

AGENDA: 4th Short Course R25DK099080 The Mathematical Sciences in Obesity

Mon 6/26/2017 - Fri 6/30/2017		Module identification color codes
The University of Alabama at Birmingham Executive Learning Center (ELC), 6th floor 1716 9 th Avenue South, SHPB 640 Birmingham AL 35233		Introduction to math method
		Application of method to obesity
		Hands-on interactive session
		Open problems⁺
Time	Speaker	Topic
Day 1 - Mon 6/26/2017		
8:00 - 8:30	Diana Thomas, Montclair	Registration
8:30 - 9:30	David Allison/Andrew Brown, UAB	Introductory remarks: A comedy of errors
9:30 – 10:30	Steven Heymsfield, PBRC	Overview of state of the field of obesity and mathematical sciences
10:30 – 11:30	David Allison, UAB	Overview of funding approach at NIH and other federal granting agencies
Lunch 11:30-12:45		
Module 1: Outcomes in Obesity Randomized Controlled Trials (RCTs)		
1:00-1:45	Inmaculada (ChiChi) Aban, UAB	Introduction to RCTs and their quantitative analysis
2:00-2:45	Peng Li, UAB	Missing data in randomized clinical trials
3:00-4:00	Michael Oakes, U of Minnesota	Cluster Randomized Trials
4:00-5:30	Moderated by Senior Researchers	Roundtable Session ⁺⁺
Day 2 - Tue 6/27/2017		
Module 2: Modeling weight change using energy balance		
9:00 – 9:45	Diana Thomas, Montclair	Introduction to Energy Balance Models
10:00 – 10:45	Corey Gerving PhD, USMA West Point	Application of Energy Balance Models
11:00-11:30	Corby Martin	Models delivered using smart phone technology
Lunch 11:30-12:45		
Module 3: Modeling Effects in Populations		
1:00-1:45	Stephen Mennemeyer PhD, UAB	Using Simulation to Estimate Economic Effects: Examples from Cost-Effectiveness of Obesity Programs
2:00-2:45	Shawn Bauldry PhD, Purdue	Instrumental Variable Approaches
3:00-4:00	Bruce Lee MD, Johns Hopkins	Population Level Effects of Energy Balance Manipulations
4:00-5:30	Moderated by Senior Researchers	Roundtable Session ⁺⁺
Day 3 - Wed 6/28/2017		
Module 4: Modeling Obesity Interventions Through Networks		
9:00 - 09:45	James Hill, UC Denver	Open problems
10:00 – 10:45	Ryan Miller, USMA	Introduction to Networks to Identify sub-Communities

11:00 – 11:45	Kayla de la Haye ,USC	Informing obesity interventions using networks
Lunch		
Module 5: Modeling Behavioral Responses in Obesity		
1:00-1:45	Graham Thomas, Brown University	Application of models to monitor adherence
2:00-2:45	Rodney Sturdivant PhD, Azusa Pacific University	Structural Equation Modeling in Obesity
2:45-3:45	Paula-Chandler Laney, UAB	Open Problems
4:00-5:30	Moderated by Senior Researchers	Roundtable Session ⁺⁺
Day 4 - Thu 6/29/2017		
Module 6: Sensor and Engineering Models in Obesity		
9:00 – 9:45	Edward, Sazonov, Alabama, Tuscaloosa	Overview of the field
9:45 – 10:30	Adam Hoover, Clemson University	Bite measurement methods and models
10:30 – 11:30	Ken McLeod, Binghamton	Regulating RMR to maintain heat balance and body mass
Lunch 11:30-12:45		
Module 7: Scaling Laws and Obesity		
1:00-1:45	Courtney Peterson, UAB	Overview of the field
2:00-2:45	Dave Nelson, Univ S Alabama	Allometric Scaling & Whole-Animal Energy Balances
3:00-4:00	Steven Heymsfield, PBRC	Open Problems
4:15-5:30	Moderated by Senior Researchers	Roundtable Session ⁺⁺ Preparation for student presentations
Day 5 - Fri 6/30/2017		
Module 8: Evolutionary Genetics		
9:00 – 09:40	David Meyre PhD, McMaster University	Human evolution and obesity
9:40 – 10 AM	Michael Sandel PhD, Univ West Alabama: Q&A	
10:00 – 10:40	Yann Klimentidis PhD, Univ of Arizona	Asking and answering evolutionary genetic questions about obesity
10:40 – 11 AM	Michael Sandel PhD, Univ West Alabama: Q&A	
11:00 – 11:40	Andrew Higginson PhD, Univ of Exeter	Evaluating the logic of evolutionary explanations for obesity
11:40 – 12 PM	Michael Sandel PhD, Univ West Alabama: Q&A	
Lunch		
1:00-1:45	Student Presentations	
2:00-2:45		
3:00-3:30		
3:30-4:00		
4:15-5:30		

Course website:

<https://www.uab.edu/shp/home/energetics/courses/mathematical-sciences-shortcourse/fourth>

Registration website:

<http://www.uab.edu/shp/home/energetics/courses/mathematical-sciences-shortcourse/fourth-registration>