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PROFESSIONAL EXPERIENCE & EDUCATION	<p>Assistant Professor Mechanical & Aerospace Engineering BioInspired Institute Syracuse University, USA</p> <p>Postdoctoral Associate & Active Learning Initiative Fellow Biological & Environmental Engineering Department Cornell University, USA</p> <p>Ph.D. in Applied Physics University of Twente, Netherlands</p> <p>M.S. in Engineering Mechanics Virginia Tech, USA</p> <p>B.E. in Civil Engineering Jadavpur University, India</p>	<p>Fall 2022-</p> <p>2019 - 2022</p> <p>2014 - 2018</p> <p>2011 - 2014</p> <p>2006 - 2010</p>
RESEARCH INTERESTS	<p>Designer Materials - Programmable soft surfaces; Flexible metamaterials; Elasto-fluidic composites; Adhesion, wetting, and fracture of ultra-soft gels.</p> <p>Bio-Inspired Structures - Acoustics of fish swim bladder; Flow control by soft, undulating structures; Mechanics of swallowing.</p>	
TEACHING INTERESTS	<p>Undergraduate - Mechanics of Materials, Stability of Structures, Thermodynamics, Mathematical Methods in Engineering .</p> <p>Graduate - Continuum mechanics, Theory of Elasticity, Viscous Flow.</p>	
JOURNAL PUBLICATIONS	<p>Published/Submitted</p> <p>[19] M. M. Flapper, A. Pandey, S. Karpitschka, and J. H. Snoeijer ‘Reversal of solvent migration in poroelastic folds’, <i>Submitted</i>, 2022.</p> <p>[18] A. Pandey, J. Yuk, B. Chang, F. Fish, and S. Jung, ‘Slamming dynamics of diving and its implications of diving related injuries’, <i>Science Advances</i> 8, eabo5888, 2022. [Front Cover] Media coverage - Phys.org, Cornell News, NewScientist, EurekAlert, ScienceDaily, ScienMag, Popular Science</p> <p>[17] Y. Sequeira, A. Maitra, A. Pandey, and S. Jung, ‘Revisiting the NASA surface tension driven convection experiments’, <i>Npj Microgravity</i>, 8(1), 2022.</p> <p>[16] E. Esmaili, Z. Chen, A. Pandey, S. Kim, S. Lee, and S. Jung, ‘Corona splashing triggered by a loose monolayer of particles’, <i>Applied Physics Letters</i>, 119, 2021. Selected for Featured Articles, Scilight</p> <p>[15] A. Pandey, M. Kansal, M. A. Herrada, J. Eggers and J. H. Snoeijer, ‘Elastic Rayleigh-Plateau Instability: Dynamical Selection of Nonlinear States’, <i>Soft</i></p>	

Matter, **17**, 5148, 2021.

- [14] M. van Limbeek, M. Essink, **A. Pandey**, J. H. Snoeijer, and S. Karpitschka, ‘Pinning-induced folding-unfolding asymmetry in adhesive creases’, *Physical Review Letters*, **127**, 028001, 2021. **Selected for Editors’ Suggestion Physics viewpoint article by Prof. J. Kolinski**
- [13] M. Essink, **A. Pandey**, S. Karpitschka, C. H. Venner and J. H. Snoeijer, ‘Regimes of Soft Lubrication’, *Journal of Fluid Mechanics*, **915**, A49, 2021.
- [12] **A. Pandey**, B. Andreotti, S. Karpitschka, G. J. van Zwieten, E. H. van Brummelen, and J. H. Snoeijer, ‘Singular nature of the elastocapillary ridge’, *Physical Review X*, **10**, 031067, 2020. **Media coverage - Cornell News**
- [11] **Review Article:** J. H. Snoeijer, **A. Pandey**, M. A. Herrada, and J. Eggers, ‘The relationship between viscoelasticity and elasticity’, *Proceedings of the Royal Society A*, **476**: 20200419.
- [10] **A. Pandey**, C. L. Nawijn, and J. H. Snoeijer, ‘Hydrogel menisci: Shape, interaction, and instability’, *EPL (Europhysics Letters)*, **122**, 3, 2018.
- [9] S. Liu*, **A. Pandey***, J. Duvigneau, J. Vancso, and J. H. Snoeijer, ‘Size-Dependent Submerging of Nanoparticles in Polymer Melts: Effect of Line Tension’, *Macromolecules*, **51**, 2411, 2018. *co-first author
- [8] S. Karpitschka, J. Eggers, **A. Pandey**, and J. H. Snoeijer, ‘Cusp-shaped Elastic Creases and Furrows’, *Physical Review Letters*, **119**, 198001, 2017.
- [7] **A. Pandey**, S. Karpitschka, L. A. Lubbers, J. H. Weijs, L. Botto, S. Das, B. Andreotti, and J. H. Snoeijer, ‘Dynamical theory of the inverted cheerios effect’, *Soft Matter*, **13**, 6000, 2017.
- [6] S. Karpitschka, **A. Pandey**, L. A. Lubbers, J. H. Weijs, L. Botto, S. Das, B. Andreotti, and J. H. Snoeijer, ‘Liquid drops attract or repel by the inverted cheerios effect’, *Proceedings of the National Academy of Sciences*, **113**, 7403, 2016. **Media coverage - Phys.org, The NY Times, The Australian, Gizmodo, UT News Selected for a perspective article by Prof. A. Jagota**
- [5] **A. Pandey**, S. Karpitschka, C.H. Venner, and J. H. Snoeijer, ‘Lubrication of soft viscoelastic solids’, *Journal of Fluid Mechanics*, **799**, 433, 2016.
- [4] D. P. Holmes, P. T. Brun, **A. Pandey**, and S. Protiere, ‘Rising beyond elastocapillarity’, *Soft Matter*, **12**, 4886, 2016. **[Front Cover]**
- [3] **A. Pandey**, D. Moulton, D. Vella, and D. P. Holmes, ‘Dynamics of snapping beams and jumping poppers’, *EPL (Europhysics Letters)*, **105**, 24001, 2014.
- [2] **A. Pandey** and D. P. Holmes, ‘Swelling-Induced Deformations: A materials defined transition from structural instability to surface instability’, *Soft Matter*, **9**, 5514, 2013.

Outreach

- [1] S. Wildeman, **A. Pandey**, and J. H. Snoeijer, ‘Bespiegeling over drijvende paperclips (Reflections on floating paperclips)’, *Nederlands Tijdschrift voor Natuurkunde (Dutch Physics journal)*, Special Issue, Page 72, 2018.

INVITED
TALKS

- Wetting and creasing of soft solids, *Condensed matter seminar, Umass Amherst, USA, 2022.*
- Interfacial pumping inspired by snails, *Soft & Active Matter Seminar, IIT Hyderabad, India, 2021.*
- Form, flow, and function at soft interfaces, *Mechanical & Aerospace Engineering, Syracuse University, USA, 2021.*
- Form, flow, and function at soft interfaces, *Institute of Physics, University of Amsterdam, Netherlands, 2019.*
- The near and the far of a soft contact, *Max Planck Institute for Dynamics and Self-Organization, Germany, 2019.*
- Pinching a soft solid: ridges and cusps, *Widely Applied Mathematics Seminar, Harvard University, USA, 2019.*
- Pinching a soft solid: ridges and cusps, *AMOLF, Amsterdam, 2018.*
- Interacting singularities: two drops on a soft solid, Focus session, *Physics @ Veldhoven, FOM, Netherlands, 2017.*
- Liquid drops attract or repel by the inverted cheerios effect, *Dutch soft matter day, Wageningen University, Netherlands, 2016.*
- Inverted cheerios effect: elastocapillary interaction of liquid drops, *Department of Physics and Astronomy, McMaster University, Canada, 2016.*

CONTRIBUTED
TALKS

- Interfacial pumping inspired by snails, *APS DFD, Phoenix, USA, 2021.*
- Interfacial pumping inspired by snails, *APS March Meeting, USA, 2021.*
- Impact force of human high diving, *APS DFD, Chicago (Virtual), USA, 2020.*
- Hydrogel menisci: shape & interaction, *APS March Meeting, Boston, USA, 2019.*
- Cusp-shaped surface creases and furrows, *ESMC, Bologna, Italy, 2018.*
- Cusp-shaped surface creases and furrows, *CMIF summer school, Cambridge, UK, 2017.*
- Inverted cheerios effect: elastocapillary interaction of liquid drops, *ICTAM, Montreal, Canada, 2016.*
- Elastocapillarity and the curling of fibers, *APS March Meeting, Denver, USA, 2014.*
- Mechanics and Dynamics of Snapping Beams, *APS March Meeting, Baltimore, USA, 2013.*

SUPERVISION
&
MENTORING

At **Cornell University** (daily supervision)

3 Ph. D. students - Eshan Esmaili, Jisoo Yuk, Abhradeep Maitra.

5 M. Eng students - Yohan Sequiera, Emily Wang, Yuming Sun, Yiheng Zhu, Sarah MacGregor.

1 B. S. student - Rachel Bocian.

At **University of Twente** (Officially supervised 2 M. Sc. and 2 B. Sc. theses)

2 M. Sc. students - Martin Essink, Minkush Kansal.

2 B. Sc. students - Martin Essink, Charlotte L. Nawijn.

TEACHING EXPERIENCE At **Cornell University**
 Fall 2021 - As an active learning initiative fellow, I am implementing active learning strategies into two courses - Bio-fluid mechanics, and Capstone design in biological engineering.
 Fall 2019 - Bio-fluid mechanics (Guest lecture on Boundary Layers)

At **University of Twente** (Teaching responsibilities include conducting tutorials, preparing homework problems, occasional lecturing)
 Spring 2018 - Fluids & Elasticity.
 Fall 2015, Fall 2016 - Advanced Fluid Mechanics.

At **Virginia Tech** (Teaching responsibility was to supervising experiments)
 Spring 2014 - Mechanics of Materials.
 Fall 2012 - Mechanical Behavior of Materials Lab.
 Spring 2012, 2013 - Fluid Mechanics Lab.

Guest lecture at **South Dakota State University**
 Fall 2019 - Engineering Mechanics in Biomedical Applications (on Elastohydrodynamics in Articular Cartilage)

PROPOSAL WRITING Marie Sklodowska-Curie actions Individual Fellowships (2018) submitted to the European Commission. Selected for the Seal of Excellence (top 15%).

AWARDS AND HONORS

- ICTAM Travel Award (2016).
- Bechtel Travel Fellowship (Virginia Tech, Spring 2013, 2014).
- Pratt Presidential Graduate Fellowship (Virginia Tech, Fall 2011).

SERVICE **Reviewer**
 Nature Communications, Soft Matter, Journal of Fluid Mechanics, Physics of Fluids, Colloids and Interfaces, International Journal of Solids & Structures, Acta Mechanica Sinica, Applied Sciences, Processes.

PROFESSIONAL MEMBERSHIP American Physical Society (since 2012).
 Society of Engineering Science (since 2012).