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## **On shape and elasticity: bio-sheets, curved crystals, and odd droplets**

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### **Citation**

Garcia Aguilar, I. R. (2022, September 13). *On shape and elasticity: bio-sheets, curved crystals, and odd droplets*. *Casimir PhD Series*. Retrieved from <https://hdl.handle.net/1887/3458390>

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**Note:** To cite this publication please use the final published version (if applicable).

# Acknowledgements

In research in general but especially for a PhD track, there is a whole team of people standing behind every produced piece of scientific work, often larger than what meets the eye. Here, I would like to bring these contributions to the front stage since, no matter the size, they are in one way or another imprinted in this thesis.

The starting point of the list is the core of sharp minds at the front line of the research questions, and who enriched the work presented in the previous pages. I would like to acknowledge my supervisor, Luca Giomi, and his valuable scientific input. Luca, your engaging way to give presentations was both something to strive to and a motivation to apply to your group, so I am thankful that you sought a way to welcome me in the Institute Lorentz as a PhD candidate. A bulk of our research was made possible thanks to the joint project with Eli Sloutskin in his fascinating work on shape-shifting droplets. Eli, thank you for your keen remarks, thorough comments, and explanations throughout our collaboration. Piermarco, I enjoyed working with you these years; thank you for so patiently helping understand the connections between geometry, topology and physics in such a passionate way, at the start of the road. Ludwig, thank you for helping me wrap around the last loose bits towards the end instead, for shedding a different light on the covariant derivative, and for pretzels. Thank you both for your critical observations, and for reinstating my short-lived and long-lost appreciation for differential geometry. To the past and present members of the Soft & Bio mechanics group, also including André, Dan, Dimitris, Jose, Julia, Livio, Niladri, Richard, Rory, and Zhihong, thank you for your interesting questions and the enlightening discussions, as these were often the little push to get unstuck or even take big leaps. In particular, thank you Steven for your work during your master's research which set a strong computational basis for the study in polymorphism.

Supporting the academic research is more often than not a large group dealing with the practical aspects of the job, from administrative to IT support, whose contribution is sometimes underappreciated or even wrongly taken for granted. Fran, Manon, Leonardo, and the staff at the SCIS, thank you for your help with all my questions and issues, big or small, on how to navigate such practicalities. I would like to also acknowledge my second promotor, Ana Achúcarro. Thank you for your empathetic and yet fair advice and support, which is a shame to have found on the final stretch but that nonetheless arrived at the right time. Regarding this thesis, thank you Samia for taking on the task of correctly translating my summary and for wise advice. Thank you Sofi Lu for once again sharing a creative project with me in designing the outer covers.

Insightful scientific discussion and fun are both fundamental to good research, and I often found this fruitful combination within the colleagues of the Lorentz Institute and the Soft Matter community in Leiden. Ali, Anne, Bahareh, Casper, Daniela, Karina, Kirsten, Peter, Rachel, Ruben, and Vera, it has been a pleasure to share

lunches, seminars, cookies, uitjes and train rides with you. In this line, I want to acknowledge the fellow PhD candidates that have shared the road with me, who know about the good, the bad, the ugly, and – I would add – the beautiful of this experience. Gesa, Hamed, Koen, Melissa, Qi, Stef, and Zhenya, I am specially grateful to you, as you have been there for some big wins and also down time. Your advice has been fundamental and “thank you” is not enough for your support through it all.

The Covid-19 pandemic brought along many unusual and uncomfortable situations, permeating many aspects of life, including work. Despite that, a silver lining was the connections those months formed or strengthen. Liz, Rafa, Vanessa, and Sharony, thank you for being my online officemates in such lonely times. Alice, Anna, Aravindh, Fabrizio, Guada, Margherita and Savvas, thank you for freshening up the return to the office.

As a foreigner an ocean away from the country that watched me grow, it has been of paramount significance in the PhD journey to have found a home in Leiden, for which loving people are a key ingredient. Andre, Elenita, Fede, Flavio, Jittolo, Marta, Nicando, and Vince, you became older (academic) siblings, and I deeply cherish the safety and support I feel from you. It would have been very hard without you. Carmen and Glenn, thank you for the motivation either through advice or *la importantísima tacita de café*. Yasmin and Francesco, life in the Nieuwstraat was just the needed break after long office hours and I appreciate the support you still offer to this day.

Familie van Gijn, bedankt voor het zijn van een warm tweede gezin voor vele jaren. Tilla, thank you for so wholesomely taking care of me. Lau and Char, thank you for your unconditional disposition to help and for continuously untangling the knots in my head. Mathijs, you have kept me grounded and in one piece, and I feel blessed for the small window that made our bubbles overlap. Thank you for your genuine and crucial support.

Finally, my most fundamental and love-filled appreciation goes to my family, who have encouraged me blindly down the road. Despite thinking of me as the odd scientist, you have always been my strongest supporters.

## About the author

I was born in San José, Costa Rica in 1989. Strongly encouraged by my high school physics teacher, dr. Rolando Berty, my path in Physics started at the Universidad de Costa Rica where I graduated with honors in 2012 after completing a four-year bachelor program in Physics, partially funded by an Honor and Academic Excellence scholarship. During this time, I worked as a research assistant at the Research Center for Material Science and Engineering, where we studied the optical properties of scarabs with metallic appearance. I also collaborated at the Research Center for Atomic, Nuclear and Molecular Sciences, where I was responsible for a project to improve self-absorption corrections in gamma spectrometry. Thanks to a scholarship from the Brazilian Synchrotron Light Laboratory for the CNPEM Summer Internship, in 2011 I studied magnetic interfaces using X-ray spectroscopy. The following year I was awarded a full scholarship for the Summer Internship at the Bariloche Atomic Center in Argentina, where instead I dipped my toes in the more theoretical side of physics with a partially numerical study in the retransformation of martensites.

Having acquired a taste for computational methods, I pursued the Erasmus Mundus MSc course in Atomic Scale Modelling of Physical, Chemical and Biomolecular Systems, thanks to a full scholarship from the European Commission. In 2015, I was conferred a triple degree from the ENS Lyon (FR), the VU and UvA in Amsterdam, and Sapienza Università di Roma (IT), after completing my thesis titled “Modelling the ultrafast reorganization of the actin cytoskeleton induced by cell stimulation”, under the supervision of Prof.dr. Bela Mulder at AMOLF.

I began the PhD track at Institute Lorentz in 2017 after being awarded a D-ITP diversity grant, under the supervision of dr. Luca Giomi. After working on curved crystals and emulsion droplets in collaboration with dr. Piermarco Fonda and dr. Eli Sloutskin, I stirred back to bio-inspired physics when supervising two master students, studying collective motion with machine learning methods and eventually wrapping up with the work in tubulin assemblies. Throughout my PhD I attended various schools, including the Boulder Summer School in Theoretical Biophysics, workshops and conferences. I presented my work at Physics@Veldhoven (2021), the APS March Meeting (2018, 2019, 2021) and the DPG Spring Meeting (2021). I also served as a teaching assistant for the MSc course Statistical Physics. From 2018 to 2021 I was the representative for Leiden University in the PhD Council of the Dutch Research School of Theoretical Physics.