CASOS Summer Institute 2020

Times	Activity	CASOS TA Staff for Sunday
TBD (morning and afternoon)	Zoom assistance with loading software on machines	TBD

The focus of Sunday:
1) helping participants get the software onto their machines and loading properly.
2) helping the participants load their data into the tools.
3) provide some one-on-one support to participants having access issues.

***Sunday is not a required day for participants. It is optional
to join the zoom meeting.***

***Lectures and common instruction begin on Monday June 8, 2020.*

CASOS PhDs and Post Doctorates:

Catherine King	Geoff Dobson
Daniele Bellutta	Ramon Villa Cox
Aman Tyagi	Matthew Babcock, PhD
Thomas Magelinski	Iain Cruickshank
Mihovil Bartulovic	Christine Sowa
Jeremy Straughter	Josh Uyheng
Luke Osteritter	Ibrahim Rahhal
JD Moffitt	

CASOS Summer Institute 2020

How will this virtual format work?

For each day there is a focus listed on the agenda. The lectures, follow-along sessions, and case studies have been pre-recorded. You should watch them before or on that day. The tentative length of those videos are marked on the agenda. In addition to the pre-recorded videos, we will also hold 3 three-hour live sessions daily to do large group instruction, small group and if needed, individual instruction, more details below.

Lectures – In these videos a talk is given covering critical background information, theoretical and empirical. Questions can be asked during the interactive sessions for that day's lectures. In addition, questions and answers can be posted to our slack channel (details to be distributed).

Hands-On – In these videos the instructor walks through how to do a specific task. You will be given a link and password to access data and software to download. Before starting these videos, you should get the data on your machine and launch ORA or NetMapper, depending on the video and then follow along with the instructor to learn how to do that task on the software.

Case Studies – In these videos a particular research vignette is presented then the instructor walks you through how to do a piece of that research. You should get the data on your machine for that vignette and launch ORA or NetMapper, depending on the video, and then follow along with the instructor on this second part of the video, to gain experience doing that portion of the research.

Live Sessions – Each day there are three different windows for hands-on learning and Q&A. We have chosen three very different time periods, such that at least 2 fall into the times between 8 am and 8 pm for most participants. We anticipate that most participants will attend at most two of these each day. During these sessions we will do the following three things:
1) Repeat aspects of each follow along and conduct secondary follow-alongs based on attendee questions
2) Answer questions – main speaker who does follow along and several graduate assistants will be available.
3) Hold breakout sessions where you can go if you want to work one on one with someone on your data, or on an advanced feature of ORA or NetMapper.

For the breakout rooms, you will need to be assigned to them at a specific time. More information will be sent on how to sign up each day. We want to make sure groups are evenly distributed.

The three interactive/live sessions each day are:
- 9 am-12 noon US Eastern
- 1 pm-4 pm US Eastern
- 7 pm-10 pm US Eastern

CASOS Summer Institute
2020
Day 1 – Overview and Getting Started
Monday, 6/8/20

Time/Duration	What	Instructor
10 min	**Welcome**	Prof. Kathleen M. Carley (Other)
2 hr	**Dynamic Network Analysis Overview & Basics**	Prof. Kathleen M. Carley (Lecture)
1.5 hrs	**DNA - key metrics**	Prof. Kathleen M. Carley (Lecture)
1 hr	**ORA – Basic Interface, Import CSV file, email import, Key Entity Report, Citation import, Citation report**	Jeff Reminga (Hands On)
1 hr	**ORA – Basic Visualization Techniques - Coloring, Sizing, Images, and Tools**	Jon Storrick (Hands On)
1 hr	**Groups & Topology**	Prof. Kathleen M. Carley (Lecture)
1 hr	**ORA – Group Report, using attributes in Group Report, Reports with 2 or more meta-networks, finding which measure is in which report**	Jeff Reminga (Hands On)
3 hr	**The three interactive/live sessions:** • **9 am-12 noon US Eastern** • **1 pm-4 pm US Eastern** • **7 pm-10 pm US Eastern**	ALL
1 hr – Time TBD	**Reception – this will happen at some point on day 1 just a session for everyone to introduce himself or herself and to talk in small groups.**	**All participants and CASOS Center**

CASOS Summer Institute
2020
Day 2 – Data
Tuesday, 6/9/20

Time/Duration	What	Instructor
10 min	**Where does the data come from?**	Prof. Kathleen M. Carley (Lecture)
1.5 hrs	**Text to Networks & Semantic Networks**	Prof. Kathleen M. Carley (Lecture)
30 min	**NetMapper**	Prof. Kathleen M. Carley (Lecture)
1 hr	**NetMapper – from texts to networks**	Neal Altman (Hands On)
10 min	**A Cautionary Note about Saving Unicode Text from Excel**	Neal Altman (Hands On)
30 min	**Edit Data, Create Thesauri or Delete List, Apply functions to Many Files**	Jeff Reminga (Hands On)
1 hr	**Networks of Hate Speech in COVID-19 Discourse**	Joshua Uyheng (Case Study)
45 min	**Dynamic Networks for Social Media**	Prof. Kathleen M. Carley (Lecture)
1 hr	**Topic Group Report & Semantic Report**	Jeff Reminga (Hands On)
1 hr	**Case Study: Detecting Polarization & Stance**	Sumeet Kumar (Case Study)
30 min	**LDA, LSA**	Joshua Uyheng
1 hr	**Going from Data to Latent Networks**	Iain Cruickshank (Hands On)
1 hr	**Analyzing Moroccan Employment Stakeholder Perceptions**	Ibrahim Rahhal (Case Study)
1 hr	**Processing twitter data with NetMapper, creating meta and semantic networks with text**	JD Moffitt (Case Study)
3 hr	**The three interactive/live sessions:** • **9 am-12 noon US Eastern** • **1 pm-4 pm US Eastern** • **7 pm-10 pm US Eastern**	ALL

CASOS Summer Institute
2020
Day 3 – Basic Analysis
Wednesday, 6/10/20

Time/Duration	What	Instructor
1 hr	**Centralities, redundancies, cognitive demand - Key Entity Report, Management Report**	Geoff Dobson (Hands On)
1 hr	**One and Two Mode Metrics**	Ramon Villa Cox (Hands On)
1 hr	**Metric Based Comparison**	Christine Sowa
1 hr	**Groups, Meta-Nodes, Big Data**	Jon Storrick (Hands On)
1 hr	**Finding Factions from Ukrainian Legislative Data**	Tom Magelinski (Case Study)
1 hr	**Prediction and Comparison of Networks**	Ramon Villa Cox (Hands On)
1 hr	**QAP:MRQAP Analysis Report**	Jeremy Straughter (Case Study)
30 min	**MRQAP and Regression, Visualize Distributions How to put network metrics in regressions**	Jeff Reminga (Hands On)
30 min	**Geo-Spatial Visualization**	Jon Storrick (Hands On)
30 min	**Visualizing**	Jon Storrick (Hands On)
1 hr	**Clustering - Unimodal, to Cluster Ensembling, to Multi-Modal Custering**	Iain Cruickshank (Hands On)
3 hr	**The three interactive/live sessions:** • **9 am-12 noon US Eastern** • **1 pm-4 pm US Eastern** • **7 pm-10 pm US Eastern**	ALL

CASOS Summer Institute
2020

Day 4 – Dynamics & Spatial Reasoning
Thursday, 6/11/20

Time	What	Instructor
2 hr	**Dynamics: Reasoning About Networks Over Time**	Prof. L. Richard Carley (Lecture)
1 hr 30 min	**Fourier Analysis, change detection** *Follow along*	Prof. L. Richard Carley (Lecture)
30 min	**Geo-temporal Networks and Visualization**	Prof. L. Richard Carley (Lecture)
1 hr	**Examining the COVID Protest Discussion on Twitter**	Matthew Babcock, PhD (Case Study)
30 min	**Collecting and Analyzing Twitter Data Best Practices**	Ramon Villa-Cox (Lecture and Hands On)
30 min	**Collecting and Analyzing Reddit Data Best Practices**	Christine Sowa (Lecture and Hands On)
1 hr	**Twitter Importers, Twitter Report Reddit Importer, Reddit Report**	Jeff Reminga (Hands On)
1 hr	**BEND & Community Assessment**	Prof. Kathleen M. Carley
1 hr	**Exploring Russian Influence Campaigns Over Time on Reddit**	Christine Sowa (Case Study)
1 hr	**Ecuadorian Protests**	Ramon Villa Cox (Case Study)
30 min	**Twitter De-identification**	Jon Storrick (Hands On)
1 hr	**Twitter Hashtag Community Analysis: A Case Study on the Canadian Elections**	Daniele Bellutta and Catherine King (Case Study)
30 min	**Finding Bots and Trolls**	Joshua Uyheng
3 hr	**The three interactive/live sessions:** • **9 am-12 noon US Eastern** • **1 pm-4 pm US Eastern** • **7 pm-10 pm US Eastern**	ALL

CASOS Summer Institute
2020
Day 5 – Simulation
Friday, 6/12/20

Time	What	Instructor
30 min	**Generating Synthetic Networks in ORA**	Luke Osteritter
30 min	**Micro-Simulations in ORA**	Ramon Villa Cox (Hands On)
30 min	**Immediate Impact Analysis**	Tom Magelinski (Hands On)
1 hr 15 min	**Social Influence Theory**	Prof. Kathleen M. Carley (Lecture)
30 min	**Agent Based Modeling - Intro**	Mike Kowalchuk (Hands On)
30 min	**Virtual Experiments**	Geoff Dobson (Hands On)
1 hr	**Dynamics, Trails and Networks**	Mihovil Bartulović (Hands On)
1 hr	**Trails and Networks: Loom; Network representation of Trails**	Mihovil Bartulović (Case Study)
30 min	**Cyber-FIT**	Geoff Dobson (Case Study)
1 hr	**Construct**	Mike Kowalchuck (Hands On)
1 hr	**Exploring Polarization on Climate Change debate on Twitter**	Aman Tyagi (Case Study)
3 hr	**The three interactive/live sessions:** • **9 am-12 noon US Eastern** • **1 pm-4 pm US Eastern** • **7 pm-10 pm US Eastern**	ALL

CASOS Summer Institute 2020

Day 6 – Advanced Issues
Saturday, 6/13/20

Time	What	Instructor
38 min	**NetFlow**	Geoff Dobson
30 min	**Handling Large Data Sets**	Jeff Reminga (Hands On)
30 min	**Ego Network Reports**	Jeff Reminga (Hands On)
1 hr	**Machine Learning Models in ORA**	Mike Kowalchuck
1 hr	**Conversations around Insider Threat**	Luke Osterritter (Case Study)
3 hr	**The three interactive/live sessions:** • **9 am-12 noon US Eastern** • **1 pm-4 pm US Eastern** • **7 pm-10 pm US Eastern**	ALL

CASOS Summer Institute 2020

Day 7 – One on One

Extra Sunday 6/14/20

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