

JUNE 2023

WEEK 1

PROF. ROBICHAUD'S LECTURE

Senior Lecturer in Ethics and Public Policy
at the Harvard Kennedy School of Government and Director

POWER AND RESPONSIBILITY: DOING PHILOSOPHY WITH SUPERHEROES

Monday: Heroes and Hard Choices

Tuesday: Superpowers, Oversight and Accountability

Wednesday: Truth, Justice and the American Way

Thursday: Do the Villains Have a Point?

Friday: Superheroes and the Virtues

**I hope this sounds fun and
pedagogically exciting!**

[Discussion Topics](#)



PROF. ROBICHAUD

Senior Lecturer in Ethics and Public Policy at the Harvard Kennedy School of Government and Director of Pedagogical Innovation at the Edmond J. Safra Center for Ethics. He received his doctorate in philosophy from MIT

[VIEW MATERIAL](#)

For you, a brief breakdown:

Monday we'll look at a clip from the first Spider-Man movie, where the Green Goblin makes Spider-Man choose between saving a bunch of kids and saving Mary Jane. I'll give students a chance to discuss what they would do, and then lecture about utilitarianism, deontology, and role responsibilities.

Tuesday we'll look at a clip from Captain America: Civil War where the Avengers debate whether there should be international oversight over their actions. I'll give students a chance to discuss what side they're on, and then lecture about political legitimacy and oversight.

Wednesday we'll look at Superman's claim that he stands for truth, justice and the American way. I'll give students a chance to discuss what that means to them, and then we'll look at truth in politics, social justice, and the value of democracy.

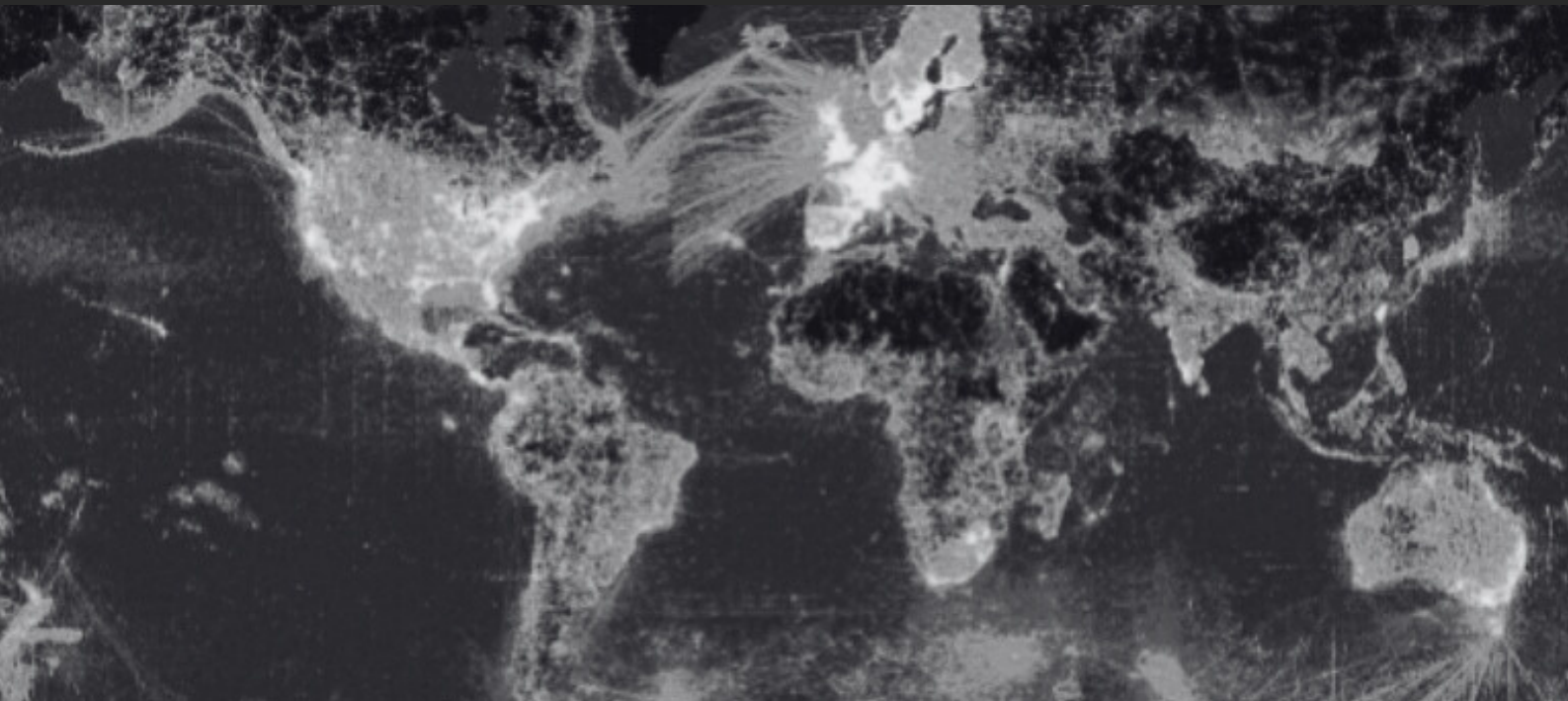
Thursday we'll look at the arguments made by Killmonger from Black Panther, Thanos from Avengers Endgame and the Joker from Dark Knight. Each villain has something interesting to say, and I'll give students a chance to debate whether they think there's merit in their positions. Then we'll talk about just war (Killmonger), our responsibilities to the planet (Thanos) and whether we're all truly just egoistic and selfish (the Joker).

Friday will be a little different. I'll ask students the night before to choose a favorite superhero of theirs and to come ready to share what it is about them that they find virtuous,

admirable and worth modeling. After doing that for a bit we'll then talk about the importance of developing personal and civic virtues, and I'll use Wonder Woman as a primary example of a character who has inspired many people over many generations.

PROF. BEERY'S LECTURE

FROM THE MIT SCHWARZMAN COLLEGE OF COMPUTING



HERE ARE THE TITLES AND
SHORT DESCRIPTIONS:

[VIEW MATERIAL](#)

[PLEASE READ THIS BLOG POST](#)

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Lecture 1: Overview of Computer Vision for Biodiversity

In this lecture, we will discuss how computer vision is currently used to help ecologists understand biodiversity and ecosystems worldwide, and touch on some of the big challenges to increased spatial and temporal biodiversity monitoring.

Lecture 2: Deep Dive on Camera Traps

In this lecture we'll dig deep into one of the most widely used biodiversity sensors: camera traps. We'll learn how camera traps are used, look at camera trap data, and discover some of the modern computer vision methods that can find and identify species in these images.

LECTURE 3: GENERALIZATION AND DISTRIBUTION SHIFT

In this lecture we will look a little deeper into generalization, one of the major technical challenges when deploying computer vision models in the real world. We will learn what factors contribute to generalization being a challenge, and some ways to improve generalization.

Lecture 4: Monitoring the Urban Forest

In this lecture we will explore automated method for detecting and identifying trees in cities, an interesting and important application of computer vision for urban ecology and planning.

Lecture 5: Participatory Human- AI Elephant Population Modeling

In this lecture we will learn about how to build AI systems that can work together with humans to tackle challenging tasks, such as identifying individual elephants in the wild.

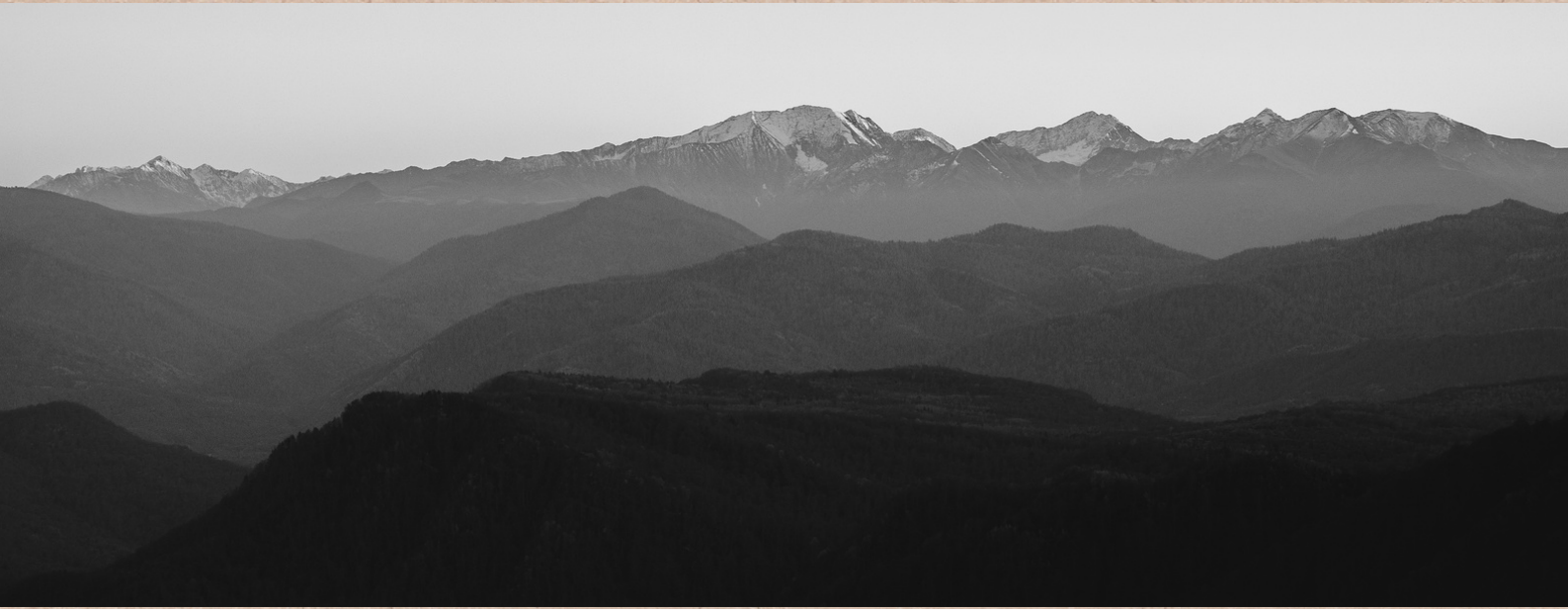


"PROF. BEERY OF THE MIT SCHWARZMAN COLLEGE OF COMPUTING"

PROF. Albernez, from Columbia University, Department of English and Comparative Literature

ROMANTICISM AND BEYOND

LITERATURE AND SOCIAL CHANGE IN A WORLD ON FIRE



I. INTRODUCTION TO ROMANTICISM: LITERATURE IN A WORLD ON FIRE

This first lecture will introduce students to the tumultuous world at the dawn of the 19th century in England and the rest of Europe. This was a revolutionary era of huge social, political, and cultural changes, and these changes were taken up by a daring group of writers, artists, and thinkers known as the Romantics. This day will introduce some of key figures, historical contexts, and themes of the period, discuss what the word "Romanticism" signifies, and lay the groundwork for the rest of the week's lectures and discussions. We'll also discuss why we should care about literature from the past in our moment today.



2. REVOLUTION AND TIME

This lecture will highlight the importance of revolution to the writers of the period – revolution both as a concept and as a political event – with special attention to the momentous political revolutions that occurred in France (1789), Haiti (1791), and elsewhere. We will examine how poets such as William Wordsworth and William Blake responded to the changes brought about by revolution in their work, especially in their conceptions of time and history. What does it mean to write literature in the radically new era that the French Revolution promised to inaugurate?

3. NATURE AND SCIENCE

Romanticism is often associated with an emphasis on nature, even to the point of nature-worship. In this lecture, we will explore how Romantic writers like John Clare responded to changes in the environment and the landscape in the age of the industrial revolution in England. We will see writers responding to both the wonders and dangers of scientific advancement, a tension exemplified in Mary Shelley's classic science fiction novel *Frankenstein* from the year 1818—a tale perhaps more relevant than ever in our age of artificial intelligence and climate change.

4. IMAGINATION AND MYTH

In a time of war, political upheaval, and radical possibilities, writers explored the imagination as a superior human ability to reanimate the past and envision new futures. For many of the Romantics, the imagination was both a quintessentially human power, and also a connection to the divine. This lecture outlines how writers and artists like William Blake, Samuel Taylor Coleridge, and John Keats employed the imagination and repurposed ancient mythologies to speak to their present.

5. LEGACIES AND FUTURES

This final lecture presents the huge cultural influence of Romantic writers in the ages that follow, up to the present. From Jane Austen film adaptations to popular images of vampires to contemporary writers, musicians, filmmakers, and activists, the Romantic writers continue to be a source of inspiration and a challenge to look at our world differently—its past and its possible futures.



PROF. ALBERNEZ

Columbia University,
Department of English and Comparative Literature

Ph.D. University of California, Berkeley (2018)

Albernez specializes in the literature, especially poetry, of the Romantic period, with a particular interest in the legacies of Romanticism across a number of theoretical and critical domains. His current book project, entitled *All Things Common: Romanticism and the Measure of Community*, traces new formations of community, ecology, and the everyday in Romantic literature and its later inheritors.

— week 4

Prof. Dr. Lorenzo

Department of Earth, Environmental, and Planetary Sciences at Brown University and also Chairman and co-founder of Ocean Visions.

He is internationally recognized for his work and leadership in understanding ocean climate and its impact on marine ecosystems and coastal communities.

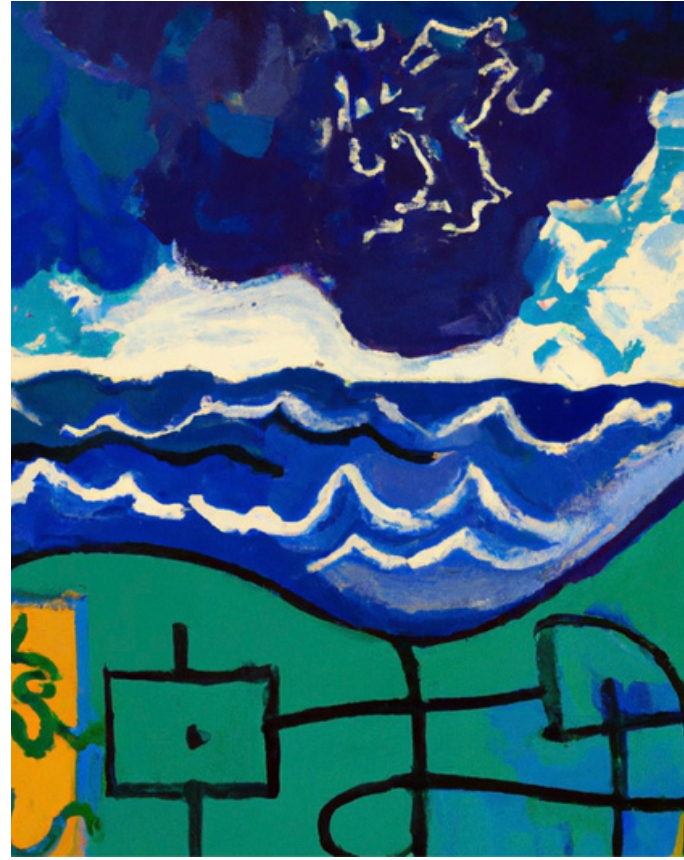
More recently, Di Lorenzo efforts have focused on transforming research and knowledge generated in academia into equitable and practicable ocean-based solutions to climate by co-founding in 2019 the Ocean Visions and in 2022 the United Nations Ocean Decade Center on Ocean-Climate Solutions.

Background Lecture

- Ocean, Ecosystems, Climate Change, and Solutions 01
- Structure and Circulations of the Ocean and Atmosphere 02
- Climate and Marine Ecosystems 03

Research Lab

- Ocean Acidification, Warming, Hypoxia, and Marine Life 04
- Migration, Movement, and Survival of Marine Organisms 05



NUMERICAL LABS WITH MATLAB (CODES AND THEORY)

MATLAB

Lab #1: Evaluating Ocean Temperature Rate of Change

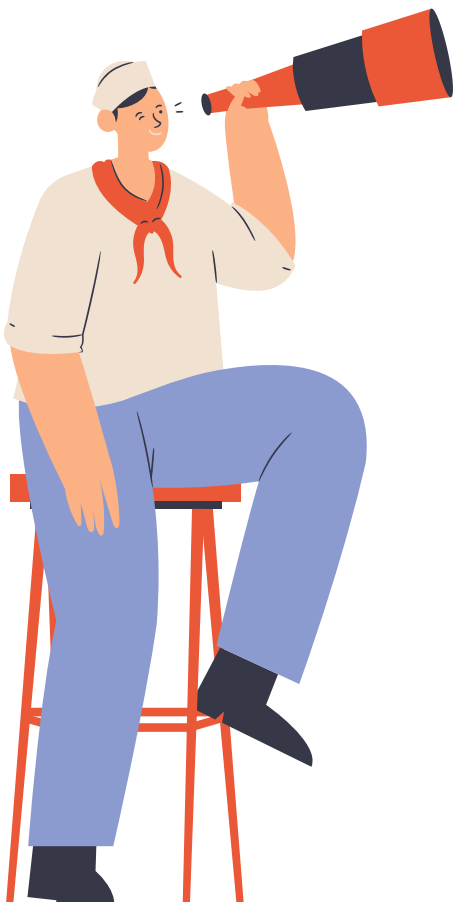
- Implement numerical solutions for a temperature decay equation
- Create plots for the solution
- Include an atmospheric forcing term and reconstruct temperature anomalies

Lab #2: Understanding Mean, Standard Deviation of Global Surface Temperatures

- Discuss the concepts of mean, seasonal cycle, standard deviation, and anomalies
- Map global surface temperature mean and standard deviation for summer and winter seasons
- Investigate the structure of the mean and seasonal cycle

Lab #3: Correlation and Regression Maps of Global Surface Temperatures

- Calculate and visualize the spatial correlation/regression between global surface temperature and a key environmental factor
- Analyze and interpret lag correlation between surface temperature and a key environmental factor



Lab #4: Linear and Quadratic Trends in Global Surface Temperature

- Apply the LSQ approach to compute linear and quadratic trends
- Plot climate change trends and delve into understanding their patterns

Lab #5: Modes of Global Surface Temperatures

- Compute EOFs of global surface ocean temperature
- Research and describe the observed patterns

[View Materials](#)