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## **Playing dice with the universe: Bayesian statistical analyses of cosmological models and new observables**

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Playing dice with the Universe: Bayesian Statistical  
analyses of cosmological models and new  
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The cover shows an illustration of the bright night sky. The painting was made by my father, *Miguel Cañas Muñoz*, who has a genuinely interest in astronomy and shared this passion with me when I was a little girl. I thank *Jaime Cañas Muñoz* for realizing the graphical design of the cover using the painting.

*A mamá, papá y Juanchito*



# Glossary

$\Lambda$  Cosmological constant.

$\Lambda$ CDM Standard Cosmological model.

(C)DM (Cold) Dark Matter.

**AIC** Akaike Information Criterion.

**AP** Alcock-Paczynski effect.

**BAO** Baryonic Acoustic Oscillations.

**BBN** Big Bang Nucleosynthesis.

**BH** Black Hole(s).

**BIC** Bayesian Information Criterion.

**BICEP** Background Imaging of Cosmic Extragalactic Polarization.

**BM** Baryonic Matter.

**CAMB** Code for Anisotropies in the Microwave Background.

**CfA** Center for Astrophysics Redshift Survey.

**CLASS** Cosmic Linear Anisotropy Solving System.

**CMB** Cosmic Microwave Background.

**CPL** Chevallier-Polarski-Linder parametrization.

**DE** Dark Energy.

**DES** Dark Energy Survey.

**EC** Euclid Consortium.

**EFT** Effective Field Theory.

**EM** Electromagnetic.

**ESA** European Space Agency.

**ET** Einstein Telescope.

**FLRW** Friedmann-Lemaitre-Robertson-Walker.

**GC** Galaxy Clustering.

**GPs** Gaussian Processes.

**GR** General Relativity.

**GR** Gravitational Lensing.

**GW** Gravitational-Waves.

**IA** Intrinsic Alignment.

## Glossary

**IST:L** Inter-Science Taskforce Likelihood.

**IST:NL** InterScience Taskforce Non-Linear.

**LIGO** Laser Interferometer Gravitational-Wave Observatory.

**LISA** Laser Interferometer Space Antenna.

**LSS** Large Scale Structure.

**MCMC** Monte Carlo Markov Chain.

**ML** Machine Learning.

**NASA** National Aeronautics and Space Administration.

**SDSS** Sloan Digital Sky Survey.

**SHO** Simple Harmonic Oscillator.

**SKA** Square Kilometre Array.

**SNIa** SuperNovae of type Ia.

**WL** Weak Lensing.

**WMAP** Wilkinson Microwave Anisotropy Probe.

**XC** Cross (X) - Correlations.

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