

CASOS Summer Institute 2019

Day 0 – Set Up
 Sunday, 6/9/19
 GHC 6115

Times	Set Up and Individualized Data Entry	CASOS TA Staff for Sunday	
TBD	Put up posters	Sienna	Sienna
TBD	Put up signs	Sienna	Sienna
TBD	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 10, 2019.*

CASOS PhDs and PostDoctorates:

David Beskow	Geoff Dobson
Sumeet Kumar	Ramon Villa Cox
Aman Tyagi	Matthew Babcock
Thomas Magelinski	Iain Cruikshank
Mihovil Bartulovic	Christine Sowa
Geoff Morgan	Josh Uyheng
Luke Osteritter	

CASOS Summer Institute 2019

Day 1 – Overview and Getting Started
Monday, 6/10/19
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

CASOS TA's will be assisting during the entire week	Sumeet Kumar, Ramon Villa Cox, Geoff Dobson, Matthew Babcock, David Beskow, Iain Cruikshank, Mihovil Bartulovic, Thomas Magelinski, Aman Tyagi, Christine Sowa, Luke Osteritter, Josh Uyheng
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Day 2 – Data
 Tuesday, 6/11/19
 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	Introducing AutoMap and the Data-to-Model (D2M) Wizard	Neal Altman
11:20 – 11:30	A Cautionary Note about Saving Unicode Text from Excel	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	Collecting Twitter Data	David Beskow
14:15 – 14:45	Twitter importers, YouTube import, YouTube Report	Jeff Reminga
14:45 – 15:00	Break	
15:00 – 16:00	Twitter Report, Super Spreaders, Super Friends Topic Group & Semantic Network Report	Jeff Reminga
16:00 – 16:30	Matrix Algebra, Folding, converting time data to dynamic and back	Jeff Reminga
16:30 – 17:00	Twitter De-Identifier. Micro-Visualizations	Jon Storricks
17:00 – 17:30	NetMapper	Eric Malloy
17:30 – 18:45	Small Group Work: Hands On	ALL

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Day 3 – Basic Analysis
 Wednesday, 6/12/19
 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	LDA, LSA	Sumeet Kumar
10:15 – 10:30	Break	
10:30 – 11:00	Metric Based Comparison of Networks Graph and Node Level Metrics Key entity, Group, Twitter reports	Dr. Matt Babcock
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	Case Study – Elections 2018	Dr. Matt Babcock
13:30 – 14:30	Prediction and Comparison of Two or More Networks: Hamming Distance, Correlation, QAP, MRQAP	Tom Magelinski
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 – 16:45	Latent Space to Networks e.g. Socio-Cultural Cognitive Mapping	Iain Cruikshank
16:45 – 17:30	Using K-core to Find Needle In Haystack of Bot-net Data	David Beskow
17:30 – 18:45	Small Group Work: Hands On	ALL

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Day 4 – Dynamics & Spatial Reasoning
 Thursday, 6/13/19
 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 – 14:00	Visualizing Change in Networks: Dynamics, Path Finder, Maps & Trails	Jon Storricks
14:00 – 14:30	Geo-Spatial Visualization & the Region Viewer	Jon Storricks
14:30 – 15:00	Visualization Special Features Nodel, More Meta-Nodes, Heat Maps	Jon Storricks
15:00 – 15:30	Break	
15:30 – 16:00	Geo-temporal Networks and Visualization	Sumeet Kumar
16:00 – 16:45	Dynamics, Trails and Networks: Loom; Going from Trails to Networks and Networks to Trails	Mihovil Bartulovic
16:45 – 17:15	Case Study: Trail Clustering	Mihovil Bartulovic
17:15 – 17:45	Case Study – Ukrainian Voting	Tom Magelinski
17:45 – 18:45	Small Group Work: Hands-on	ALL

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Day 5 – Simulation
 Friday, 6/14/19
 GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:00 – 08:30	Breakfast Continental	
08:30 – 09:00	Generating Synthetic Networks in ORA	Ramon Villa Cox
09:00 – 09:30	Micro-Simulations in ORA	Tom Magelinski
09:30 – 10:00	Virtual Experiments	Geoff Dobson
10:00 – 10:30	Immediate Impact Analysis	Ramon Villa Cox
10:30 – 10:45	Break	
10:45 – 12:00	Social Influence Theory	Prof. Kathleen M. Carley
12:00 – 13:00	Lunch	
13:00 – 13:30	Case Study: Cyber-Fit	Geoff Dobson
13:30 – 14:00	Agent Based Modeling - Intro	Prof. Kathleen M. Carley
14:00 – 15:00	Agent Based Modeling - Construct	Mike Kowalchuck
15:00 – 15:30	Break	
15:30 – 16:30	Machine Learning in ORA	Mike Kowalchuck
16:30 – 17:00	Case Study: Characterizing Organizational Micro-Climates	Geoff Morgan
17:00 – 18:00	Small Group Work: Hands On	ALL

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Day 6 – Advanced Issues
Saturday, 6/15/19
GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
08:30 – 09:00	Breakfast Continental	
09:00 – 09:30	Case Study – Predicting Polarization on Social Media	Sumeet Kumar
09:30 – 10:00	Handling Large Data Sets – Import Tips, Fast Measures	Jeff Reminga
10:00 – 10:30	Addressing General ORA questions	Jeff Reminga
10:30 – 10:45	Break	
10:45 – 12:00	Sentiment Analysis and Application Using NetMapper	Sumeet Kumar
12:00 – 13:00	Lunch	
14:00 – 14:30	Case Study: Characterizing the spread of Disinformation on Twitter	Ramon Villa Cox
14:30 – 15:00	Case Study -Graph Learning and Misinformation	Iain Cruikshank
15:00 – 15:30	Ego Network Reports	Jeff Reminga
15:30 – 15:45	Break	
15:30 – 18:30	Small Group Work: Hands On	ALL

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Day 7 – One on One
Extra Sunday 6/16/19
GHC 6115

<u>Time</u>	<u>What</u>	<u>Instructor</u>
TBD by Appointment	Break-out sessions on tools and individualized training <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>	All CASOS TA's