Programmable mechanical metamaterials

Florijn, H.C.B.

Publication List

[1] Bastiaan Florijn, Corentin Coulais and Martin van Hecke,
Programmable Mechanical Metamaterials: the Role of Geometry,
Soft Matter (2016).

[2] Bastiaan Florijn en Martin van Hecke,
Progammeerbare mechanische metamaterialen,
Nederlands Tijdschrift voor Natuurkunde **5**, 81, (2015).

[3] Bastiaan Florijn en Martin van Hecke,
Progammeerbare mechanische metamaterialen,
Eureka! **49**, jaargang 12, (2015).

[4] Bastiaan Florijn, Corentin Coulais and Martin van Hecke,
Programmable Mechanical Metamaterials,
Phys. Rev. Lett **113**, 175503 (2014).

[5] Arnaud Lazarus, Bastiaan Florijn, and Pedro Reis,
Geometry-Induced Rigidity in Nonspherical Pressurized Elastic Shells,
Phys. Rev. Lett **109**, 144301 (2012).

[6] Henrique Di Lorenzo Pires, Bastiaan Florijn, and Martin van Exter,
Measurement of the Spiral Spectrum of Entangled Two-Photon States,
Phys. Rev. Lett **104**, 020505 (2010).

In preparation:

[7] Corentin Coulais, Bastiaan Florijn, and Martin van Hecke,
Barcode Metamaterials, In preparation.

[8] Bastiaan Florijn, Corentin Coulais, and Martin van Hecke,
Programmable domain walls in biholar sheets, In preparation.

[9] Nitin Singh, Corentin Coulais, Bastiaan Florijn, and Martin van Hecke,
Soft Biholar Mechanism, In preparation.

Curriculum Vitae

I was born on august 18, 1985 in Doetinchem, the Netherlands. I spent most of my childhood in Zutphen, where I also obtained my VWO-diploma from 'De Vrije School de Berkel'. In 2005, I went to Leiden University to study physics. After receiving my bachelors degree in 2009, I began my masters studies at the same university. As part of the masters program I did two research projects. The first project 'Mechanical Response of Packing Derived 2D Elastic Networks' was done at Leiden University under supervision of prof. dr. M. van Hecke. The second research project 'Geometry-Induced Rigidity in Non-spherical Pressurized Elastic Shells' was performed at MIT in Boston under supervision of dr. P.M. Reis.
After obtaining my masters degree (cum laude) I started my PhD under supervision of prof. dr. Martin van Hecke at Leiden University. I have presented my work at several (inter)national conferences to fellow researchers but also to a broader audience (Dutch national radio, APS press conference, several invited talks) and in (inter)national journals (see publication list).
During my PhD, I was a teaching assistant for the undergraduate courses 'Special Relativity', 'Diffusion' and 'Classical Mechanics b'. In addition, I have supervised nine students for their bachelor or master research internship. Moreover, I contributed to the promotion of our lab and the Leiden University via many lab tours and setting up demonstration experiments. Currently I am working at the Optics Department of TNO in Delft as a scientist and innovator.

Acknowledgments

After four turbulent years this thesis is completed. It has been a period of intense learning for me, not only scientifically but also on a personal level. During these years I have received a lot of support and help from many people and I will take the time to thank them here.
Martin, I have learned a lot from you. I appreciate your open and direct attitude in scientific discussions, your support in good and in bad times and the time you took to talk about work and life. You were a true mentor.
Corentin, I truly enjoyed working with you, you became a friend. Your enthusiasm gave me a lot of energy and was a driving force in the progress we have made.
Thanks Jeroen Mesman for your technical support, input and creativity.
Danielle, thank you for your humor, administrative help and your support in tougher times.
Thank you fellow group members Alex, Scott, Nitin, Luuk, Anne and my office mates Geert, Merlijn and Peter. Also thank you Vera, Casper and Daniela of the Kraft-group.
Koen, Henk, Jacob, Ernst-Jan, Leah, Frits, Chris, and Nigel, your work as bachelor or/and master students in the lab is very much appreciated.
On a more personal level I am grateful for the support of my parents, brothers, parents in law, other family and friends (CN'88, 1.0, Orgie-D and buddies from high school). And finally, thank you Laura and Myrthe. Laura, I always feel your unconditional support, you helped me to put things in perspective, and pushed me when needed. Myrthe, as little as you are, you have helped me by showing what is important in my life.