

# On multifield inflation, adiabaticity, and the speed of sound of the curvature perturbations

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### Curriculum Vitae

I was born on the 11 July of 1986, in the city of Santiago, Chile. Upon completing my primary and secondary school I entered the Faculty of Physical and Mathematical Sciences of Universidad de Chile. After my Bachelor, I joined the Astronomy Department at Cerro Calán, where I obtained a Master degree in Astronomy. Part of my Master thesis involved an experimental research project at Cardiff University in Wales. In 2011 I joined the Instituut Lorentz of Leiden University. I enrolled in the PhD program as a Huygens fellow to work under the supervision of Prof. dr. Ana Achúcarro. During my PhD I made a long term visit to the Institute for the Physics and Mathematics of the Universe (IPMU) in Japan, where I joined the group of Prof. dr. Masahiro Kawasaki. During these years I had the privilege to attend many schools and conferences in Japan, US, and many countries in Europe. Beginning in September, I will be a postdoctoral researcher at the University of Barcelona.

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I first would like to thank my advisor Ana Achúcarro for her guidance and support during this PhD. I always found her door wide open, for which I am most grateful. I would also like to thank my co-promotor Gonzalo Palma for initiating me in the world of research, and for the many discussions we had during this period. I am indebted to both of you for not only guiding my route as a physicist, but also for being examples on how to teach and perform scientific research with passion, honesty and good faith.

During my research I had the privilege to closely work with very talented colleagues. My deepest gratitude are to Pablo, Jesus, Bin and Yvette for sharing their passion with me. I will further like to extent my gratitude to all the members of the Cosmology and the Particle Physics groups of the Lorentz Institute. I was very pleased to have shared my time with you. My sincere gratitude also to Fran and Marianne for their precious help and positive vibes. Part of my research was done in the Institute for the Physics and Mathematics of the Universe in Japan, which very warmly opened to me the doors of their Institute. I am in particular thankful to Masahiro Kawasaki for making me part of his group, and for being very open for discussion and collaboration.

From my time in Leiden I am mostly proud of having met extraordinary friends. It is pretty impossible naming all of them. My thoughts are with all the people with whom I have shared nights around the dining table of Oude Rijn-4. To all of you, thanks for sharing your desires, creativity and joy with me. For constantly reminding me about the magical nature of the world, I thank Manuela.

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