University of Colorado Boulder
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# Teo Price-Broncucia

## Education and Research Experience

**University of Colorado Boulder** *PhD Computer Science* 2024 (Expected)
Advised by Rebecca Morrison

**National Center for Atmospheric Research** *Visiting Student Researcher* May 2023 - Current
Mentored by Allison Baker

**University of Colorado Boulder** *MS Computer Science* 2022

**Colorado College** *BA Physics* 2014
Advised by Shane Burns
Boettcher Foundation Scholar

## Research Interests

I am interested in data informed physics based computer models. This has led me to the topics of reduced models, calibration, and uncertainty quantification with a focus on expensive chaotic models such as those used in climate and weather prediction. I'm curious about the potential to improve the utility of models in educational and industrial domains. I believe we have an obligation to consider the societal and environmental impacts of our work, minimize harm, and contribute to the wellbeing of humanity and the natural world.

## Conference Activity and Publications

Conference Paper: **Price-Broncucia T,** Morrison R. *Ultra-Short-Time Batching and Unscented Kalman Inversion for Calibration of Expensive Chaotic Models* - USNCCM17 **UQ Student Paper Competition Semi-Finalist**, 2023

Conference Paper: **Price-Broncucia T,** Morrison R. *Multi-Time Unscented Kalman Inversion for Calibration of Expensive Chaotic Models* - ICASP14, **CERRA Student Recognition Award Recipient**, 2023

Poster: *Multi-Time Unscented Kalman Inversion for Calibration of Expensive Chaotic Models* - USACM Thematic Conference on Uncertainty Quantification for Machine Learning Integrated Physics Modeling, 2022

Paper: Scholl VM, McGlinchy J, **Price-Broncucia T**, Balch JK, Joseph MB. *Fusion neural networks for plant classification: learning to combine RGB, hyperspectral, and lidar data.* PeerJ 9:e11790, 2021

## Teaching and Service

**Graduate Peer Mentor Program** — *Mentor* 2023-Current
Mentored first year graduate student.

**McNair Scholar Program** — *Mentor* 2022-Current
Mentored undergraduate McNair scholars, who are first generation college students working towards pursuing doctoral studies.

**CU Access and Inclusion Program** — *Mentor* 2021-2022
Mentored first year engineering student from an underrepresented group on managing social, mental, and academic difficulties.

**CU Computer Science Department** — *Teaching Assistant* 2021
Introduction to Programming. Weekly instruction and office hours for ~75 students.

## Teaching and Service cont.

**CodeConnects** — *Instructor* 2019-2020

Remote instruction for high school student without access to CS in school.

**Yampa Valley Science School** — *Biosphere Resource Specialist* 2015

Led a team of 6 to teach a comprehensive ecological curriculum to 6th graders in Routt County.

## Industry Experience

**Boeing, Denver** — *Research Intern* 2019

Worked on image recognition, data analysis, and data visualization projects.

**E3 Consulting, Denver** — *Analyst* 2016-2018

Due diligence of energy projects with a focus on energy production modeling for solar projects. Inspected over 75 new and existing solar projects across the United States. Worked with top developers and financial parties in the industry.