Benjamin Carter

Education

2021 - 2023 Rhode Island School of Design | MID

2013 - 2015 Stanford University | MS

- Stanford d.school Graduate
- Stanford ARPA-E Funded Project. Energy Behavior Initiative: Product Lead, Research & Design
- PBL Lab: Mentor and Cross-disciplinary Advisor (2015+). Structural Engineer, winning team (2014).
- Stanford Graduate Student Council: Officer

2008 - 2011 University of Canterbury, New Zealand | BE (Hons, First Class)

- 2012 WCTE Author: "Study of a high performance timber building"
- 2011 Christchurch City Council Design Challenge: First Prize + Travel Fellowship
- Post-Tensioned Timber Research: Seismic performance & feasibility study

Experience

2020 +	Independent Consultant	Boston/Los Angeles/Oakland/Seoul

Sr. Technology Analyst + Engineer

- Technical consultant to early stage modular manufacturing+construction startups: R2 and Cassette Systems
- Responsible for development of core technology product and analysis methods, reporting to CTO/CEO

2018 - 2020 **RAD Urban**

Sr. Structural Engineer

- Leadership role in engineering, serving as senior engineer across two high-rise modular projects.
- Technology development role focused on structural systems and assembly, reporting to CEO.

2018 Katerra

Structural Automation + Systems Engineer

• Founding member of Systems Engineering + Automation team. Pitched CTO in week 1 for roadmap, vision for development path, and built out team to execute the project over Q3-Q4.

2015 - 2018 Arup

Analyst - Advanced Technology + Research

- Expanded collaboration with clients including BIG, Heatherwick, Foster + Partners, Snohetta, ZGF, WeWork.
- Digital fabrication champion, leading first use of additive manufacturing in billable work.
- Finite element analysis in LS-DYNA. Seismic nonlinear time history analysis of complex structures including the implementation of novel material models for concrete and masonry.
- Probabilistic seismic hazard analysis for large portfolios, such as UBC portfolio containing 300+ buildings.
- Automated the structural assessment of large portfolios using Julia, Python and LS-DYNA.

2015 EnergyNest

Consultant - Business Development

- Represented Norwegian innovators' novel cost-leading energy storage technology entering the U.S. market.
- System level design thinking and financial modelling produced a business plan for new application space.

Oakland

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San Francisco

San Francisco

Stanford/Norway

2014 **Arup**

- Collaboration with Bjarke Ingels Group, Heatherwick Studio, Foster and Partners.
- Materials research + curation: Biophilic, biomimetic and bio-based. Novel tensile polymers, carbon fiber.

2013 Beca Ltd

Graduate Structural Engineer

- Demonstrated technical analytical skills at scale through several large seismic assessments, including inspection, and reporting responsibilities. Communicated these technical outcomes in an accessible manner with clients through crafted overview documents supported with detailed reports.
- Highest productivity and profitability team throughout firm.

2011 - 2012 University of Canterbury

Research Assistant

- Assistant to Ph.D. candidate, managing laboratory and practical stages of research.
- Design and procurement for test specimens, prediction of results in FEA and via proposed design methods.
- Self directed in a formal research environment, authoring reports for academia and funding sources.

Research Intern

- Applied for and won grant funding for private transportation modelling research project.
- Responsible for project from problem statement to conclusion. Managed research schedule and deliverables.

Research + Publications

- 2015 Stanford ARPA-E Energy Behaviour Initiative: Funded research position, Product lead, research and design
- [Author] Carradine, David, et al. "Study of a high performance timber building: Design, construction and performance." World Conference on Timber Engineering 15 (2012): 19.
- [Acknowledgement, Data Collection] Smith, T., et al. "The Seismic Performance of a Post-tensioned LVL Building During the 2011 Canterbury Earthquake Sequence." 15th World Conf. on Earthquake Engineering, International Association for Earthquake Engineering, Tokyo. 2012.
- [Acknowledgement, Data Collection] Ponzo F.C., et al. "Time-History Response And Damping of a Post-Tensioned timber Building During the Canterbury Seismic Sequence" GNGTS, Gruppo Nazionale di Geofisica della Terra Solida, 2012
- [Acknowledgement, Data Collection] DITOMMASO, Rocco, et al. "Monitoring the Seismic Performance of a Post-Tensioned LVL Building During the 2011 Canterbury Earthquake Sequence." 2012 NZSEE Conference, Christchurch, NZ. 2012. EACS 2012 5 th European Conference on Structural Control, Genoa. 2012.
- [Acknowledgement, Data Collection] Smith, Tobias, et al. "Seismic performance of a post-tensioned LVL building subjected to the Canterbury earthquake sequence." NZSEE Annual Technical Conference & AGM. 2012.
- 2011: NZ Innovation Agency Grant: Private industry partnership programme, applied for and won transportation modelling research project.

San Francisco

Auckland, New Zealand

Christchurch, New Zealand

Christchurch, New Zealand

Traffic Design Group Ltd

2011