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On the geometry of fracture and frustration

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CURRICULUM VITAE

I was born on 4 March 1988 in Lissersbroek. After graduating from Het Rijnlands Lyceum Sassenheim, I started my BSc studies in Physics in Leiden at the age of seventeen. I obtained my degree three years later in 2008. Besides the regular courses I completed an interdisciplinary honours programme on solar biofuels. I spent half a year on experimental and computational research on light harvesting complexes in photosynthetic bacteria under the guidance of prof. dr. S. Völker and the late prof. dr. R. Silbey (MIT).

In the next two years, I concentrated on theoretical physics. This included a one-year research project on liquid crystal emulsions at the Instituut Lorentz with dr. Vitelli and in close collaboration with the experimental group of prof. dr. A. Fernandez-Nieves at the Georgia Institute of Technology. In 2010, I obtained my MSc degree in physics cum laude, also from Leiden University.

In November 2010, I continued working with dr. Vitelli as a PhD researcher. A large part of the results are collected in this thesis. I stayed twice at the University of Chicago (in March 2011 and August 2013) as part of a collaboration with prof. dr. W. T. M. Irvine. I have presented my work on fourteen occasions at national and international conferences, schools and seminars in France (Les Houches), England (Cambridge), Belgium (Leuven), Portugal (Lisbon), the USA (Chicago, Dallas, Biddeford) and the Netherlands. At FYSICA 2014, the annual conference of the Nederlandse Natuurkundige Vereniging, I was elected as best plenary young speaker by an audience of over 500 people. In this year, I also won the Belgian equivalent of this young speaker contest.

Throughout my PhD and MSc studies I have assisted in teaching the courses Statistical physics (fall 2011, 2012 and 2013), Quantum Mechanics II (spring 2010 and 2011), Klassieke mechanica II (fall 2009), Klassieke mechanica I (spring 2009) and Wiskunde Aansluiting (fall 2008). During my BSc studies I have also been employed as a tutor to a group of first-year students in the academic years 2006-2007 and 2007-2008.

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- **V. Koning**
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Submitted

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I visited Noah Mitchell and William Irvine in Chicago to collaborate on the work on fracture. William, thank you for your hospitality and generosity, and for my first words of Italian that I learnt while deciphering your code. Noah, every time it was great to chat with you, whether it was in Chicago, Utrecht or over skype.

On the theory side I worked together with Benny van Zuiden, Randy Kamien and Vincenzo Vitelli. Benny, with your enthusiasm and friendship you were the best office mate I could wish for. Vincenzo, I feel privileged to have been your first apprentice. There are many things that I could thank you for, but what stands out for me is the confidence you gave me in public speaking, which to my surprise turned into the aspect of my PhD that I have enjoyed most. In my (perhaps somewhat distorted) memory we practiced my MSc talk day in and day out till we got it right. Thanks for all this attention and the early exposure you gave me by sending me to the APS meeting and to Chicago to give talks there while I was just a few months into my PhD.

I thank my colleagues in the Instituut Lorentz, in particular the fellow group members, the members of my indoor football team and the secretary; you created a pleasant environment to work in. My friends, mijn broertje Jesper en mijn zusje Iris, thank you all for providing the distractions that are necessary to complete a thesis. Nico, dank voor je gezelschap tijdens onze talrijke pauzes die we sinds ons gezamenlijke bachelor-onderzoek gehouden hebben. Jesper, we delen dezelfde voorkeur in sport, muziek en zelfs wetenschap, en hebben zoveel dingen samen gedaan. Dank je voor je

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