The long course provides additional instruction to more senior trainees, including advanced graduate students and postdocs. This part of the program provides a research residence program at UCLA where trainees will interact with world-leading researchers in the field of computational genomics. The program combines structured training programs with flexible time in order to encourage interaction and collaboration with other participants and program faculty.

<table>
<thead>
<tr>
<th>SCHEDULE</th>
<th>Dates</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Bear Retreat</td>
<td>July 11th - 14th</td>
<td>5</td>
</tr>
<tr>
<td>First Short Course</td>
<td>July 16th - 20th</td>
<td>7</td>
</tr>
<tr>
<td>Long course –middle week</td>
<td>July 23rd - 27th</td>
<td>12</td>
</tr>
<tr>
<td>Second Short Course</td>
<td>July 30th - August 3rd</td>
<td>14</td>
</tr>
</tbody>
</table>

**RESEARCH TALKS**

45-minute explorations of current problems and research in computational genomics by participating faculty.

**TUTORIALS**

Interactive, guided 45-minute workshops that aim to help participants apply new techniques to research problems.

**JOURNAL CLUBS**

45-minute sessions that give participants an opportunity to critically evaluate recent articles and stay up-to-date on relevant new research. As part of our Short Course, we will be breaking into small groups for daily journal clubs. Journal clubs provide an excellent opportunity to discuss current work and doing so with colleagues with shared interests can be insightful, productive, and fun.

**THE 2018 ORGANIZING COMMITTEE**

Eran Halperin, UCLA CGSI Co-Director  
Eleazar Eskin, UCLA, CGSI Co-Director  
Fereydoun Hormozdiari, UC Davis  
David Koslicki, Oregon State University  
Kirk Lohmueller, UCLA  
Dima Shlyakhtenko, UCLA IPAM Director
The CGSI retreat will be a unique opportunity for faculty and Long Course participants to become acquainted and learn about each other's research in an informal setting. The 2018 CGSI retreat schedule includes research talks, flash talks, journal clubs, and social events.

### ACCOMMODATION

| The 2018 CGSI retreat will be held at the Best Western Hotel in Big Bear Lake, California. Hotel rooms have already been assigned to guests; please check in with your name. Complimentary breakfast served from 6:00 a.m. to 9:30 a.m. |
| Best Western Big Bear Chateau 42200 Moonridge Rd, Big Bear Lake, CA 92315 |
| (909) 866-6666 |

### RESEARCH TALKS

| This year's retreat features twelve 30-minute research talks presented by emerging scholars in the field of computational genomics. Each presenter compiled a list of relevant papers that provide a more in-depth exploration of their research talk material. Click to open a paper in your internet browser. |

### JOURNAL CLUB

| As part of our annual retreat, we will be breaking into five small groups for daily journal clubs on July 12 and July 13. Journal clubs provide an excellent opportunity to discuss current work and doing so with colleagues with shared interests can be insightful, productive, and fun. Note required reading for each journal club. |

### ACTIVITIES

| Arrangements for optional social events include dinners at local restaurants, hiking in the San Bernardino Mountains, soccer competitions at a nearby park, and free time at the hotel. The Best Western Big Bear Chateau features an outdoor heated swimming pool and hot tub, as well as a game room with a pool table. |

### RUN WITH SAGI SNIR

| At 7:30am there will be a morning run, and at 8:00am we will hold a cool down session—led by world-renown scholar Dr. Sagi Snir. We invite you to join us for a leisurely and scenic jog around Big Bear. Wellness and sport are key aspects of the LA experience! Meet in the lobby of the hotel.. |

### YOGA WITH ALISON SHAW

| At 7:30am there will be a morning introduction to Yoga. |
The short course provides didactic training in computational and statistical genomic methods development. This part of the program is relevant to a wide range of trainees who are interested in developing or enhancing the methodology development aspect of their research program.

**LOCATION**
The First Short Course will be held in the California Room at the UCLA Faculty Center. The Faculty Center is situated in the heart of the UCLA campus. An attractive and comfortable private club that opened in 1959, the UCLA Faculty Center offers many well-furnished meeting rooms, lounges, patios, and dining facilities are available for a wide range of social and professional activities.  
**480 Charles Young Drive, Los Angeles, CA 90095-1617**

**PARKING**
The closest lots to the Faculty Center is **Parking Structure 2**. Go to the **Kiosk #2** in the sidewalk to pay for your permit.

---

**Long Course - middle week**  
**July 23-27**

The Long Course will be held in the First Floor Conference Room in the Gonda Building. The Gonda (Goldschmied) Neuroscience and Genetics Research Center, is a state-of-the-art facility that helps researchers explore the depths of science.  
**200 Medical Plaza Driveway, Los Angeles, CA 90095**

**PARKING**
The closest lots to the Gonda Building are **Parking Structure 8 and Parking Structure 9**. Go to the **Kiosk Booth** in the middle of the road to pay for your permit.
The second short course provides a focus on computational methods in statistical and population genetics and computational methods in microbiome analysis. This part of the program is relevant to a wide range of trainees who are interested in developing or enhancing the methodology development aspect of their research program.

**LOCATION**

| The Second Short Course will be in the building of Engineering VI Mong Auditorium |
| 404 Westwood Plaza, Los Angeles, CA 90095, USA |

**PARKING**

| The closest lots to the Gonda Building are Parking Structure 8 and Parking Structure 9. Go to the [Kiosk Booth](#) in the middle of the road to pay for your permit. |
### Wednesday July 11

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:00</td>
<td>Check-in Best Western Big Bear Chateau</td>
<td>42200 Moonridge Rd, Big Bear Lake, CA 92315</td>
</tr>
<tr>
<td>18:00</td>
<td>CGSI Retreat Dinner</td>
<td></td>
</tr>
</tbody>
</table>

### Thursday July 12

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:00-9:00</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>07:00-9:00</td>
<td>Registration - Pick up your name tag</td>
<td>in the hotel breakfast room!</td>
</tr>
<tr>
<td>09:00</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Alex Schoenhuth &quot;A short tutorial about</td>
<td>deep neural network architectures&quot;</td>
</tr>
<tr>
<td>10:45</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>David Koslicki</td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>Hiking in the San Bernardino Mountains</td>
<td>@ Big Bear Discovery Center</td>
</tr>
<tr>
<td></td>
<td>@ Big Bear Discovery Center</td>
<td>40971 North Shore Drive/ Hwy 38, Fawnskin, CA 92333</td>
</tr>
<tr>
<td>19:00</td>
<td>CGSI Retreat Dinner</td>
<td>40199 Big Bear Blvd, Big Bear Lake, CA 92315</td>
</tr>
</tbody>
</table>

### Friday July 13

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Related papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>06:00-9:00</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>TBA</td>
<td>C GSI 2018 5</td>
</tr>
<tr>
<td>10:00</td>
<td>Sayan Mukherjee “Mapping epistatic traits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>using kernel methods and variance component models”</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Ilan Gronau “Using the ancestral recombination graph to investigate adaptations of birds in the Amazon”</td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td>Sagiv Shifman “Essential genes linked to neurodevelopmental disorders”</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Sports @ Meadow Park</td>
<td></td>
</tr>
<tr>
<td></td>
<td>41220 Park Ave, Big Bear Lake, CA 92315</td>
<td></td>
</tr>
<tr>
<td>18:00</td>
<td>Dinner @ Paoli’s Italian Country Kitchen</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40821 Village Dr, Big Bear Lake, CA 92315</td>
<td></td>
</tr>
<tr>
<td>20:00</td>
<td>Free Time in the Best Western Game Room and Outdoor Pool</td>
<td></td>
</tr>
</tbody>
</table>

**Saturday July 14**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-10:00</td>
<td>Journal Club Brunch and Social Activity</td>
</tr>
<tr>
<td>12:00</td>
<td>Check out of hotel</td>
</tr>
</tbody>
</table>
# First Short Course

## Monday July 16

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00</td>
<td>Registration and Breakfast - Check in and pick up your name tag during breakfast!</td>
</tr>
<tr>
<td>09:00</td>
<td>Introduction - CGSI Organizing Committee</td>
</tr>
</tbody>
</table>
| 09:15 | Lior Pachter  
Tutorial  
“What is CCA, why you should care, and how to use it“ |
| 10:00 | Saharon Rosset “The Multivariate Normal Distribution: Linear Mixed Models and Beyond“ |
| 10:45 | Coffee Break |
| 11:15 | Journal Club |
| 12:00 | Lunch |
| 13:30 | David Koslicki |
| 14:15 | Coffee Break |
| 14:45 | Kirk Lohmueller “Methods for inference of purifying selection and dominance coefficients from genomic data“ |
| 15:30 | Coffee Break |
| 16:00 | Fereydoun Hormozdiari “Contribution of structural variation to genome structure“ |
| 17:00-18:00 | Happy Hour @ Wolfgang Puck Express - Ackerman Union, Level 1, UCLA Campus |

We will hold happy hour at Wolfgang Puck, a bar on campus located just a few minutes' walk away from the Faculty Center. We strongly encourage all to attend these happy hours and to get to know your fellow course participants.

## Tuesday July 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
</tr>
<tr>
<td>09:15</td>
<td>TBA</td>
</tr>
</tbody>
</table>

© CGSI 2018
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00</td>
<td>Tutorial</td>
<td>Can Alkan “Characterization of genomic structural variation using various sequencing technologies.”</td>
</tr>
<tr>
<td>10:45</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>UCLA Career Opportunities Lunch - UCLA Faculty Center</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Michael Schatz</td>
<td>&quot;Advances in Genome Sequencing and Assembly&quot;</td>
</tr>
<tr>
<td>14:15</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Jian Ma</td>
<td>“Algorithms for studying nuclear genome organization and evolution”</td>
</tr>
<tr>
<td>15:30</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>Alex Schoenhuth</td>
<td>“Discovering and genotyping genetic variants in single cells”</td>
</tr>
<tr>
<td>17:00-20:00</td>
<td>Picnic, Volleyball, &amp; Soccer @ Santa Monica Beach</td>
<td></td>
</tr>
</tbody>
</table>

**Wednesday July 18**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Sayan Mukherjee</td>
<td>“Compositional models for microbiome data and time series models for microbiome data”</td>
</tr>
<tr>
<td>10:00</td>
<td>Sagiv Shifman</td>
<td>&quot;Essential genes linked to neurodevelopmental disorders&quot;</td>
</tr>
<tr>
<td>10:45</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Sriram Sankararaman</td>
<td>“Probabilistic modeling and inference in genomics”</td>
</tr>
<tr>
<td>12:00</td>
<td>Tutorial</td>
<td>Bogdan Pasaniuc &quot;How to identify susceptibility genes in post-GWAS studies.&quot;</td>
</tr>
<tr>
<td>Time</td>
<td>Event Description</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>Teaching Bioinformatics Lunch - UCLA Faculty Center</td>
<td></td>
</tr>
<tr>
<td>13:00-18:00</td>
<td>Self-Guided Tour of Hollywood - We encourage CGSI participants to Lyft or Uber to Hollywood for a self-guided tour of the neighborhood.</td>
<td></td>
</tr>
<tr>
<td>18:00-19:30</td>
<td>Picnic@HollywoodBowl - Grab food and snacks on your way over to the Hollywood Bowl Picnic Area!</td>
<td></td>
</tr>
<tr>
<td>20:00-22:00</td>
<td>Hollywood Bowl Concert</td>
<td></td>
</tr>
</tbody>
</table>

**There are two ways to get to Hollywood:**
1. Early in the afternoon, split into smaller groups and take Uber or Lyft to the historic Hollywood district. The average cost of an Uber or Lyft ride from Westwood to Hollywood is $18 (please note that we cannot control the rate of Uber or Lyft fares). We provide on the following page recommendations for lunch, sightseeing, and purchasing food and drinks for the picnic and show at Hollywood Bowl.
2. Late in the afternoon, take the Hollywood Bowl shuttle bus from Westwood (Veteran Ave at Wilshire Blvd) to Hollywood. This shuttle is $7 both ways, and the earliest departure is 5:30pm. You may request one shuttle ticket when RSVPing for the event. Participants who take the shuttle will arrive at the Bowl just in time for the show and will not arrive in time for the picnic. If you wish to take the bus, please let us know—we will walk you from campus to the bus stop.

We recommend purchasing food and drinks in Westwood, before leaving, and bringing your personal picnic to the Hollywood Bowl as your dinner during the show.

**Where to buy food for the picnic and concert.**
Join us for a picnic at 6:00pm—bring your own food and drink—and walk with us to the bowl at 7:30pm.
In addition, the evening’s Bowl performance allows guests to bring their own food and drink. We suggest stopping by the following stores to grab food, snacks, and drinks. Bring your leftovers to the show!
Trader Joe’s 1600 Vine St, Los Angeles, CA 90028
Yucca Supermarket 1815 N Cahuenga Blvd, Los Angeles

**How to get to the Hollywood Bowl.**
We reserved a picnic area for CGSI participants to meet and hang out before heading up to the venue. From the picnic area, the bowl is a 0.5-mile uphill walk and takes approximately 15 minutes.
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Related papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Tutorial</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Mark Chaisson &quot;Detecting variation using single-molecule sequencing&quot;</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Iuliana Ionita “Statistical methods for the integration of functional genomics data and whole exome/genome sequencing data for improved gene discovery”</td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>UCLA Career Opportunities Lunch - UCLA Faculty Center</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Tutorial</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Ilan Gronau “Re-examining demography inference from genomic data”</td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Cenk Sahinalp “Tumor evolution modeling through the use of single cell and bulk sequencing data”.</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>Tutorial</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>Brian Browning “Phasing the UK Biobank”</td>
<td></td>
</tr>
<tr>
<td>17:30-19:00</td>
<td>Bike Ride along Santa Monica beach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possibility of keeping the Bike overnight until 10 am - $ 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fill out the Contract Agreement prior your arrival.</td>
<td></td>
</tr>
<tr>
<td>19:00-21:00</td>
<td>Twilight Concert Series @ Santa Monica Pier - Grab food and snacks on your way over to Santa Monica!</td>
<td></td>
</tr>
</tbody>
</table>

© CGSI 2018
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Related papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>James Zou &quot;Contrastive PCA&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Sagi Snir &quot;Non linearity of Epigenetic Aging is Detected via the Universal PaceMaker&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>UCLA Career Opportunities Lunch - UCLA Faculty Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Jason Ernst</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Tutorial</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:15</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Vikas Bansal &quot;Haplotyping human genomes using whole-genome sequencing&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>William (Xiaoquan) Wen &quot;Bayesian integrative analysis of molecular QTL and GWAS data&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17:00-18:00</td>
<td>Happy Hour @ Wolfgang Puck Express - Ackerman Union, Level 1, UCLA Campus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Saturday July 21**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Related papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-12:00</td>
<td>Volleyball &amp; Soccer @ Santa Monica Beach</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Monday July 23

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Related papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Saharon Rosset</td>
<td>p. 743–755</td>
</tr>
<tr>
<td></td>
<td>“Speciation without Isolation: The Future of Humans?”</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>10:45</td>
<td>Mark Chaisson</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;Resolving multicopy duplications using assembly by phasing&quot;</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Special Coffee Break and Long Course Orientation</td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Or Zuk &quot;Improved Deep-Learning Methods for Enhancers Identification and Interpretation&quot;</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>Dinner</td>
<td></td>
</tr>
</tbody>
</table>

### Tuesday July 24

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Related papers</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Rayan Chikhi “Data structures for k-mers (applications: reference-free sequencing data analysis)”</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Kin Fai Au &quot;IDP-denovo: de novo transcriptome assembly and isoform annotation by hybrid sequencing&quot;</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
<td></td>
</tr>
<tr>
<td>14:15-14:45</td>
<td>Special Coffee Break and Long Course Orientation</td>
<td></td>
</tr>
</tbody>
</table>
### Wednesday July 25

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30-14:45</td>
<td>Long Course Day Three - DAY OFF</td>
</tr>
</tbody>
</table>

### Thursday July 26

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
</tr>
<tr>
<td>09:15</td>
<td>Jo Hardin “Issues in sequencing depth when clustering genetic profiles measured across varying levels of Rpos protein”</td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>10:30</td>
<td>Jessica (Jingyi) Li “Statistical Methods for Bulk and Single-cell RNA-seq data”</td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>14:15-14:45</td>
<td>Special Coffee Break</td>
</tr>
</tbody>
</table>

### Friday July 27

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
</tr>
<tr>
<td>09:15</td>
<td>Lior Pachter “(Computational and experimental) methods for multiplexed single-cell RNA-Seq”</td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
</tr>
<tr>
<td>10:30</td>
<td>Jae Hoon Sul “Contribution of common and rare variants to bipolar disorder susceptibility in population isolates.”</td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
</tr>
<tr>
<td>14:15-14:45</td>
<td>Special Coffee Break</td>
</tr>
</tbody>
</table>

### Saturday July 28

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DAY OFF</td>
</tr>
</tbody>
</table>
### Monday July 30

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Tutorial</td>
<td>Ben Langmead &quot;Using huge public sequencing datasets to answer scientific questions&quot;</td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Tutorial</td>
<td>Eytan Ruppin “Harnessing genetic interactions to advance whole genome precision oncology&quot;</td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Tutorial</td>
<td>Rayan Chikhi &quot;Methods for metagenome assembly (de Bruijn graphs)&quot;</td>
</tr>
<tr>
<td>14:15</td>
<td>Special Coffee Break</td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Tutorial</td>
<td>Or Zuk “Inference of Selection from Intra-Species and Inter-Species Variation&quot;</td>
</tr>
<tr>
<td>15:30-16:00</td>
<td>Coffee Break and Second Short Course Orientation</td>
<td></td>
</tr>
<tr>
<td>16:00-16:45</td>
<td>Tutorial</td>
<td>Pavel Pevzner  “Genome and metagenome long reads assembly&quot;</td>
</tr>
<tr>
<td>18:00</td>
<td>CGSI Dinner at 800 Degrees Pizza, Westwood.</td>
<td></td>
</tr>
</tbody>
</table>

### Tuesday July 31

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Tutorial</td>
<td>Sohini Ramachandran &quot;Applications of Latent Dirichlet Allocation in genomics&quot;</td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------------------------------</td>
<td>----------------------------------------------------</td>
</tr>
<tr>
<td>10:30</td>
<td>Sharon Aviran “Automated recognition of functional RNA elements by their SHAPE data signatures”</td>
<td></td>
</tr>
<tr>
<td>11:15 - 11:45</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>11:45</td>
<td>Andres Gomez “Intrinsic and extrinsic drivers of the human microbiome: An evolutionary perspective”</td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch and free afternoon</td>
<td></td>
</tr>
<tr>
<td>15:30</td>
<td>Will Rogers State Park Rd, Pacific Palisades, CA 90272 Parking is $12.00 per vehicle</td>
<td></td>
</tr>
</tbody>
</table>

**Wednesday August 1**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Tutorial Nick Chia “MMinte: an application for predicting metabolic interactions among the microbial species in a community”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Emilia Huerta Sanchez “The impact of admixture on patterns of human genetic variation”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Tutorial Thomas Sharpton “Imputing the functional capacity of microbiomes through metagenome annotation”</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14:15 - 14:45</td>
<td>Special Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Activity</td>
<td>Details</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>14:45</td>
<td>Tutorial</td>
<td>John Novembre &quot;Tools for mapping spatial heterogeneity in population genetic data&quot;</td>
<td></td>
</tr>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Shai Carmi &quot;Hidden Markov Models for pre-implantation genetic testing and ancient DNA&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Murat A. Eren &quot;From characterizing genomic heterogeneity within single populations to investigating evolutionary forces acting on environmental microbes&quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Tutorial</td>
<td>Siavash Mirarab &quot;Genome-wide species tree reconstruction despite gene tree discordance.&quot;</td>
<td></td>
</tr>
<tr>
<td>14:15 - 14:45</td>
<td>Special Coffee Break</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:30 - 20:00</td>
<td>Picnic, Volleyball &amp; Soccer @ Santa Monica Beach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19:00 - 21:00</td>
<td>Twilight Concert Series @ Santa Monica Pier - Grab food and snacks on your way over to Santa Monica!</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Thursday August 2**

**Friday August 3**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>09:15</td>
<td>Daniel Wegmann &quot;Incorporating genotype uncertainty in population genetics: general concepts and applications to ancient DNA&quot;</td>
<td></td>
</tr>
<tr>
<td>10:00</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>10:30</td>
<td>Vineet Bafna</td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>Journal Club</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch Break</td>
<td></td>
</tr>
<tr>
<td>13:30</td>
<td>Ran Blekhman</td>
<td></td>
</tr>
<tr>
<td>14:15-14:45</td>
<td>Special Coffee Break</td>
<td></td>
</tr>
</tbody>
</table>

### Lunch Recommendations

We recommend visiting the following restaurants in smaller groups:

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>Address</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musso &amp; Frank Grill</td>
<td>6667 Hollywood Blvd, Los Angeles, CA 90028</td>
<td>Classic American fare at Hollywood's oldest eatery</td>
</tr>
<tr>
<td></td>
<td>(323) 467-7788</td>
<td></td>
</tr>
<tr>
<td>25 Degrees - Hollywood</td>
<td>7000 Hollywood Blvd, Los Angeles, CA 90028</td>
<td>Vintage pub with burgers, shakes, &amp; glam decor</td>
</tr>
<tr>
<td>Roosevelt Hotel</td>
<td>(323) 785-7244</td>
<td></td>
</tr>
<tr>
<td>Loteria Grill – Hollywood</td>
<td>6627 Hollywood Blvd, Los Angeles, CA 90028</td>
<td>Creative takes on classic Mexican eats &amp; a full bar</td>
</tr>
<tr>
<td></td>
<td>(323) 465-2500</td>
<td></td>
</tr>
<tr>
<td>Stout Burgers and Beer</td>
<td>1544 N Cahuenga Blvd, Los Angeles, CA 90028</td>
<td>Casual gastropub with inventive burgers &amp; craft beer</td>
</tr>
<tr>
<td></td>
<td>(323) 469-3801</td>
<td></td>
</tr>
<tr>
<td>Kino Sushi</td>
<td>6721 Hollywood Blvd, Los Angeles, CA 90028</td>
<td>Popular Japanese, Korean &amp; Chinese fare</td>
</tr>
<tr>
<td></td>
<td>(323) 465-4567</td>
<td></td>
</tr>
<tr>
<td>Pig 'N Whistle</td>
<td>6714 Hollywood Blvd, Los Angeles, CA 90028</td>
<td>1920s pub serves up drinks &amp; Continental fare</td>
</tr>
<tr>
<td></td>
<td>(323) 463-0000</td>
<td></td>
</tr>
<tr>
<td>Luv2eat Thai Bistro</td>
<td>6660 Sunset Blvd P, Los Angeles, CA 90028</td>
<td>Classic Thai eatery for familiar favorites</td>
</tr>
<tr>
<td></td>
<td>(323) 498-5835</td>
<td></td>
</tr>
<tr>
<td>JINYA Ramen Express</td>
<td>6801 Hollywood Blvd, #317, Los Angeles, CA 90028</td>
<td>Counter service with ramen bowls &amp; Japanese sides</td>
</tr>
<tr>
<td></td>
<td>(323) 391-1916</td>
<td></td>
</tr>
<tr>
<td>Umami Burger Hollywood</td>
<td>1520 N Cahuenga Blvd, Los Angeles, CA 90028</td>
<td>Lively chain serving elevated burgers &amp; craft beer</td>
</tr>
<tr>
<td></td>
<td>(323) 469-3100</td>
<td></td>
</tr>
<tr>
<td>Urban Masala</td>
<td>6554 Hollywood Blvd, Los Angeles, CA 90028</td>
<td>Modern spot with quick-serve Indian eats</td>
</tr>
<tr>
<td></td>
<td>(323) 957-9999</td>
<td></td>
</tr>
<tr>
<td>Places to go</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>Angeles Walk LA: Self-Guided Historic Trails</td>
<td>📍</td>
<td></td>
</tr>
<tr>
<td>Hollywood Cemetery Self-Guided Tour</td>
<td>📍</td>
<td></td>
</tr>
<tr>
<td>FieldTripper App</td>
<td>📍</td>
<td></td>
</tr>
<tr>
<td>The Real Los Angeles Self-Guided Tours</td>
<td>📍</td>
<td></td>
</tr>
<tr>
<td>TimeOut: 22 must-see Hollywood attractions</td>
<td>📍</td>
<td></td>
</tr>
<tr>
<td>Fodor’s Travel: Hollywood Sights</td>
<td>📍</td>
<td></td>
</tr>
</tbody>
</table>