



2nd Annual Short Course on Next Generation Sequencing: Technology & Statistical Methods
December 10 - 13, 2012

**UAB in Birmingham, AL &
HudsonAlpha Institute for Biotechnology in Huntsville, AL**

Mon 12/10/12 UAB in Birmingham, AL

Time	Speaker	Topic
08:30 - 09:15	Derry Crawford	Registration
09:15 - 09:30	Hemant Tiwari, PhD	Introductory Remarks
09:30 - 10:45	Greg Barsh, PhD	Overview of Genetics & Genomics (Intro: Sequencing for Variation & Functional Genomics)
10:45 - 11:00		BREAK
11:00 - 12:15	Shawn Levy, PhD	Technical Overview of NGS (Platforms; chemistry; library construction)
12:15 - 01:30		LUNCH
01:30 - 02:45	Shawn Levy, PhD	Primary Data Analysis (Base calling; alignment; QC; variant calling)
02:45 - 03:00		BREAK
03:00 - 04:15	Devin Absher, PhD	Copy Number & Structural Variants (biology; experimental methods; analysis)
04:15 - 04:30		BREAK
04:30 - 05:00	All Faculty	Discussion Q&A

Tue 12/11/12 HudsonAlpha Institute for Biotechnology in Huntsville, AL

Time	Speaker	Topic
07:30 - 07:45		Gather in Hotel Lobby for departure
07:45 - 09:15		Bus Transportation to HudsonAlpha in Huntsville
09:15 - 09:30		Gather in HudsonAlpha meeting room
09:30 - 10:00	Braden Boone, MS, MIT	Computing Needs for NGS (Computing & storage needs; data handling)
10:00 - 11:00	Greg Cooper, PhD	DNA Sequence Variant Annotation and Analysis
11:00 - 11:15		BREAK
11:15 - 12:15	Jay Gertz, PhD	RNA-seq
12:15 - 01:30		LUNCH
01:30 - 02:30	Devin Absher, PhD	Genome-scale DNA methylation analysis
02:30 - 03:30	Rick Myers, PhD	ChIP-seq (protein:DNA Interactions on a Genome-wide Scale)
03:30 - 03:45		Break
03:45 - 05:00	All Faculty	Discussion (Q & A) & Tour of sequencing facility
05:00 - 06:30		Bus Transportation to Hotel in Birmingham





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Wed 12/12/12 UAB in Birmingham, AL

Time	Speaker	Topic
09:00 - 10:15	Xiangqin Cui, PhD	Analysis of Whole Genome Transcriptome Sequencing Data
10:15 - 10:30		BREAK
10:30 - 11:45	David Crossman, PhD	Analysis of NGS data using Galaxy
11:45 - 01:15		LUNCH
01:15 - 02:30	Shili Lin, PhD	Whole Genome 3D Regulation Analysis Using Sequencing
02:30 - 02:45		BREAK
03:00 - 04:15	Jonas Almeida, PhD	Cloud Computing and Semantic Web application to High-Dimensional Biomedical Data
04:15 - 05:00	All Faculty	Discussion (Q & A)

Thu 12/13/12 UAB in Birmingham, AL

Time	Speaker	Topic
09:00 - 10:15	Suzanne Leal, PhD	Rare Variants Association Analysis
10:15 - 10:30		BREAK
10:30 - 11:45	Yun Li, PhD	The 1000 Genomes Project: Behind and Beyond the Creation of Phase 1 Data
11:45 - 01:15		LUNCH
1:15 - 2:30	Degui Zhi, PhD	Assembling NGS data
02:30 - 03:00	All Faculty	Discussion (Q & A)

Course Website: http://www.soph.uab.edu/ssg/nhgri_r25/secondshortcourse

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