## CONFERENCE ON MATHEMATICAL ECOLOGY
## University of Nebraska-Lincoln, April 14-15, 2012

### Friday, April 13, 2012
### Avery Hall

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| 3:15 – 3:50 | Rowlee Reception, Avery 348 |
| 4:00 – 5:00 | Rowlee Lecture, **Mark Lewis**, *Mathematical Models for Carnivore Territories,* Avery 115 |
| 7:00 | Those participants who are interested in going out to dinner with a group should meet in the lobby of the downtown Holiday Inn.  UNL graduate students will meet you there and help form groups. |

### Saturday, April 14, 2012
### Room 212, Jackie Gaughan Multicultural Center
### Nebraska Union

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| 8:00 – 8:15 | Welcome Comments: **Gregory Snow**, Associate Dean for Research, College of Arts and Sciences, University of Nebraska-Lincoln |
| 8:15 – 8:50 | **Judith Miller**: *Quantitative genetics and species' ranges* |
| 8:50 - 9:25 | **Kim Cuddington**: *Invasion risk and birthday problem* |
| 9:25 – 10:00 | **Stephen Ellner**: *Temporally variable dispersal and demography can accelerate the spread of invading species* |
| 10:00 – 10:15 | Break |
| 10:15 – 10:50 | **Stuart Townley**: *Diffusion, density dependence and linearised transients: A triumverate of destabilising effects* |
| 10:50 – 11:25 | **Pauline van den Driessche**: *Models for the spread of Cholera* |
| 11:25 – noon | Small Group Discussions – we will break up into four groups, in rooms 212 and 317 in the Gaughan Center and room 213 in the Union. |

Topics:

Are Transients here to stay?

Is trait variation just another form of stochasticity?

What kind of empirical evidence disproves a model? or How should model predictions be tested?

What can't we do now, that we need to figure out in the next 10 years?

Noon – 1:00          Lunch: The food court vendors (Imperial Palace, Planet Sub, Runza, Sbarro)  will be open and there is space reserved for conference participants on the 1st floor of the Union.  There are also nearby places downtown.

1:00 – 1:35          **Tim Reluga**: *Discrete Random Variable Algebras and the Representations of Stochastic Population Models*

1:35 – 2:10          **Shripad Tuljapurkar**: *Stage-Plus-Age Dynamics: Measures of Reproductive Timing that predict Growth Rate*

2:10 – 2:45          **Priyanga Amarasekare**: *Towards a mechanistic understanding of temperature effects on population viability*

2:45 – 3:00          Break

3:00 – 3:35          **Roger Nisbet**: *Modeling population level impacts of engineered namomaterials in the environment*

3:35 – 4:10          **Hao Wang**: *Risk Assessment of Oil Sands Pollution on Fish Population Dynamics*

4:10 – 4:45          Small Group Discussions – we will break up into four groups, in rooms 212 and 317 in the Gaughan Center and room 213 in the Union.

Topics:

 When are individual based models useful?

 What skills and/or knowledge (mathematical, ecological, computational) does the next generation of mathematical ecologists need?

 Can we predict the relationship between biodiversity and particular ecosystem services?

 Do we have the right models to predict the response of species' ranges to climate change?

5:30 - 7:00          Poster Session with Cash Bar, Downtown Holiday Inn, lower level.  Posters will be left up during the banquet

7:00          Conference Banquet, Downtown Holiday Inn, lower level.

**Sunday, April 15, 2012**
**Avery Hall 115 (note building change)**

8:00 – 8:35     **Mike Neubert**: *Strategic models for spatial management of fisheries and their bioeconomic implications for marine reserves*

8:35 – 9:10     **Sebastian Schreiber**: *Should I stay or should I go? An SDE perspective on the ecology and evolution of movement*

9:10 – 9:45     **Stephen Cantrell**: *Evolutionary stability of ideal free strategies in patchy environments*

9:45 – 10:00     Break

10:00 – 10:35     **Mark Lewis**: *First passage time in complex environments: Connecting random walks to functional responses*

10:35 – 11:10     **Bill Fagan**: *Linking Individual Movements and Population Patterns in Dynamic Landscapes*

11:10 – 11:45     Summary of the discussions on Saturday

11:45 – noon     Closing remarks by Richard Rebarber