

DIRECTION OF STUDENT RESEARCH PROJECTS

Advisor of 15 Master's theses, 4 Master's projects, one Honors thesis, 5 graduate summer research projects, and 12 senior projects in Mathematics at UNCW, numerous DIS works and thesis committee memberships.

- 11 joint research publications on refereed media, 7 joint conference talks and 4 student poster presentations, resulting from directed graduate and undergraduate research projects.
- Two students (Fan Wang and Chenhong Lu) won the Graduate Student Achievement Award from UNCW.
- 5 student research projects (Yaqi Yang, Fan Wang, Chenhong Lu, Wei Liu and J. Swinson) funded by Summer Research Grant, UNCW Graduate School.
- An undergraduate Honors Work (J. Rowell) in Mathematics won the UNCW Undergraduate Research Award and a Special Award at the Student Paper Competition by the Society of Industrial and Applied Mathematics.

List of Master's theses, Master's projects and Honor's thesis directed:

1. "*Dynamics of a Fast SIRV Epidemic Model with Vaccination*", Master's Project, Hannah Richie, expected in June 2014.
2. "*Mathematical and Numerical Analysis on a Two-patch Model for Adaptive Consumer Movement*", Master's Thesis, Katherine Olivolo, completed in May 2014.
3. "*A Mathematical Analysis on Population Dynamics in an Environmentally-driven Infectious Disease*", Master's Thesis, Bailey Elliott, completed in May 2014.
4. "*Predator-prey Dynamics with predators using hawk and dove tactics*", Master's Project, Elisabeth Peters, completed in December 2013.
5. "*Effects of Optimal Anti-predator Behavior of Prey on Predator-Prey Dynamics: The Role of Refuges*", Master's Thesis, Leopold Hartsock, completed in May 2013.
6. "*The stability analysis and impact of predator mortality rate on age-structured models*", Master's Thesis, Michael Cowen, completed in May 2013.
7. "Predator-Prey Relationship in a Closed Habitat", Master's Project, James Figliolia, completed in December 2012.
8. "*Hierarchal Inductive Process Modeling and Analysis*", Master's Thesis, Youri Nelson, completed in July 2011.

9. "*An extended Rosenzweig-MacArthur model of a tritrophic food chain*", Master's Thesis, Nicole Rocco, completed in May 2011.
10. "*Heteroclinic cycles in the chemostat models and the winnerless competition principle*", Master's Project, Kathleen Gebczyk, completed in December 2010.
11. "*Two-patch predator-prey system coupled with migration of both species*", Master's Thesis, Brevin Rock, completed in December 2009.
12. "*Population Dynamics of Two Diffusively Coupled Predator-Prey Interactions*", Master's Thesis, Jody Hinson, completed in July 2002.
13. "*A Mathematical Model for Two-stage Chemical Reaction*", Master's Thesis, Biaozi Wei, completed in April 2001.
14. "*Dynamics of a 3-species Food Chain Model with Time Delays*" Master's Thesis, Wenjie Wang, completed in March 2001.
15. "*Population Dynamics in a Model of Territory Acquisition*" Master's Thesis, Richard J. Donovan Jr., completed in April 1998.
16. "*Models of Screening for HIV Transmission*", Master's Thesis, James Swinson Jr., completed in December 1997.
17. "*Comparison and Numerical Simulation for Diffusive Models of Resource and Sexual Competition*", Master's Thesis, Wei Liu, completed in May 1997.
18. "*Persistence and Permanence in a Three-species Food-chain Model*", Master's Thesis, Chenhong Lu, completed in May 1996.
19. "*Asymptotic Periodicity and Permanence in a Competition-diffusion System with Discrete Delays*", Master's Thesis, Fan Wang, completed in May 1995.
20. "*Coexistence and Permanence in a Four-species Food-Chain Model*", Honor's Thesis, Jonathan T. Rowell, completed in December 1994.