

# CASOS Summer Institute 2018

Day 0 – Set Up  
Sunday, 6/10/18  
GHC 6115

Times	Set Up and Individualized Data Entry	CASOS TA Staff for Sunday	
11am	Put up posters	Sienna	Sienna
11am	Put up signs	Sienna	Sienna
1pm-4pm	Get software on people's machines	CASOS TA's	

***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 June 11, 2018.*

**CASOS PhDs and PostDoctorates:**

David Beskow	Geoff Dobson
Sumeet Kumar	Ramon Villa Cox
Binxuan Huang	Matthew Babcock
Thomas Magelinski	Iain Cruikshank
Mihovil Bartulovic	

# CASOS Summer Institute 2018

Day 1 – Overview and Getting Started  
Monday, 6/11/18  
GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 - 08:20	Breakfast & Registration - start making sure software is on machines	
08:20 - 08:30	Welcome	Prof. Kathleen M. Carley
08:30 - 10:45	Dynamic Network Analysis Overview & Basics	Prof. Kathleen M. Carley
10:45 - 11:00	Break	
11:00 - 12:30	DNA - key metrics	Prof. Kathleen M. Carley
12:30 - 13:30	Lunch <i>*make sure software is on machines</i>	
13:30 - 14:30	ORA – Basic Interface, Import CSV file, email import, Key Entity Report, Citation import, Citation report	Jeff Reminga
14:30 - 15:30	ORA – Basic Visualization Techniques - Coloring, Sizing, Images, and Tools	Jon Storricks
15:30 - 16:00	Break	
16:00 - 17:00	Groups & Topology	Prof. Kathleen M. Carley
17:00 - 18:00	ORA – Group Report, using attributes in Group Report, Reports with 2 or more meta-networks, finding which measure is in which report	Jeff Reminga
18:00 - 18:20	Pictures	All SI and All CASOS Faculty, Staff, Students, Participants
18:20 - 20:00	Reception	All participants and CASOS Center Invited

<b>CASOS TA's will be assisting during the entire week</b>	Sumeet Kumar, Binxuan Huang, Ramon Villa Cox, Matthew Babcock, David Beskow, Iain Cruikshank, Mihovil Bartulovic, Thomas Magelinski
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# CASOS Summer Institute 2018

Day 2 – Data  
 Tuesday, 6/12/18  
 GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 - 08:10	Breakfast Continental	
08:10 - 08:20	Where does the data come from?	Prof. Kathleen M. Carley
08:20 -10:05	Text to Networks & Semantic Networks	Prof. Kathleen M. Carley
10:05 - 10:20	Break	
10:20 – 11:20	AutoMap	Neal Altman
11:20 - 11:30	Saving Excel Safely	Neal Altman
11:30-12:00	Edit Data, Create Thesauri or Delete List, Apply to Many Files	Jeff Reminga
12:00 - 13:00	Lunch	
13:00 - 13:45	Dynamic Network for Social Media	Prof. Kathleen M. Carley
13:45 - 14:15	Running IVCC & Semantic Network Report	Jeff Reminga
14:15 - 15:00	Case Study: Detecting Polarization on Social Media	Sumeet Kumar
15:00 - 15:30	Break	
15:30 - 16:30	LDA, LSA	Sumeet Kumar
16:30 – 17:00	NetMapper	Eric Malloy
17:00 – 17:30	Socio-Cultural Cognitive Mapping	Iain Cruickshank
17:30 - 18:45	Small Group Work: Hands On	ALL

# CASOS Summer Institute 2018

Day 3 – Basic Analysis  
 Wednesday, 6/13/18  
 GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 - 08:15	Breakfast Continental	
08:15- 09:15	Centralities, redundancies, cognitive demand - Key Entity Report, Management Report	Geoff Dobson
09:15 - 10:15	One and Two Mode Metrics, Assessing Change, Folding Network	Ramon Villa-Cox
10:15 - 10:30	Break	
10:30 - 11:00	Metric Based Comparison of Networks Graph and Node Level Metrics Key entity, Group, Twitter reports	Sumeet Kumar
11:00 - 12:00	Groups, Meta-Nodes, and Big Data. Visualizing Attributes and Measures	Jon Storricks
12:00 - 13:00	Lunch	
13:00-13:30	Ukrainian Voting Data – Case Study	Tom Magelinski
13:30-14:30	Prediction and Comparison of Two or More Networks: Hamming Distance, Correlation, QAP, MRQAP	Ramon Villa-Cox
14:30-15:00	MRQAP and Regression, Visualize Distributions How to put network metrics in regressions	Jeff Reminga
15:00 - 15:30	Break	
15:30-16:00	Geo-Spatial Visualization & the Region Viewer	Jon Storricks
16:00-17:00	Visualizing Change in Networks: Dynamics, Path Finder, Maps & Trails	Jon Storricks
17:00 - 17:30	Case Study: Netflow	Geoff Dobson
17:30 - 18:45	Small Group Work: Hands On	ALL

# CASOS Summer Institute 2018

Day 4 – Dynamics & Spatial Reasoning  
 Thursday, 6/14/18  
 GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 - 08:30	Breakfast Continental	
08:30 - 10:15	Dynamics: Reasoning About Networks Over Time	Prof. L. Richard Carley
10:15 - 10:30	Break	
10:30 - 12:00	Fourier Analysis, change detection <i>Follow along</i>	Prof. L. Richard Carley
12:00 - 13:00	Lunch	
13:00 – 13:30	Case Study: Exploring False Story Dynamics in the Black Panther Conversation	Matthew Babcock
13:30 - 14:00	Collecting Twitter Data	Binxuan Huang
14:00-15:00	Twitter importers, YouTube import, and Twitter Report, YouTube Report, Super Spreaders, Super Friends Use case	Jeff Reminga
15:00-15:30	Break	
15:30-16:15	Geo-temporal Networks and Visualization	Sumeet Kumar
16:15-17:00	Using K-core to Find Needle In Haystack of Bot-net Data	David Beskow
17:00-17:30	Twitter De-Identifier. Micro-Visualizations	Jon Storricks
17:30 - 18:45	Small Group Work: Hands-on	ALL

# CASOS Summer Institute 2018

Day 5 – Simulation  
Friday, 6/15/18  
GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 - 08:30	Breakfast Continental	
08:30 - 9:00	Generating Synthetic Networks in ORA	Sumeet Kumar
9:00-9:30	Micro-Simulations in ORA	Ramon Villa-Cox
10:00-10:30	Immediate Impact Analysis	Tom Magelinski
10:30 - 10:45	Break	
10:45 – 12:00	Social Influence Theory	Prof. Kathleen M. Carley
12:00 - 13:00	Lunch	
13:00 – 14:00	Agent Based Modeling	Prof. Kathleen M. Carley
14:00 -14:30	Virtual Experiments	Geoff Dobson
14:30-15:00	Case Study: Cyber Fit - ABM	Geoff Dobson
15:00 - 15:30	Break	
15:30-17:00	Small Group Work: Hands On	ALL

# CASOS Summer Institute 2018

Day 6 – Advanced Issues  
Saturday, 6/16/18  
GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:30 - 09:00	Breakfast Continental	
09:00 - 9:30	Dynamics, Trails and Networks: Loom; Going from Trails to Networks and Networks to Trails	Binxuan Huang
09:30 - 10:00	Inferring Broken Points in Trails – Case Study	Binxuan Huang
10:00-10:30	High Dimensional Trails – Case Study	Mihovil Bartulovic
10:30 - 10:45	Break	
10:45 - 11:45	Grouping Comparison, Gowers	Iain Cruickshank
11:45 - 13:00	Lunch	
13:00 – 14:00	Handling Large Data Sets – Import Tips, Fast Measures	Jeff Reminga
14:00 – 14:30	Ego Network Reports	Jeff Reminga
14:30 - 15:00	Sentiment Analysis	Sumeet Kumar
15:00 - 15:30	Break	
15:30 – 18:30	Small Group Work: Hands On	ALL

# CASOS Summer Institute 2018

Day 7 – One on One  
Extra Sunday 6/17/18  
GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
<b>TBD by Appointment</b>	<b>Break-out sessions on tools and individualized training</b>  <i>**During the week we will be grouping together participants with students, this day is optional and for anyone who needs further instruction. Timings will be established with TA's and participants</i>	<b>All CASOS TA's</b>