

AfEA PRE-CONFERENCE WORKSHOP**System Dynamics Modeling in Epidemiology**

15 April 2019 | 11:30-14:00 | Eduardo Mondlane Conference Ctr

**Montefiore**

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To download all workshop materials:

1. Go to workshop GitHub site → <https://github.com/dlounsbu/AfEA-sdm>.
2. Click on green 'Clone or download' button.
3. Select 'Download ZIP' to transfer a compressed copy of all workshop materials.
4. Open the transferred file to unzip all folders and files.

AGENDA

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| 10:00 – 11:30 | TA check: Download and install workshop materials and software [^] |
| 11:30 – 11:35 | Welcome and workshop overview |
| 11:35 – 11:45 | <u>Ice breaker</u> : <i>What's your problem?</i> |
| 11:45 – 12:00 | Systems theory: Feedback concepts from engineering ('balancing' and 'reinforcing' loops) |
| 12:00 – 12:30 | <u>Exercise</u> . A systems thinking approach to conceptualizing women's empowerment |
| 12:30 – 12:45 | Introduction to system dynamics model building and validation |
| 12:45 – 13:00 | Sources of information and types of data for system dynamics modeling |
| 13:00 – 13:15 | <u>Exercise</u> . Understanding structure and behavior: First order delays and smooths |
| 13:15 – 13:30 | <u>Exercise</u> . Simulating characteristics of populations: Co-flow structures |
| 13:30 – 13:45 | <u>Exercise</u> . Simulating patterns of disease in populations: Aging chain structures (S-I-R) |
| 13:45 – 13:55 | Tradeoffs in modeling: Generality, realism, fit, and precision |
| 13:55 – 14:00 | Recommended resources for additional study and practice in system dynamics |

[^]**Workshop activities involve hands-on skill building exercises.** All participants are encouraged to bring a personal laptop computer to the workshop, pre-installed with a free 20-day trial copy of Stella Architect® system dynamics modeling software. See instructions for downloading and installing your copy at https://github.com/dlounsbu/AfEA-sdm/tree/master/trial_stella_architect_software.