

Workshop Schedule

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Week 1

Day 1, Jan 3

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|---|
| 9:00 – 10:30 | Lecture | ERD/DPS | Introductions and Goals |
| 10:30 – 10:45 | Morning Break | | |
| 10:45 – 12:00 | Livecode | DPS | Basics in R (R Studio; importing, exporting, cleaning data; data classes) |
| 12:00 – 13:30 | Lunch | | |
| 13:30 – 14:45 | Livecode | DPS | Slightly more advanced R (custom functions, flexible arguments, loops) |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Hands on | — | Practice manipulating raw data |

Day 2, Jan 4

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|--|
| 9:00 – 10:00 | Lecture | ERD/DPS | Overview of Movement Ecology and Analyses |
| 10:30 – 10:45 | Morning Break | | |
| 10:45 – 12:00 | Livecode | DPS | Introduction to spatial data in R |
| 12:00 – 13:30 | Lunch | | |
| 13:30 – 14:45 | Livecode | DPS | Movement data in R (movebank, ltraj objects, path metrics) |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Hands on | — | Practice plotting tracks and extracting path metrics |

Day 3, Jan 5

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|---|
| 9:00 – 11:00 | Lecture | ERD | Home ranges and utilization distributions |
| 11:00 – 11:15 | Morning Break | | |
| 11:30 – 12:00 | Livecode | DPS | MCP, KDE home range estimation in R |
| 12:00 – 13:30 | Lunch | | |
| 13:00 – 14:15 | Livecode | ERD | From LoCoH to T-LoCoH (and a-LoCoH) |
| 14:15 – 14:30 | Afternoon Break | | |
| 14:30 – 16:30 | Hands on | — | Home Range Estimation Activity |

Week 2

Day 4, Jan 8

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|---|
| 9:00 – 10:30 | Lecture | WMG | Space-time considerations |
| 10:30 – 10:45 | Morning Break | | |
| 10:45 – 12:00 | Livecode | ERD | More Thoughts: LoCoh & BB |
| 12:00 – 13:30 | Lunch | | |
| 13:30 – 14:45 | Livecode | ERD | T-LoCoH derived metrics; alternative methods (Brownian bridges, AKDE) |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Hands on | — | Personal Projects |

Day 5, Jan 9

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|--|
| 9:00 – 10:30 | Lecture | ERD | Modelling habitat selection: common selection models |
| 10:30 – 10:45 | Morning Break | | |
| 10:45 – 12:00 | LiveCode | DPS | Habitat Selection Analysis in R |
| 12:00 – 13:30 | Lunch | — | |
| 13:30 – 14:45 | LiveCode | ERD/DPS | Step Selection Functions and Beyond in R |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Hands on | — | Selection Activity |

Day 6, Jan 10

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|--|
| 9:00 – 10:30 | Lecture | WMG | Behavioral analysis; FME, CAM, and movement syndromes |
| 10:30 – 10:45 | Morning Break | | |
| 10:45 – 12:00 | Livecode | ERD | Extracting behavioral state from movement tracks (BCPA, HMM) |
| 12:00 – 13:30 | Lunch | | |
| 13:30 – 14:45 | Livecode | DPS | Identifying movement syndromes; metrics for classification |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Hands on | — | Behavioral State Activity |

Day 7, Jan 11

| Time | Activity | Speaker | Topic |
|---------------|---------------|---------|------------------------------------|
| 9:00 – 10:30 | Lecture | DPS | Simulating movement; when and why? |
| 10:30 – 10:45 | Morning Break | | |

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|-----------------------|
| 10:45 – 12:00 | Livecode | ERD | Simulating movement 1 |
| 12:00 – 13:30 | Lunch | | |
| 13:30 – 14:45 | Livecode | ERD | Simulating movement 2 |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Hands on | — | Simulation Activity |

Day 8, Jan 12

| Time | Activity | Speaker | Topic |
|---------------|-----------------|---------|---|
| 9:00 – 10:30 | Lecture | WMG | Epidemiological models |
| 10:30 – 10:45 | Morning Break | | |
| 10:45 – 12:00 | LiveCode | WMG | Modeling Epidemics in Nova and fitting parameters |
| 12:00 – 13:30 | Lunch | | |
| 13:30 – 14:45 | Lecture | DPS/ERD | An brief introduction to hierarchical models in Ecology |
| 14:45 – 15:00 | Afternoon Break | | |
| 15:00 – 16:30 | Wrap Up | — | Questions and Final Discussion |