

# CASOS Summer Institute 2015

## Day 0 – Set Up

Sunday, 7/5/15

13:30-16:30	Set Up and Individualized Data Entry	CASOS TA Staff for Sunday	
		Kenny Joseph	Will Frankenstein
		Geoff Morgan	Wei Wei
		Matt Benigni	

The focus of Sunday is for one-on-one extra help in

- 1) getting the software onto the participants machines
- 2) helping the participants load their data into the tools
- 3) and providing some one-on-one support or small group support focused around the participants interest

Sunday is not a required day for participants. It is optional.

Lectures and common instruction begin on Monday

CASOS PhDs:

Kenny Joseph	Will Frankenstein
Geoff Morgan	Wei Wei
Matt Benigni	

# CASOS Summer Institute 2015

## Day 1 – Overview and Getting Started

Monday, 7/6/15

<u>Time</u>	<u>What</u>	<u>Instructor</u>	<u>TA's</u>
08:00 - 08:30	<b>Breakfast &amp; Registration - start making sure software is on machines</b>		All CASOS PhDs
08:30 - 08:40	<b>Welcome</b>	Prof. Kathleen M. Carley	
08:40 - 10:45	<b>Dynamic Network Analysis Overview</b>	Prof. Kathleen M. Carley	All CASOS PhDs
10:45 - 11:00	<b>Break</b>		
11:00 - 12:30	<b>DNA - key metrics</b>	Prof. Kathleen M. Carley	All CASOS PhDs
12:30 - 13:30	<b>Lunch - &amp; make sure software is on machines</b>		All CASOS PhDs
13:30 - 14:15	<b>Case Study: Paul Revere</b>	William Frankenstein	All CASOS PhDs
14:15 - 15:00	<b>ORA – Basic Interface, Import CSV file, Key entity report, Standard Social Network Report</b>	Jeffrey R. Reminga	All CASOS PhDs
15:00 - 15:30	<b>Break</b>		
15:30 - 16:30	<b>Groups &amp; Topology</b>	Prof. Kathleen M. Carley	All CASOS PhDs
16:30 - 17:30	<b>ORA – Group Report, Reports with 2 or more meta-networks, simple 2D visualization</b>	Jeffrey R. Reminga	All CASOS PhDs
17:30 - 18:00	<b>Pictures</b>	<b>All SI and All CASOS Faculty, Staff and PhD Students</b>	
18:00 - 20:00	<b>Reception</b>	<b>All CASOS Center Invited</b>	

All CASOS PhDs	Matt Benigni, Will Frankenstein, Kenny Joseph, Geoffrey Morgan, Wei Wei
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## Day 2 – Data

Tuesday, 7/7/15

<u>Time</u>	<u>What</u>	<u>Instructor</u>	<u>TA's</u>
08:00 - 08:15	<b>Breakfast Continental</b>		
08:15- 08:30	<b>Where does the data come from?</b>	Prof. Kathleen M. Carley	All CASOS PhDs
08:30-10:15	<b>Text to Networks &amp; Semantic Networks</b>	Prof. Kathleen M. Carley	All CASOS PhDs
10:15 - 10:30	<b>Break</b>		
10:30 - 11:30	<b>AutoMap</b>	Neal Altman	All CASOS PhDs
11:30-12:00	<b>Email Data (CEMAP)</b>	Jeff Reminga	All CASOS PhDs
12:00 - 13:00	<b>Lunch</b>		
13:00-13:30	<b>Case Study: Nuclear Twitter Networks</b>	Will Frankenstein	All CASOS PhDs
13:30-14:30	<b>Import JSON Import Citation Data Different ways of loading data Delta/keyframe Exporting data in CSV</b>	Jeff Reminga	All CASOS PhDs
14:30-15:00	<b>Thesauri and Delete, Import Wizard</b>	Jeff Reminga	All CASOS PhDs
15:00 - 15:30	<b>Break</b>		
15:30 - 17:00	<b>LDA, LSA</b>	Wei Wei	All CASOS PhDs
17:00 - 18:45	<b>Small Group Work: Hands On</b>	ALL	All CASOS PhDs

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## Day 3 – Basic Analysis

Wednesday, 7/8/15

<u>Time</u>	<u>What</u>	<u>Instructor</u>	<u>IA</u>
08:00 - 08:15	<b>Breakfast Continental</b>		
08:15- 09:15	<b>Centralities, redundancies, cognitive demand - Measures and Reports</b>	Will Frankenstein	All CASOS PhDs
09:15 - 10:15	<b>One and Two Mode Metrics, Assessing Change, Folding</b>	Wei Wei	All CASOS PhDs
10:15 - 10:30	<b>Break</b>		
10:30 - 11:00	<b>Metric Based Comparison of Networks Graph and Node Level Metrics</b>	Will Frankenstein	All CASOS PhDs
11:00 - 12:00	<b>Groups and Meta-nodes – Visualization techniques Attributes</b>	Jon Storrick	All CASOS PhDs
12:00 - 13:00	<b>Lunch</b>		
13:00-13:30	<b>Case Study: ISIS – Group Identification and Data Pruning</b>	Matt Benigni	All CASOS PhDs
13:30-14:30	<b>Prediction and Comparison of Two or More Networks Networks: Hamming Distance, Correlation, QAP, MRQAP</b>	Kenny Joseph	All CASOS PhDs
14:30-15:00	<b>Visualizing Differences Due to Attributes Tiles</b>	Jon Storrick	All CASOS PhDs
15:00 - 15:30	<b>Break</b>		
15:30-17:00	<b>MRQAP and Regression How to put network metrics in regressions</b>	Jeff Reminga	All CASOS PhDs
17:00 - 18:45	<b>Small Group Work: Hands On</b>	ALL	All CASOS PhDs

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## Day 4 – Dynamics

Thursday, 7/9/15

<u>Time</u>	<u>What</u>	<u>Instructor</u>	<u>TA's</u>
08:00 - 08:30	<b>Breakfast Continental</b>		
08:30 - 10:15	<b>Dynamics: Reasoning About Networks Over Time</b>	Prof. Kathleen M. Carley	All CASOS PhDs
10:15 - 10:30	<b>Break</b>		
10:30 - 12:00	<b>Fourier Analysis, change detection</b> Follow along	Prof. L. Richard Carley	All CASOS PhDs
12:00 - 13:00	<b>Lunch</b>		
13:00 – 13:30	<b>Case Study: Testing Social Theory with Social Media data</b>	Kenny Joseph	All CASOS PhDs
13:30 - 14:30	<b>Micro-Simulations in ORA</b> Expand this	Kenny Joseph	All CASOS PhDs
14:30-15:00	<b>Dynamics, Trails and Networks: Loom;</b> <b>Going from Trails to Networks and</b> <b>Networks to Trails</b>	Kenny Joseph	All CASOS PhDs
15:00-15:30	<b>Break</b>		
15:30-16:00	<b>Visualizing Change in Networks:</b> <b>Dynamics, Path Finder</b>	Jon Storick	All CASOS PhDs
16:00-17:00	<b>Immediate Impact Analysis</b>	Geoff Morgan	All CASOS PhDs
17:00 - 18:45	<b>Small Group Work: Hands-on</b>	Group Leads: TBD	All CASOS PhDs

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## Day 5 – Network Simulation

Friday, 7/10/15

<u>Time</u>	<u>What</u>	<u>Instructor</u>	<u>TA's</u>
08:00 - 08:30	<b>Breakfast Continental</b>		
08:30 - 9:30	<b>Agent Based Modeling</b>	Prof. Kathleen M. Carley	All CASOS PhDs
09:30 - 10:30	<b>Constructural Theory</b>	Prof. Kathleen M. Carley	All CASOS PhDs
10:30 - 10:45	<b>Break</b>		
10:45 - 11:15	<b>Near Term Analysis</b>	Kenny Joseph	All CASOS PhDs
11:45 - 13:00	<b>Lunch</b>		
13:00 - 13:30	<b>Case Study: Predicting Change In Organizations</b>	Geoff Morgan	All CASOS PhDs
13:30 - 15:00	<b>Using Construct Through ORA</b>	Geoff Morgan	All CASOS PhDs
15:00 - 15:30	<b>Break</b>		
15:30 – 16:00	<b>Virtual Experiments</b>	Kenny Joseph	All CASOS PhDs
16:00 – 17:00	<b>Validation Extended Construct</b>	Geoff Morgan	All CASOS PhDs
17:00 - 18:30	<b>Small Group Work: Hands On</b>	Group Leads	All CASOS PhDs

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## Day 6 – Advanced Issues

Saturday, 7/11/15

<u>Time</u>	<u>What</u>	<u>Instructor</u>	<u>TA's</u>
08:00 - 08:30	Breakfast Continental		
08:30 - 9:30	Geo-Temporal Networks & Event Detection	Wei Wei	All CASOS PhDs
09:30 - 10:30	Geo-Spatial Visualization & Region Viewer	Jon Storrick	All CASOS PhDs
10:30 - 10:45	Break		
10:45 - 11:30	Large Dynamic Networks	Geoff Morgan	All CASOS PhDs
11:15 - 12:00	Metrics for Large Data	Wei Wei	All CASOS PhDs
12:00 - 13:00	Lunch		
13:00 – 13:30	Case Study: Resiliency Modeling	Geoff Morgan	All CASOS PhDs
14:00-15:00	Social Influence Theory	Kenny Joseph	All CASOS PhDs
15:00 - 15:30	Break		
15:30 - 16:15	Case Study: Arab Spring	Wei Wei	All CASOS PhDs
16:15 - 17:00	Synthetic Networks	Wei Wei	All CASOS PhDs
17:00 - 18:45	Small Group Work: Hands On	Group Leads	All CASOS PhDs

# CASOS Summer Institute 2015

## Day 7 – One on One – Extra Sunday 7/12/2015

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 - 08:30	Breakfast Continental	
08:30 - 10:30	Break out sessions on tools and individualized training	All CASOS PhDs
10:30 - 10:45	Break	
10:45 - 12:15	Break out sessions on tools and individualized training	All CASOS PhDs
12:15 - 13:15	Lunch	
13:15 - 14:45	Break out sessions on tools and individualized training	All CASOS PhDs
14:45 - 15:00	Break	