# PROFESSIONAL SUMMARY

**Dr Liam Cheng**

**POSTDOCTORAL RESEARCH FELLOW IN BIOMEDICAL ENGINEERING**

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Passionate about using technology to advance healthcare through research into regenerative medicine and deeply committed to mentoring the next generation of researchers.

# EDUCATION

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| 2018-2022 | **PhD. in Biomedical Engineering** University of Sydney, Sydney, NSW Thesis: "Regenerative Medicine and Biomaterials: A New Approach to Tissue Engineering" |
| 2016-2018 | **Master of Science in Biomedical Engineering** University of California, Los Angeles (UCLA), Los Angeles, CA Dissertation: "Novel Biomaterials for Sustained Drug Release" |
| 2012-2016 | **Bachelor of Engineering (BioMed Engineering), Honours** UNSW, Sydney, NSW Dean's Honours List |

# RESEARCH EXPERIENCE

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| 2022-present | **Postdoctoral Research Fellow** Biomedical Engineering Department, University of Sydney   * Conducted clinical research in regenerative medicine, focusing on the development of novel biomaterials for tissue engineering. * Awarded the prestigious Innovare Medix Fellowship for outstanding research potential in biomedical engineering, contributing to a 20% increase in departmental research funding. * Delivered the '3D Bioprinting for Organ Regeneration' project that resulted in a 25% improvement in tissue compatibility in trial participants. This work has been cited over 100 times since it was published, reflecting its impact on the field. * Employed advanced imaging techniques and computational modelling to analyse tissue growth and biomaterial integration. * Published findings in several high-impact journals and presented at international conferences, contributing to significant advancements in the field of tissue engineering. |

# RESEARCH EXPERIENCE (cont.)

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| 2016-2018 | **Research Assistant** BioMechanics and Materials Laboratory, UCLA   * Led the development of nano-scale drug delivery systems, achieving a 35% increase in drug efficacy and a 20% reduction in side effects, as evidenced by peer-reviewed publications. * Employed nanotechnology and microfabrication techniques in novel drug delivery systems, improving targeted drug delivery efficiency by 40%. |

# PUBLICATIONS

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| Journal Articles | |
| 2023 | Cheng, L., Smith, J., & Brown, A. (2023). 'Innovations in Biomaterials for Tissue Engineering', **Journal of Biomedical Engineering Research**, vol. 57, no. 2, pp. 134-150. |
| 2022 | Cheng, L., & Lee, D. (2022). '3D Bioprinting Techniques in Organ Regeneration: A Review', **Advanced Research in Biomedical Engineering**, vol. 45, no. 4, pp. 201-215. |
| 2021 | Cheng, L., Taylor, M., & Khan, S. (2021). 'Nano-scale Drug Delivery Systems and Their Impact on Patient Outcomes', **International Journal of Nanomedicine and Bioengineering**, vol. 39, no. 1, pp. 75-89. |

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| Book Chapters | |
| 2022 | Cheng, L. (2022). 'Biomaterials and Their Applications in Regenerative Medicine', in H. Wang (ed.), **Emerging Trends in Biomedical Engineering**, Sydney University Press, Sydney, pp. 102-128. |

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| Conference Proceedings | |
| 2022 | Cheng, L. (2022). 'The Future of Biomedical Engineering: 3D Bioprinting and Beyond', **Proceedings of the International Conference on Biomedical Engineering**, Melbourne, pp. 456-461. |

# PRESENTATIONS AND CONFERENCES

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| August 2023 | **Biomedical Engineering Global Summit,** Sydney Delivered an address on "Advancements in 3D Bioprinting for Tissue Engineering", focusing on interdisciplinary approaches and future trends in biomedical engineering. |
| March 2022 | **International Conference on Nanomedicine,** Melbourne Served as the Panel Chair for a session on "Innovations in Drug Delivery Systems", facilitating discussions among leading researchers in the field. |

# PRESENTATIONS AND CONFERENCES (cont.)

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| July 2021 | **Annual Australian Biomedical Engineering Conference,** Brisbane Presented "Biomaterials in Regenerative Medicine: New Frontiers", earning the 'Best Presentation' award for insights on novel biomaterials applications. |
| October 2020 | **National Biomedical Engineering Workshop,** Perth Conducted a workshop on "Statistical Analysis in Biomedical Research", emphasising practical applications in biomedical data interpretation. |
| June 2019 | **Asia-Pacific Biomedical Engineering Symposium,** Adelaide Spoke on "Next-Generation Biomaterials for Medical Applications", highlighting the evolution and potential of biomaterials in medical science. |

# PROFESSIONAL EXPERIENCE

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| 2022-present | **Postdoctoral Research Fellow** Biomedical Engineering Department, University of Sydney   * Leading a research team focused on the development of next-generation biomaterials for tissue engineering applications. * Securing a $200,000 grant for research into nano-tech drug delivery systems. * Published multiple peer-reviewed articles in top-tier journals, enhancing the department's research profile. |
| 2018-2020 | **Tutor** Biomedical Engineering Department, University of Sydney   * Taught undergraduate biomedical engineering tutorials, focusing on subjects such as biomaterials and tissue engineering. Engagement in these classes led to several students to pursuing this area in their Honours thesis. * Created engaging educational materials that contributed to a 20% increase in student grades and positive course evaluations. |
| 2016-2018 | **Research Assistant** BioMechanics and Materials Laboratory, UCLA   * Contributed to groundbreaking research on nano-scale drug delivery systems. This resulted in two patents being granted. * Established a foundation as a biomedical researcher by co-authoring articles in several leading international journals. |
| 2015 | **Biomedical Engineer (Intern)** MediTech Solutions, Sydney   * Supporting a team developing a new heart valve design, which was 20% more efficient than previous versions. * Collaborated with a multidisciplinary team to optimise medical device prototypes for clinical trials. |

# SKILLS

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| Technical |
| * **Laboratory techniques:** Proficient in 3D bioprinting, tissue culture and regenerative medicine methodologies. * **Analytical tools:** Skilled in using high-resolution microscopy, flow cytometry and spectroscopy for detailed biomedical analysis. * **Software proficiency:** Advanced user of MATLAB, Python for data analysis, and AutoCAD for biomedical design. * **Statistical analysis:** Experienced in using statistical software such as SPSS and R for complex data interpretation and research validation. |

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| Academic management and leadership |
| * **Grant writing:** Demonstrated success in securing research funding, including a $200,000 grant for drug delivery system research. * **Project management:** Skilled in leading research teams and projects, ensuring timely completion and adherence to objectives. * **Communication:** Effective communicator, with experience in presenting at international conferences and publishing in high-impact journals. * **Leadership:** Proven leadership skills, demonstrated by successfully heading a research team and mentoring junior researchers. |

# AWARDS AND HONOURS

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| 2023 | **Young Investigator Award**, Biomedical Engineering Society Awarded for outstanding contributions to the field of tissue engineering and regenerative medicine. |
| 2022 | **Innovare Medix Fellowship**, University of Sydney Prestigious fellowship recognising exceptional potential in biomedical research. |
| 2018 | **Best Graduate Research Award**, UCLA BioMechanics and Materials Lab Awarded for the innovative nano-scale drug delivery system project. |
| 2016 | **Dean's List for Academic Excellence**, UNSW Recognised for exceptional academic performance during the Bachelor of Engineering programme. |
| 2015 | **Undergraduate Research Scholarship**, UNSW Competitive scholarship awarded for academic excellence and research potential in biomedical engineering. |

# RELATED INTERESTS AND ACTIVITIES

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| 2021-present | **President** Biomedical Engineering Society, University of Sydney Leading the society’s initiatives, organising academic events, and fostering industry connections for members. |

# RELATED INTERESTS AND ACTIVITIES (cont.)

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| 2020-2021 | **Volunteer Researcher** Sydney Community Health Clinic Contributed to community health projects, focusing on the development of accessible medical devices for underserved populations. |
| 2019-2020 | **Mentor** University of Sydney Peer Mentoring Program Guided first-year engineering students, providing academic support and career advice. |
| 2018 | **Event Coordinator** Australian National Biomedical Engineering Conference Played a key role in organising the conference, managing logistics and liaising with speakers and sponsors. |

# MEMBERSHIPS AND ASSOCIATIONS

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| Member since 2021 | **Australian Biomedical Engineering Society (ABES)** Engaging in professional development and contributing to discussions on advancements in biomedical engineering. |
| Associate Member since 2018 | **Engineers Australia** Involved in professional networking and continuous learning in the engineering field through industry events and resources. |
| Member since 2017 | **IEEE Engineering in Medicine and Biology Society (EMBS)** Staying updated with technological advancements and participating in interdisciplinary conferences and workshops in biomedical engineering. |
| Member since 2019 | **International Society for Tissue Engineering and Regenerative Medicine (ISTERM)** Active in global forums and collaborative research initiatives focused on tissue engineering and regenerative medicine. |

# REFEREES

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| **Prof. Emily Thompson** Head of Biomedical Engineering Department University of Sydney emily.thompson@example.edu.au   XX XXXX XXXX | **Dr Raj Patel** Senior Research Scientist MediTech Solutions raj.patel@example.com.au XX XXXX XXXX |
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| **Dr Angela Martinez** Collaborator and Associate Professor BioMechanics and Materials Laboratory, UCLA angela.martinez@example.edu   XX XXXX XXXX |  |