



Short Course on Systems Genetics

September 8- 14, 2013

The Jackson Laboratory, Bar Harbor, Maine

All events will be held at The Jackson Laboratory's Highseas Conference Center located at 276 Schooner Head Road, Bar Harbor, Maine

Sunday, September 8th

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| 5:00-7:00PM | Registration and Reception Dinner |
| 7:00-8:30PM | Introduction and Welcome
<i>Gary Churchill, The Jackson Laboratory</i> |

Monday, September 9th

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| 7:00-8:00AM | Late Registration and Breakfast |
| 8:45-10:00AM | QTL Analysis I: Introduction
<i>Karl Broman, University of Wisconsin, Madison</i> |
| 10:00-10:30AM | Break |
| 10:30-12:00PM | QTL Analysis II: Special Topics
<i>Saunak Sen, University of California, San Francisco</i> |
| 12:00-1:00PM | Lunch |
| 1:00-2:00PM | QTL Analysis III: Multiple Loci
<i>Karl Broman, University of Wisconsin, Madison</i> |
| 2:00-3:00PM | QTL Analysis IV: Multivariate QTL Mapping
<i>Saunak Sen, University of California, San Francisco</i> |
| 3:00-3:30PM | Break |

3:30-4:30PM	Lab: R/qtl <i>Karl Broman, University of Wisconsin, Madison</i>
6:00-7:00PM	Dinner
7:00-8:30PM	Study design and analysis in human genetics <i>Eleanor Feingold, University of Pittsburgh</i>

Tuesday, September 10th

7:00-8:00AM	Breakfast
8:30-10:00AM	New Resources for Mouse Genetics <i>Gary Churchill, The Jackson Laboratory</i>
10:00-10:30AM	Break
10:30-12:00PM	Causal Network Models for Correlated Quantitative Traits <i>Brian Yandell, University of Wisconsin, Madison</i>
12:00-1:00PM	Lunch
1:00-2:00PM	Finding QTL Genes <i>Ron Korstanje, The Jackson Laboratory</i>
2:00-3:00PM	Clinical Phenotyping (Mice) <i>Karen Svenson, The Jackson Laboratory</i>
3:00-3:30PM	Break
3:30-4:30PM	Mapping in an Outbred Populations <i>Dan Gatti, The Jackson Labroatory</i>
6:00-7:00PM	Dinner
7:00-8:30PM	Genetics of Type 2 Diabetes <i>Alan Attie, University of Wisconsin, Madison</i>

Wednesday, September 11th

7:00-8:00AM	Breakfast
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8:30-10:00AM	Inferring Networks for Predictive Modeling <i>Greg Carter, The Jackson Laboratory</i>
10:00-10:30AM	Break
10:30-12:00PM	Integrative Functional Genomics in GeneWeaver <i>Elissa Chesler, The Jackson Laboratory</i>
12:00-1:00PM	Lunch
1:00-6:00PM	Free Time
6:00-7:00PM	Dinner
7:00-8:30PM	Evening Discussion

Thursday, September 12th

7:00-8:00AM	Breakfast
8:30-10:00AM	Gene Expression Microarrays <i>Gary Churchill, The Jackson Laboratory</i>
10:00-10:30AM	Break
10:30-12:00PM	Correcting for Population Structure using Mixed Models <i>Eleazar Eskin, University of California, Los Angeles</i> Gene Expression
12:00-1:00PM	Lunch
1:00-3:00PM	RNA-Seq: From Study Design to Differential Expression <i>Steven Munger, Narayanan Raghupathy and Kwangbom Choi</i> <i>The Jackson Laboratory</i>
3:00-3:30PM	Break
3:30—4:30PM	Web Tools for Systems Genetics <i>Susan McClatchy, The Jackson Laboratory</i>
6:00-7:00PM	Dinner

7:00-8:30PM **Evening Discussion**

Friday, September 13th

7:00-8:00AM **Breakfast**

8:30-10:00AM **Analyzing high throughput DNA methylation data**
Rafael Irizarry, Harvard University

10:00-10:30AM **Break**

10:30-12:00PM **Analysis: Empirical Bayes Methods**
Christina Kendzierski, University of Wisconsin, Madison

12:00-1:00PM **Lunch**

1:00-2:30PM **Network and System Models**
Shawn Gomez, University of North Carolina, Chapel Hill

2:30-3:00PM **Break**

3:00-4:30PM **Weighted Gene Co-Expression Network Analysis**
Steve Horvath, University of California, Los Angeles

6:00-7:30PM **Lobster Dinner**

Saturday, September 14th

7:00-8:00AM **Breakfast**

9:00-10:00AM **Exploring the Genomic Basis of Adaptation in The Estuarine Fish, Fundulus Heteroclitus**
Benjamin King, Mount Desert Island Biological Laboratory

10:00-10:30AM **Break**

10:30-12:00PM **What is Systems Genetics?**
Gary Churchill, The Jackson Laboratory

12:00PM **Lunch and Adjourn**