

### **College of Earth, Ocean,** and Atmospheric Sciences



## **OSU NRT Program Model**

#### **Participating Groups**

**Core Program Team** 

**Faculty Advisors** and Mentors

Core Faculty Team

Internship Sponsors

#### **Program Elements**

Intensive Field Course: Introduction to NRT core concepts

#### **Professional Development in** Marine and Earth Systems Science

- Conceptual Foundations in **Risk and Uncertainty**
- Collaborative Working Structure and Functions
- Communication of Risk and Uncertainty

#### Minor in Risk and Uncertainty **Quantification in Earth Systems**

- Big Data and Uncertainty Quantification
- Risk Analysis
- Earth Systems
- Social Systems
  - Internship

Collaborative Thesis Chapter

#### **Student Trainee Outcomes**

Calculate risk and uncertainty using multiple data sources, and construct analyses of marine systems



Combine concepts from social and natural science to conduct collaborative analysis addressing humans and climate change effects on marine systems

Assess needs, perceptions and roles of stakeholders and communicate risk and uncertainty to stakeholders in industry, policy, and nongovernmental organizations

Gain professional skills in communication and collaborative working structures

# **Risk and Uncertainty Quantification** and Communication in Marine Science and Policy



**OSU NRT Programmatic Research and Training Goals** 

**Engaging graduate students in** transformative research, education, and professional experiences to address the effects of human actions and climate change on marine systems.











# **OSU NRT Student Timeline**



#### Our NRT Team at Oregon State University:

<sup>1</sup>Lorenzo Ciannelli (*Fisheries Oceanography*), <sup>1</sup>Katherine Hoffman (*Program Coordinator*), <sup>1</sup>Julia Jones (Geography), <sup>1</sup>Alexander Kurapov (Physical Oceanography); <sup>2</sup>Juan Restrepo (Uncertainty), <sup>2</sup>Enrique Thomann (Stochastic modeling), <sup>2</sup>Ed Waymire (Risk analysis); <sup>3</sup>Alix Gitelman (Environmental statistics); <sup>4</sup>Sinisa Todorovic (Machine learning); <sup>5</sup>Flaxen Conway (Social Science), <sup>6</sup>Michael Banks (Genomic); <sup>7</sup>Ana Spalding (Policy science). At Char Associates:

Cynthia Char (Human development).

<sup>1</sup>College of Earth, Ocean, and Atmospheric Sciences, <sup>2</sup>Mathematics, <sup>3</sup>Statistics, <sup>4</sup>Computer Science, <sup>5</sup>Liberal Arts, <sup>6</sup>Fisheries and Wildlife, <sup>7</sup>School of Public Policy.