner &amp; Evening on own</td>
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December 13, 2017
Pacific Symposium on Biocomputing (PSB) 2018 Schedule
January 3-7, 2018, Big Island of Hawaii

Saturday, January 6, 2018

Breakfast  Ballroom Courtyard
7:30-8:30  PSB Breakfast

Announcements  Salon 2&3
8:30-8:40  Morning Announcements

Session 5:  Challenges of Pattern Recognition in Biomedical Data  Salon 2&3
Co-chairs: Anurag Verma, Anna Basile, Marta Byrskas-Bishop, Christian Darabos, Shefali Setia Verma

8:40-8:50  Introduction
8:50-9:10  Invited Talk: Larry Smarr
9:10-9:25  Functional Network Community Detection Can Disaggregate and Filter Multiple Underlying Pathways in Enrichment Analyses
Lia X. Harrington, Gregory P. Way, Jennifer A. Doherty, Casey S. Greene

9:25-9:40  Large-Scale Analysis of Disease Pathways in the Human Interactome
Monica Agrawal, Marinka Zitnik, Jure Leskovec

9:40-9:55  Data-driven Advice for Applying Machine Learning to Bioinformatics Problems
Randal S. Olson, William La Cava, Zairah Mustahsan, Akshay Varik, Jason H. Moore

9:55-10:10  Automated disease cohort selection using word embeddings from Electronic Health Records
Benjamin S. Glicksberg, Riccardo Miotto, Kipp W. Johnson, Khader Shameer, Li Li, Rong Chen, Joel T. Dudley

10:10-10:25  Mapping Patient Trajectories using Longitudinal Extraction and Deep Learning in the MIMIC-III Critical Care Database
Brett K. Beaulieu-Jones, Patryk Orzechowski, Jason H. Moore

10:25-10:40  Causal Inference on Electronic Health Records to Assess Blood Pressure Treatment Targets: An Application of the Parametric G Formula
Kipp W. Johnson, Benjamin S. Glicksberg, Rachel Hodos, Khader Shameer, Joel T. Dudley

10:40-10:55  How Powerful Are Summary-Based Methods for Identifying Expression-Trait Associations Under Different Genetic Architectures?
Yogasudha Veturi, Marylyn D. Ritchie

Keynote:  Salon 2&3
11:00-12:15  Data Disparities: Discrimination & Equity in Big Data
Jennifer Wagner with introduction by Marylyn Ritchie

Break  Salon 2&3
12:15-1:30  Lunch on Own

Workshop  Salon 2&3
1:30-4:30  Diversity and Disparity in Biomedical Informatics

Please wear your PSB name tag and lanyard for admission to all events and hosted meals.

December 13, 2017
Pacific Symposium on Biocomputing (PSB) 2018 Schedule
January 3-7, 2018, Big Island of Hawaii

**Saturday, January 6, 2018 continued**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 4:30-5:30 | **Discussion Session**  
             | Challenges of Pattern Recognition in Biomedical Data  
             | Salon 2&3                                                          |
| 5:30-7:30 | **Dinner**  
             | Hawaii Loa Luau  
             | *PSB’s dinner will be held at the Fairmont’s Hawaii Loa Luau this year.*  
             | Luau Schedule:  
             | 5:30 pm Check-In & Seating Begins  
             | 6:00 pm Luau Dinner Buffet  
             | 7:00 pm Performance Begins / Bar Closed  
             | Plantation Estate |

Please wear your PSB name tag and lanyard for admission to all events and hosted meals.

December 13, 2017
# Pacific Symposium on Biocomputing (PSB) 2018 Schedule

**January 3-7, 2018, Big Island of Hawaii**

## Sunday, January 7, 2018

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<tbody>
<tr>
<td>7:30-8:30</td>
<td>Breakfast</td>
<td>Ballroom Courtyard</td>
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<tr>
<td>8:30-8:40</td>
<td>Closing Announcements</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>8:40-8:50</td>
<td>Session 6: Advances in Text Mining and Visualization for Precision Medicine</td>
<td>Salon 2&amp;3</td>
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<tr>
<td>8:50-9:10</td>
<td>Invited Talk: Jason Moore</td>
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<td>9:00-9:30</td>
<td>Invited Talk: Sophia Ananiadou</td>
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<td>9:45-10:00</td>
<td>VisAGE: Integrating External Knowledge into Electronic Medical Record Visualization</td>
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<td>9:45-10:00</td>
<td>Annotating gene sets by mining large literature collections with protein networks</td>
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<tr>
<td>10:00-10:15</td>
<td>Improving Precision in Concept Normalization</td>
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<td>10:20-10:30</td>
<td>Reading Between the Genes: Computational Models to Discover Function and/or Clinical Utility from Noncoding DNA</td>
<td>Salon 2&amp;3</td>
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<td>10:30-10:50</td>
<td>Invited Talk: Martha Bulyk</td>
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<td>10:50-11:05</td>
<td>Network analysis of pseudogene-gene relationships: from pseudogene evolution to their functional potentials</td>
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<td>11:05-11:20</td>
<td>Convergent downstream candidate mechanisms of independent intergenic polymorphisms between co-classified diseases implicate epistasis among noncoding elements</td>
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<td>11:20-11:35</td>
<td>Leveraging putative enhancer-promoter interactions to investigate two-way epistasis in type 2 diabetes GWAS</td>
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### Discussion Sessions

11:40-12:40 Reading Between the Genes: Computational Models to Discover Function and/or Clinical Utility from Noncoding DNA

11:40-12:40 Text Mining and Visualization for Precision Medicine

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*PSB over—see you next year!*

Please wear your PSB name tag and lanyard for admission to all events and hosted meals.

December 13, 2017
Call for Session Proposals
Pacific Symposium on Biocomputing

The Big Island of Hawaii, January 3-7, 2019

This is an invitation to submit proposals for sessions in the 24th Pacific Symposium on Biocomputing (PSB), to be held January 3-7, 2019 on the Kohala Coast, the Big Island of Hawaii. PSB will bring together top researchers from the US, the Asian Pacific nations and around the world to exchange research for the presentation of work in databases, algorithms, interfaces, natural language processing, modeling and other computational methods, as applied to biological problems, with emphasis on applications in data-rich areas of molecular biology.

PSB has been designed to be responsive to the need for critical mass in sub-disciplines within biocomputing. For that reason, it is the only meeting whose sessions are defined dynamically each year in response to specific proposals. PSB sessions are organized by leaders in the emerging areas, and targeted to provide a forum for publication and discussion of research in biocomputing's "hot topics." In this way, PSB provides an early forum for serious examination of emerging methods and approaches in this rapidly changing field.

Proposals for such sessions are hereby solicited. A proposal should identify a coherent topic that can be addressed by 3 to 12 papers. For example, a session might bring together papers on alternative approaches to a particular biological question or it might examine the applications of a particular technology in a variety of biological areas. A sample of more than 20 different decisions at previous PSB meetings have included:

- Applications of Genetics, Genomics and Bioinformatics in Drug Discovery
- Challenges of Pattern Recognition in Biomedical Data
- Democratizing Health Data for Translational Research
- Imaging Genomics
- Precision Medicine: from diplotypes to disparities towards improved health and therapies
- Reading Between the Genes: Computational Models to Discover Function and/or Clinical Utility from Noncoding DNA
- Text Mining and Visualization for Precision Medicine

A major goal of PSB is to create productive interaction among the rather different research cultures of computer science and biology. Recognizing that many in the computational community believe the value of a meeting depends on the quality of its review process, every full manuscript submitted to PSB is reviewed by at least two anonymous reviewers, as well as the session organizers and meeting chairs. Accepted papers are distributed in a proceedings volume at the meeting, and are indexed in Medline and other bibliographic databases. However, we also recognize that many potential participants, particularly from the biological community, do not choose to submit full papers to conferences, even with assurance of availability and broad indexing. Therefore, PSB also includes a separate open submission abstract book and open poster presentations in which any registrant can present research.

Responsibilities of a session chair

As a proposer of an accepted session, you will become the session chair. The chair's primary responsibility is to solicit high quality papers for the session, oversee the review, and write a tutorial introduction to your session. You are to solicit manuscripts, have them refereed, collaborate with the conference chairs in determining which manuscripts are to be accepted and structure presentation time in your session. Please contact us at the address below if you have any questions about the obligations entailed in becoming a session organizer.

http://psb.stanford.edu/callfor/sessionproposals/
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Procedure for submitting proposals

Session proposals can be as short as a single page and should in no case be more than 6 pages. The proposal should:

- Define a specific technical area to be covered.
- Justify why the proposed area is appropriate for PSB. Discuss why the topic is timely and important, and how the topic has been addressed in other conferences or recent publications.
- Argue that there is likely to be sufficient high quality, unpublished material to fill the session, e.g., a list of researchers you intend to solicit for papers. If there are unlikely to be adequate paper submissions, consider applying for a PSB workshop instead.
- Provide a short autobiographical sketch and an explicit statement that your organization endorses your involvement.
- Proposals must be submitted online at http://psb.wufoo.com/forms/psb-session-proposal-submission-form/.

Important Dates

February 9, 2018 Proposals Due
March 9, 2018 Notification Regarding the Proposals

Each proposal will be evaluated by the organizing committee. We look forward to your submissions.

Questions? Please send email to

Lawrence Hunter, Ph.D.
Director, Center for Computational Pharmacology & Computational Bioscience Program
Professor of Pharmacology (Denver) & Computer Science (Boulder)
E-mail: larry.hunter@ucdenver.edu
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We are soliciting proposals for three hour workshops appropriate to the diverse PSB conference community. Workshops can include: panels of experts on emerging areas of computational biology that are not likely to attract the number of paper submissions required for a session; open discussions of topics important to the computational biology community; or other topics and formats. Workshops at previous PSB meetings have included:

- The Future of Genome-Based Medicine
- Modeling Cell Heterogeneity: from Single-Cell Variations to Mixed Cells Populations
- Training the Next Generation of Quantitative Biologists
- Uncovering the Etiology of Autism Spectrum Disorders: Genomics, Bioinformatics, Environment, Data Collection and Exploration, and Future Possibilities
- Diversity and Disparity in Biomedical Informatics
- Integrating Community-level Data Resources for Precision Medicine Research
- Machine Learning and Deep Analytics for Biocomputing: Call for Better Explainability
- Methods for Examining Data Quality in Healthcare Integrated Data Repositories

Responsibilities of a workshop chair

As a proposer of an accepted workshop, you will become the workshop chair. The chair's primary responsibility is to organize and preside over the presentations related to your workshop.

Procedure for submitting proposals

Proposals can be as short as a single page and should in no case be more than 6 pages. The proposal should:

- Define a specific technical area to be covered, and a format for the workshop.
- Justify why the proposed area is appropriate for PSB. Discuss why the topic is timely and important, and how the topic has been addressed in other conferences or recent publications. Describe why the proposed format is appropriate for the workshop.
- If the workshop proposes invited experts, provide evidence that the experts will attend the workshop. Participants are required to register for the conference, and, unlike sessions, no financial support from the conference is offered to workshop organizers. Emails from potential participants are sufficient.
- Provide a short autobiographical sketch and an explicit statement that your organization endorses your involvement.
- Proposals must be submitted online at https://psb.wufoo.com/forms/psb-workshop-proposal-submission-form/.
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