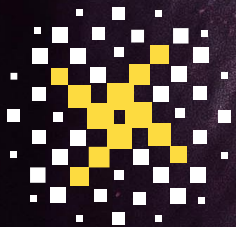# Neural Simulation-Based Supernova Ia Cosmology

Kosio Karchev
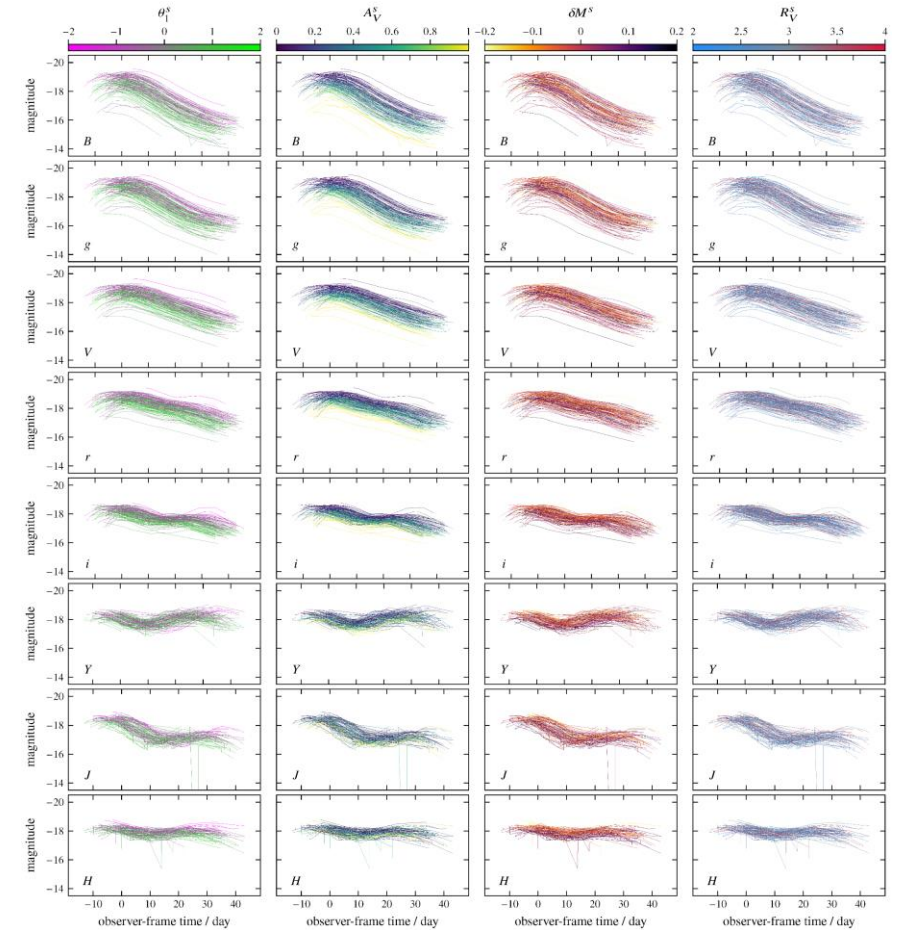
Roberto Trotta, Christoph Weniger

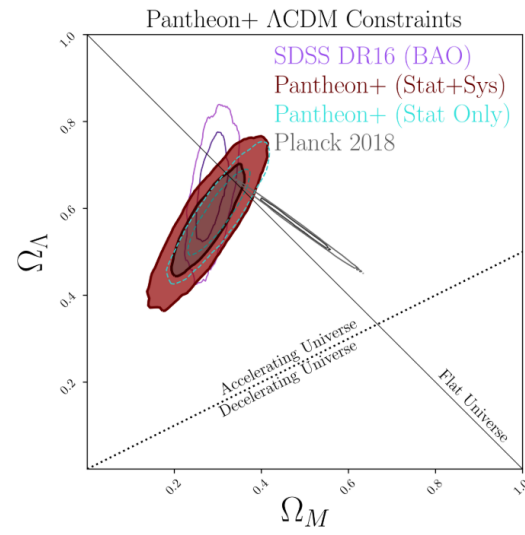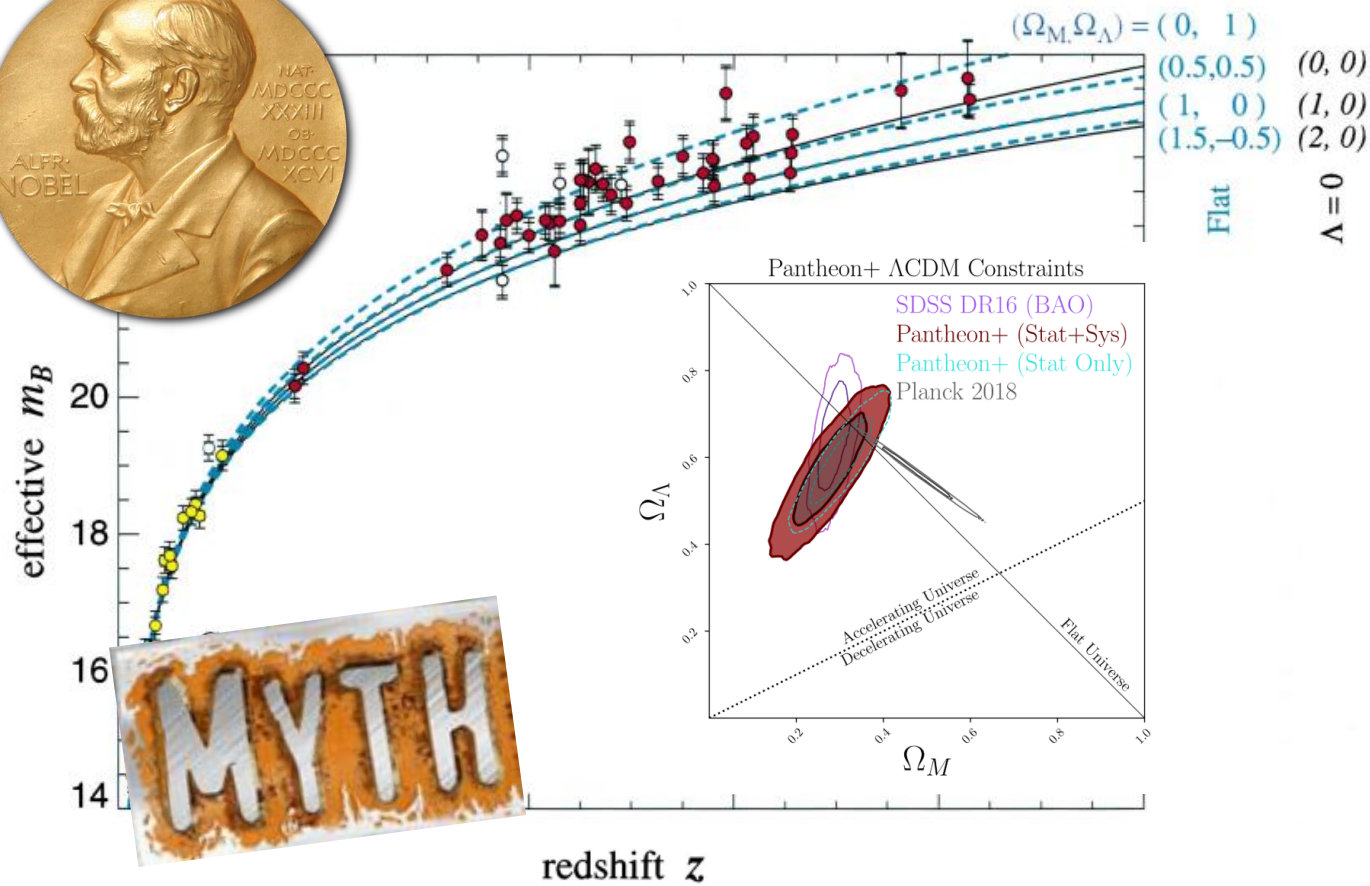SISSA DATASCIENCE
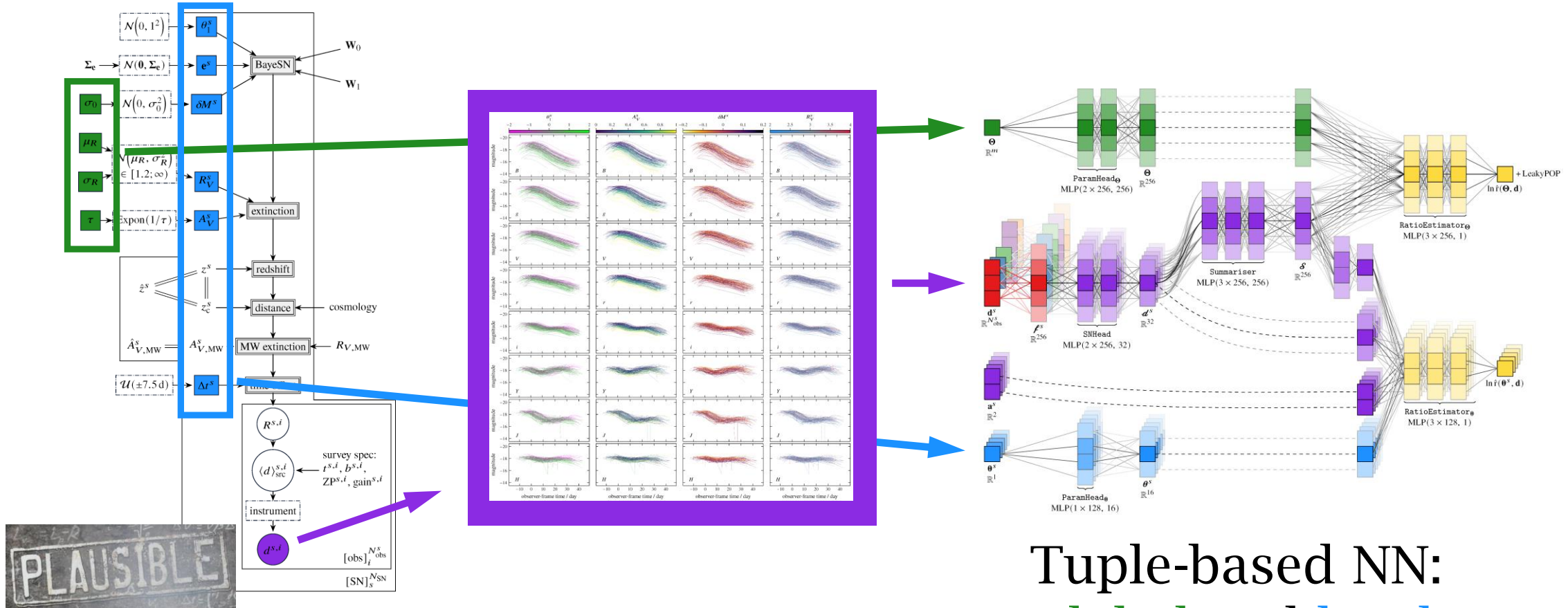Machine Learning for the Natural Sciences

EUROPEAN AI FOR FUNDAMENTAL PHYSICS CONFERENCE
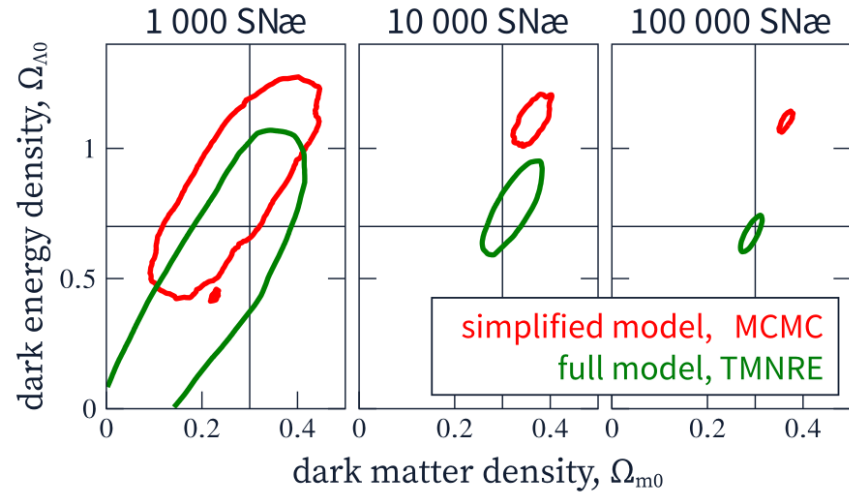EuCAIFCon 2024

Supernova Ia cosmology
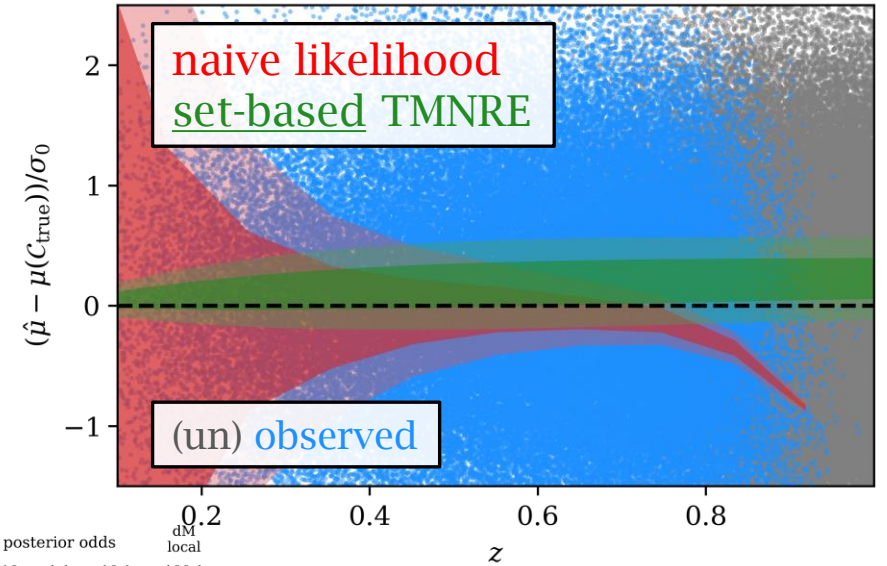
TMNRE for supernova light curves

SLiCsim

Tuple-based NN:
global and local
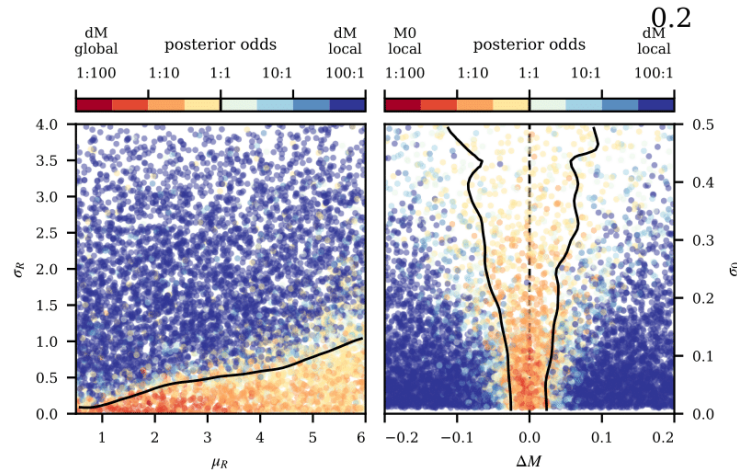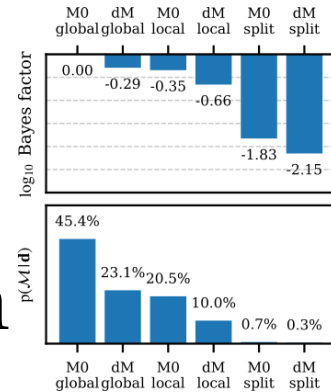NRE

The importance of being <u>principled</u>

10^5
SNæ

systematics

Bayesian
model selection

selection
effects