



FIG. 1. (a) Schematics of the experimental setup. (b) The lateral poker is a steel marble glued to a screw; two different marble diameters were tested. (c) Axial load  $F_A$  and poker force  $F_p$  for a typical experiment: (i) the shell is compressed to  $F_A^0$ , and then the gap is fixed, (ii) the poker is advanced until buckling occurs. (iii) The probe catches up with the buckled shell (iv).



**Dr. Emmanuel Viot**

From: Viot, E, Kreilos, T., Schneider, T.M. and Rubinstein, S.M., "Stability landscape of shell buckling", Physical Review Letters [28 Nov 2017, 119(22):224101]

See:

<https://emmanuel-viot.weebly.com/>

<https://projects.iq.harvard.edu/smrlab/people/emmanuel-viot>

[https://www.researchgate.net/profile/Emmanuel\\_Viot](https://www.researchgate.net/profile/Emmanuel_Viot)

<https://scholar.google.fr/citations?user=LFiFibsAAAAJ&hl=fr&oi=sra>

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**Education:**

2011-2015 Doctorate in fluid-structure interaction, Ecole Polytechnique

**Biography:**

Dr. Viot is a postdoctoral fellow who has worked on biomechanics (resistance of trees, popcorn, phyllotaxis...), fluid-structure interactions (energy harvesting from fluttering flags) and fracture (dynamic crack propagation in rubber).

He is currently working on elastic buckling thresholds in the presence of defects with Shmuel Rubinstein and Tobias Schneider (EPFL, Switzerland).

Dr. Viot writes, "I am currently postdoctoral fellow in École Polytechnique Fédérale de Lausanne (EPFL) (with Tobias Schneider) and Harvard University (with Shmuel Rubinstein)."

**Research Interests:**

I am interested in taming elastic instabilities that deform engineered objects (such as thin shells and thin plates), and in identifying physical constraints shaping natural objects (such as animals and plants).

**Selected Publications:**

Viot, E, Kreilos, T., Schneider, T.M. and Rubinstein, S.M., "Stability landscape of shell buckling", Physical Review Letters [28 Nov 2017, 119(22):224101]

Emmanuel Viot, Davide Faranda, Xavier Amandolese and Pascal Hemon, "Chaotic dynamics of flags from recurring values of flapping moment", International Journal of Bifurcation and Chaos, (in press), 2018?

S. Gerasimidis, E. Viot, J.W. Hutchinson and S.M. Rubinstein, "On establishing buckling knockdowns for imperfection-sensitive shell structures", ASME Journal of Applied Mechanics, Vol. 85, No. 9, September 2018, Paper No: JAM-18-1303; doi: 10.1115/1.4040455