



**Professor Jianlin Liu**

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Department of Engineering Mechanics  
College of Pipeline & Civil Engineering  
University of Petroleum, East China

Dr. Jianlin Liu is currently a full professor and PhD advisor in the Department of Engineering Mechanics, College of Pipeline & Civil Engineering, China University of Petroleum (East China). His main research interest deals with soft matter mechanics, interfacial mechanics, applied mathematics, nonlinear mechanics in structures and micro/nano-mechanics.

#### **Education & Working Experience:**

- (1) Bachelor in mechatronics, School of Mechatronics, Qingdao University, 2000
- (2) Master in solid mechanics, Department of Mathematics & Mechanics in School of Applied Science, Beijing Science & Technology University, 2003
- (3) PhD in mechanics, Department of Engineering Mechanics, Tsinghua University, 2008
- (4) Lecturer, Department of Engineering Mechanics, College of Pipeline & Civil Engineering, China University of Petroleum (East China), 2008.02–2009.12
- (5) Associate professor, Department of Engineering Mechanics, College of Pipeline & Civil Engineering, China University of Petroleum (East China), 2009.12–2013.12
- (6) Postdoc & research associate, Department of Mechanical & Aerospace, Seoul National University, 2011.01–2012.01
- (7) Full professor, Department of Engineering Mechanics, College of Pipeline & Civil Engineering, China University of Petroleum (East China), 2013.12–present

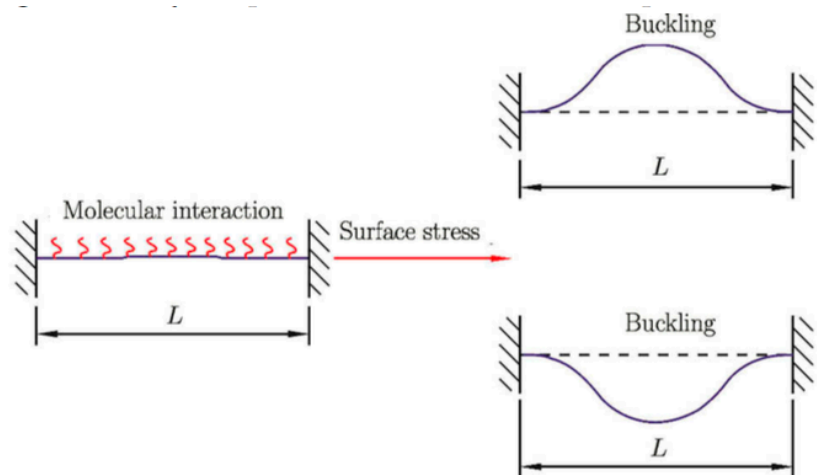


Fig. 1 Schematic of the buckling process of the nanobeam induced by chemical reaction of molecules, accompanied with surface stress variation.

From: Jianlin Liu, Jing Sun and Pingcheng Zuo, “Towards understanding why the thin membrane transducer deforms: Surface stress-induced buckling”, *Acta Mechanica Solida Sinica*, Vol. 39, No. 2, pp 192-196, April 2016

- (8) Visiting professor, Section of Mechanics, Department of Civil Engineering, Aristotle University in Thessaloniki, 2014.01-2014.02
- (9) Visiting professor, Department of Chemical Engineering, Areil University, 2014.08-2014.08
- (10) Visiting scholar, Department of Mechanics and Engineering, Peking University, 2014.09-2015.07
- (11) Guest researcher, Institute of Mechanics, Chinese Academy of Sciences, 2015.01-2015.01
- (12) Visiting professor, Department of Physical Chemistry, Osnabrueck University, 2017.01-2017.02
- (13) Endeavor scholar, Department of Mechanical Engineering, University of Wollongong, 2017.06-2017.10

**Selected Publications:**

- [a] Jianlin Liu, Jing Sun and Pingcheng Zuo, “Towards understanding why the thin membrane transducer deforms: Surface stress-induced buckling”, *Acta Mechanica Solida Sinica*, Vol. 39, No. 2, pp 192-196, April 2016
- [b] Jianlin Liu, “Explicit solutions for a SWCNT collapse”, *Archive of Applied Mechanics*, Vol. 82, No. 6, pp 767-776, June 2012
- [c] Liu, J.L., Mei, Y., Xia, R. and Zhu, W.L., Large displacement of a static bending nanowire with surface effects. *Physica E: Low-dimensional systems and Nanostructures*, 2012, 4: 2050-2055.
- [d] Liu, J.L., Xia, R. and Zhou, Y.T., Stiction of a nano-beam with surface effect. *Chinese Physics Letters*, 2011, 28: 116201.
- [e] Liu, J.L., Wu, R.N. and Xia, R., Surface effects at the nanoscale based on Gurtin’s theory: a review. *Journal of Mechanical Behaviors of Materials*, 2014, 23: 141-151.
- [1] Liu J. L., Mei Y., Xia R., A new wetting mechanism based upon triple contact line pinning. *Langmuir*, 2011, 27(1): 196–200.
- [2] Liu J. L., Feng X. Q., Wang G. F., Buoyant force and sinking condition of a hydrophobic thin rod floating on water. *Physical Review E*, 2007, 76(6): 066103.
- [3] Liu J. L., Feng X. Q., Wang G. F., Yu S. W., Mechanisms of superhydrophobicity on a hydrophilic substrate. *Journal of Physics: Condensed Matter*, 2007, 19(35): 356002.
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- [5] Liu J. L., Feng X. Q., On elastocapillarity: a review. *Acta Mechanica Sinica*, 2012, 28(4): 928–940.
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- [7] Liu J. L., Li S. P., Hou J., Near-post meniscus-induced migration and assembly of bubbles. *Soft Matter*, 2016, 12: 2221–2230.
- [8] Shanpeng Li, Jianlin Liu and Jian Hou, Curvature-driven bubbles or droplets on the spiral surface. *Scientific Reports*, 2016, 6: 37888.
- [9] Zuo P. C., Liu J. L., Li S. P., The load-bearing ability of a particle raft under the transverse compression of a slender rod. *Soft Matter*, 2017, 13(12): 2281–2412.
- [10] Gong Y. L., Mei Y., Liu J. L., Capillary adhesion of a circular plate to solid: Large deformation and movable boundary condition. *International Journal of Mechanical Sciences*, 2017, 126: 222-228.
- [11] Dou X. X., Li S. P., Liu J. L., Zero curvature-surface driven small objects. *Applied Physics Letters*, 2017, 111: 081602.
- [12] Li J., Zhang Y., Liu S., Liu J. L., Insights into adhesion of abalone: A mechanical approach. *Journal of the Mechanical Behavior of Biomedical Materials*, 2018, 77: 331-336.
- [13] Liu J. L., Gong Y. L., Cao G. F., Chemical mediated elasto-capillarity of elastic sheets. *Soft Matter*, 2017, 13, 8048-8054.
- [14] Li S. P., Zhang Y., Dou X. X., Zuo P. C., Liu J. L.\*, Hard to be killed: Load-bearing capacity of the leech

Hirudo nipponia. *Journal of the Mechanical Behavior of Biomedical Materials*, 2018, 86: 345–351.