

# CASOS Summer Institute 2016

## Day 0 – Set Up

Sunday, 6/12/16

13:30-16:30	<b>Set Up and Individualized Data Entry</b>	CASOS TA Staff for Sunday	
	Put up posters	Kenny Joseph	Sumeet Kumar
	Put up signs	Geoff Morgan	Wei Wei
	Get software on people's	Matt Benigni	Geoff Dobson

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	Sumeet Kumar
Geoffrey Morgan	Wei Wei
Matt Benigni	Geoff Dobson

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## Day 1 – Overview and Getting Started

Monday, 6/13/16

<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 - 14:30	<b>ORA – Basic Interface, Import CSV file, Key entity report, Standard Social Network Report</b>	Jeffrey C. Reminga	All CASOS PhDs
14:30 - 15:00	<b>Case Study: Paul Revere</b>	Matt Benigni	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 C. 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, Geoff Dobson, Kenny Joseph, Sumeet Kumar, Geoffrey Morgan, Wei Wei
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## Day 2 – Data

Tuesday, 6/14/16

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

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## Day 3 – Basic Analysis

Wednesday, 6/15/16

<b><u>Time</u></b>	<b><u>What</u></b>	<b><u>Instructor</u></b>	<b><u>TA</u></b>
08:00 - 08:15	<b>Breakfast Continental</b>		
08:15- 09:15	<b>Centralities, redundancies, cognitive demand - Measures and Reports</b>	Matt Benigni	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 Key entity, Group, Twitter reports</b>	Matt Benigni	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: Plane Spotters – Group Identification and Data Pruning</b>	Matt Benigni	All CASOS PhDs
13:30-14:30	<b>Prediction and Comparison of Two or More Networks: Hamming Distance, Correlation, QAP, MRQAP</b>	Kenny Joseph	All CASOS PhDs
14:30-15:00	<b>MRQAP and Regression How to put network metrics in regressions</b>	Jeff Reminga	All CASOS PhDs
15:00 - 15:30	<b>Break</b>		
15:30-16:00	<b>Visualizing Differences Due to Attributes Tiles</b>	Jon Storrick	All CASOS PhDs
16:00-16:45	<b>Collecting Twitter Data</b>	Kenny Joseph, Wei Wei, Matt Benigni	All CASOS PhDs

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16:45-17:00	<b>Twitter De-identification</b>	Jon Storrick	All CASOS PhDs
17:00 - 18:45	<b>Small Group Work: Hands On</b>	ALL	All CASOS PhDs

## Day 4 – Dynamics & Spatial Reasoning Thursday, 6/16/16

<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: Change In Organizations</b>	Geoff Morgan	All CASOS PhDs
13:30 - 14:30	<b>Geo-Spatial Visualization &amp; Region Viewer</b>	Jon Storrick	All CASOS PhDs
14:30-15:00	<b>Visualizing Change in Networks: Dynamics, Path Finder, movement on maps</b>	Jon Storrick	All CASOS PhDs
15:00-15:30	<b>Break</b>		
15:30-16:00	<b>Generating Synthetic Networks in ORA</b>	Wei Wei	All CASOS PhDs
16:00-16:30	<b>Micro-Simulations in ORA</b>	Kenny Joseph	All CASOS PhDs

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16:30-17:00	<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

## Day 5 – Network Simulation

Friday, 6/17/16

<b><u>Time</u></b>	<b><u>What</u></b>	<b><u>Instructor</u></b>	<b><u>TA's</u></b>
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: Identities in News and Social Media data related to Social Upheaval</b>	Kenny Joseph	All CASOS PhDs
13:30 - 15:00	<b>Running Construct – Back and Forth with 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, 6/18/16

<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 and Event Detection	Wei Wei	All CASOS PhDs
9:30-10:00	Dynamics, Trails and Networks: Loom; Going from Trails to Networks and Networks to Trails	Kenny Joseph	All CASOS PhDs
10:00-10:30	Case Study: Trails	Binxuan Huang	All CASOS PhDs
10:30 - 10:45	Break		
10:45 - 11:30	Large Dynamic Networks	Geoff Morgan	All CASOS PhDs
11:30 - 12:00	Metrics for Large Data	Wei Wei	All CASOS PhDs
12:00 - 13:00	Lunch		
13:00 – 13:30	Case Study: Suspended Users	Wei Wei	All CASOS PhDs
13:30-14:15	Social Influence Theory	Kenny Joseph	All CASOS PhDs
14:15-14:45	Case Study: Netflow Analysis	Geoff Dobson	All CASOS PhDs
14:45 - 15:15	Break		
15:30 - 18:00	Small Group Work: Hands On	Group Leads	All CASOS PhDs

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## Day 7 – One on One – Extra

Sunday 6/19/2016

<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	