

Chenzhuo Li

EPFL MED 2 2917, 1015 Lausanne, Switzerland ● +41 78 222 48 49 ● chenzhuo.li@epfl.ch

EDUCATION

<i>Apr 2021 - Present</i>	Doctoral Student in Mechanics <i>École Polytechnique Fédérale de Lausanne</i> ● Thesis title: Stability of low-velocity cracks near an engineered inclusion ● Advisor: Prof. John Kolinski [website] <i>Lausanne, Switzerland</i>
<i>Sep 2014 - Jun 2018</i>	B.S. in Flying Vehicle Power Engineering <i>Beihang University</i> ● GPA: 3.7/4.0 <i>Beijing, China</i>
<i>Sep 2017 - Feb 2018</i>	Undergraduate International Exchange Program <i>Polytechnic University of Milan</i> <i>Milan, Italy</i>

RESEARCH EXPERIENCE

<i>Apr 2021 - Present</i>	Ph.D. candidate in Mechanics <i>École Polytechnique Fédérale de Lausanne</i> ● Fracture mechanics, soft materials, 3D microscopy, particle tracking ● Advisor: Prof. John Kolinski [website] <i>Lausanne, Switzerland</i>
<i>Oct 2018 - Jan 2021</i>	Research Assistant <i>Beihang University</i> ● 2D & 3D digital image correlation ● Principle Investigator: Prof. Bing Pan [website] <i>Beijing, China</i>
<i>Jun 2018 - Sep 2018</i>	Experiment Assistant <i>Center of Space Exploration (Chongqing University)</i> <i>Beijing, China</i>
<i>Sep 2017 - Jun 2018</i>	Undergraduate researcher <i>Beihang University</i> ● Finite element analysis on porous materials ● Principle Investigator: Prof. Zaoyang Guo [website] <i>Beijing, China</i>
<i>May 2015 - Oct 2016</i>	Team Leader and APP developer <i>Beihang University</i> <i>Beijing, China</i>

SKILLS

Programming: MATLAB, Python, imageJ macro

Technique: 3D Particle Tracking, Digital Image Correlation (DIC), Finite Element Analysis

Laboratory: Scanning Electron Microscope (SEM), Laser Scanning Confocal Microscope (LSCM), Laser Sheet Fluorescence Microscope (LSFM), Cleanroom, Nanoscribe

Languages: Chinese (native), English (proficient)

PUBLICATIONS [Google scholar link]

* Equal contribution, † Corresponding author

13. T. Yuan, C. Li, J. Kolinski, E. Amstad[†], “Electrostatically reinforced double network granular hydrogels”, *under review*

12. C. Li, D. Zubko, D. Delespaul, J. Kolinski[†], “3D characterization of kinematic fields and poroelastic swelling near the tip of a propagating crack in a hydrogel”, *International Journal of Fracture*, online, 1–15 (2024) [link]
11. X. Wei, C. Li, C. McCarthy, J. Kolinski[†], “Complexity of crack front geometry enhances toughness of brittle solids”, *Nature Physics*, 20, 1–6 (2024) [link]
10. T. Benkley*, C. Li*, J. Kolinski[†], “Estimation of the Deformation Gradient Tensor by Particle Tracking Near a Free Boundary with Quantified Error”, *Experimental Mechanics*, 63(7), 1255–1270 (2023) [link]
9. C. Li*, X. Wei*, M. Wang, M. Adda-Bedia, J. Kolinski[†], “Crack tip kinematics reveal the process zone structure in brittle hydrogel fracture”, *Journal of the Mechanics and Physics of Solids*, 178, 105330 (2023) [link]
8. K. Zhu*, C. Li*, B. Pan[†], “Rapid and Repeatable Fluorescent Speckle Pattern Fabrication Using a Handheld Inkjet Printer”, *Experimental Mechanics*, 62(4), 627–637 (2022) [link]
7. X. Zhang*, C. Li*, L. Yu, B. Pan[†], “Heatwave distortion correction using an improved reference sample compensation method and multispectral digital image correlation”, *Applied Optics*, 60(13), 3716–3723 (2021) [link]
6. B. Dong, C. Li, B. Pan[†], “Fluorescent 2D Digital Image Correlation With Built-in Coaxial Illumination for Deformation Measurement in Space-constrained Scenarios”, *Experimental Mechanics*, 61, 653–661 (2021) [link]
5. B. Fu*, C. Li*, B. Dong[†], P. Ou[†], “Enhanced Digital Gradient Sensing Using Backlight Digital Speckle Target”, *Sensors*, 20(22), 6557 (2020) [link]
4. C. Li, H. Luo, B. Pan[†], “High-throughput measurement of coefficient of thermal expansion using a high-resolution digital single-lens reflex camera and digital image correlation”, *Review of Scientific Instruments*, 91(10), 105106 (2020) [link]
3. B. Dong*, C. Li*, B. Pan[†], “Fluorescent digital image correlation applied for macroscale deformation measurement”, *Applied Physics Letters*, 117(4), 044101 (2020) [link]
2. B. Dong*, C. Li*, B. Pan[†], “Ultrasensitive video extensometer using single-camera dual field-of-view telecentric imaging system”, *Optics letters*, 44(18), 4499–4502 (2019) [Link]
1. C. Li*, B. Dong*, B. Pan[†], “A flexible and easy-to-implement single-camera microscopic 3D digital image correlation technique”, *Measurement Science and Technology*, 30(8), 085002 (2019) [Link]

CONFERENCE PRESENTATIONS

Jul 2025	Characterization of local poroelastic swelling near the tip of a propagating crack in a hydrogel <i>The 12th European Solid Mechanics Conference (ESMC)</i> Lyon, France
Sep 2024	Near crack tip deformation fields reveal the structure of the process zone in brittle hydrogels <i>The 26th International Congress in Theoretical and Applied Mechanics (ICTAM)</i> Daegu, South Korea
Aug 2024	Near crack tip deformation fields reveal the structure of the process zone in brittle hydrogels (invited) <i>The SES (Society of Engineering) Annual Technical Meeting</i> Hangzhou, China
May 2024	Crack tip kinematics reveal the process zone structure in brittle hydrogel fracture <i>The 19th European Mechanics of Materials Conferences (EMMC)</i> Madrid, Spain
Mar 2024	Evolution of a planar crack perturbed by a rigid inclusion (poster) <i>The 19th International Conference on Deformation, Yield and Fracture of Polymers (DYFP)</i> Kerkrade, Netherlands
Jul 2022	High-resolution quasistatic near-crack-tip deformation fields in brittle hydrogels <i>The 11th European Solid Mechanics Conference (ESMC)</i> Galway, Ireland

<i>Oct 2020</i>	New exploration and application of fluorescent digital image correlation <i>The 11th International Digital Image Correlation Society Conference (iDICs)</i>	<i>Virtual</i>
<i>Jan 2020</i>	High-throughput CTE determination of bulk materials based on DSLR and DIC <i>The 26th Annual Conference of Beijing Society of Theoretical and Applied Mechanics</i>	<i>Beijing, China</i>

AWARDS AND HONORS

<i>2020, 2019, 2018</i>	First-Class Academic Scholarship
<i>2019</i>	Freshman Merit Scholarship
<i>2018</i>	CSC Scholarship for Undergraduate Exchange Program
<i>2016</i>	Third Prize for the 26 th “Feng Ru Cup” Competition
<i>2015 - 2016</i>	Student Research Training Grant

TEACHING

<i>Fall 2022 - 2024</i>	Teaching assistant in Experimental Methods in Engineering Mechanics <i>École Polytechnique Fédérale de Lausanne</i>	<i>Lausanne, Switzerland</i>
<i>Spring 2022 - 2024</i>	Teaching assistant in Continuum Mechanics <i>École Polytechnique Fédérale de Lausanne</i>	<i>Lausanne, Switzerland</i>

SERVICE

Journal reviewer: Experimental Mechanics, Optics Letters, Optics Express, Applied Optics