



Short Course on Systems Genetics

September 23-29, 2008

For more information, please contact Erin McDevitt; erin.mcdevitt@jax.org

COURSE SCHEDULE

Tuesday, September 23rd

PM

12:00-6:00 Registration Luncheon and Highseas Check-In

6:00-7:00 Dinner

7:00-7:30 Welcome
Gary Churchill, The Jackson Laboratory

Wednesday, September 24th

AM

8:30- 8:45 Course Evaluations
Suzanne Hart, The University of Maine, Orono

8:45-10:30 QTL Analysis I: Introduction
Karl Broman, University of Wisconsin, Madison

10:30-11:00 Break

11:00-12:00 QTL Analysis II: Special Topics
Saunak Sen, University of California, San Francisco

PM

12:00-1:00 Lunch

1:00-2:30 QTL Analysis III: Multiple Loci
Karl Broman, University of Wisconsin, Madison

2:30-3:00 Break

3:00-4:30 **Lab: R/qtl**
Karl Broman, University of Wisconsin, Madison

6:00-7:00 **Dinner**

7:00-8:30 **Evening Discussion (Living Room)**

Thursday, September 25th

AM

8:30-10:00 **QTL IV: Bayesian Methods**
Brian Yandell, University of Wisconsin, Madison

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

10:30-12:00 **Modeling Human Disease in Mice**
Karen Svenson, The Jackson Laboratory

PM

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

1:00-2:30 **QTL V: Causal Inference**
Gary Churchill, The Jackson Laboratory

3:00-4:30 **Lab: QTL Software Tools**
Brian Yandell, University of Wisconsin, Madison
& Randy von Smith, The Jackson Laboratory

6:00-7:00 **Dinner**

7:00-8:30 **Special Guest Lecture - Genetical Genomics in Plants**
Ritsert Jansen, Groningen Bioinformatics Centre

Friday, September 26th

AM

8:30-10:00 **Microarray Analysis I: Introduction**
Gary Churchill, The Jackson Laboratory

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

10:30-12:00 **TBD**

PM

12:00-1:00 Lunch

1:00-6:00 Free Time

6:00-7:00 Dinner

7:00-8:30 Evening Discussion (Living Room)

Saturday, September 27th

AM

9:00-10:00 Microarray Analysis II: Empirical Bayes Methods
Christina Kendziorski, University of Wisconsin, Madison

10:00-10:30 Break

10:30-12:00 Gene Expression Networks III
Christina Kendziorski, University of Wisconsin, Madison

PM

12:00-1:00 Lunch

1:00-2:30 Gene Expression Networks II
Elissa Chesler, Oak Ridge National Lab

2:30-3:00 Break

3:00-4:30 Lab: TBD

6:00-7:00 Dinner

7:00-8:30 Evening Discussion (Living Room)

Sunday, September 28th

AM

9:00-10:00 Overview of Weighted Gene Co-Expression Network Analysis
Steve Horvath, University of California, Los Angeles

10:00-10:30 Break

10:30-11:00 A Geometric Interpretation of Gene Co-Expression Analysis
Steve Horvath, University of California, Los Angeles

11:00-11:20 **A Network perspective on Expression QTLs**
Steve Horvath, University of California, Los Angeles

11:20-12:00 **Using Genetic Markers to Orient the Edges in Quantitative Trait Networks: The NEO Software**
Steve Horvath, University of California, Los Angeles

PM

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

1:00-2:30 **Dynamical Modeling**
Hongyu Zhao, Yale University

2:30-6:00 **Free Time**

6:00-8:00 **Lobster Dinner**

Monday, September 29th

AM

8:30-10:00 **Recap and Discussion**
Gary Churchill, The Jackson Laboratory

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

11:00-12:00 **Web Resources for Mouse Genetics**
Carol Bult, The Jackson Laboratory

PM

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

1:00-5:30 **Free Time** – Computer Lab Available

6:00-7:00 **Dinner**

End of Course