

Aaron Opdyke PhD, CPEng, PE, NER, APEC Engineer, IntPE(Aus), LEED AP BD+C

Senior Lecturer in Humanitarian Engineering

M +61 438.369.371

School of Civil Engineering

T+61 2.8627.9049

Faculty of Engineering

E aaron.opdyke@sydney.edu.au

The University of Sydney

W sydney.edu.au/engineering/people/aaron.opdyke

W humanitarianfrontierslab.org

ACADEMIC BACKGROUND

University of Colorado Boulder | Hinono'eiteen Boulder, USA

2017 PhD Civil Engineering w/ emphasis in Construction Engineering and Management

2015 MS Civil Engineering w/ emphasis in Construction Engineering and Management

2015 Certificate in College Teaching

2015 Certificate in Engineering for Developing Communities

California Polytechnic State University San Luis Obispo | Tihini San Luis Obispo, USA

2013 BS Civil Engineering w/ Honors

ACADEMIC APPOINTMENTS

The University of Sydney | Gadigal Sydney, Australia

School of Civil Engineering | Faculty of Engineering

Senior Lecturer in Humanitarian Engineering (January 2023 – Current)

Lecturer in Humanitarian Engineering (June 2018 – December 2022)

Waipapa Taumata Rau / The University of Auckland | Waipapa Auckland, Aotearoa New Zealand

Te Kura Mātai Taiao / School of Environment | Ko te whare Pūtaiao / Faculty of Science

Visiting Scholar (September – December 2023)

University of Twente | Enschede, The Netherlands

Department of Applied Earth Sciences | Faculty of Geo-Information Science and Earth Observation

Visiting Scholar (July – September 2023)

PROFESSIONAL EMPLOYMENT

Project Concern International | Nacotchtank Washington, DC, USA (Remote)

Humanitarian Assistance Consultant (January – May 2018)

United States Peace Corps Response | Leyte, Philippines

Disaster Risk Reduction and Management Program Officer (September 2017 – April 2018)

Build Change | Eastern Samar, Philippines

Engineer (May – July 2014)

PROFESSIONAL REGISTRATIONS

- Chartered Professional Engineer [CPEng], #5918603 – Engineers Australia
- Professional Engineer [PE], #87339 – California Board for Professional Engineers, Land Surveyors, and Geologists
- National Engineering Register [NER] – Engineers Australia
- APEC Engineer – Asia-Pacific Economic Cooperation
- International Professional Engineer [IntPE(Aus)] – International Professional Engineers Agreement (IPEA)
- LEED Accredited Professional, Building Design and Construction [LEED AP BD+C], #11030068 – United States Green Building Council
- Safety Assessment Program (SAP) Evaluator and Coordinator – California Office of Emergency Management (CalOES)

- Remote Pilot License [RePL] and Aeronautical Radio Operator Certificate [AROC], #1083090
– Australian Civil Aviation Safety Authority
- RedR Australia Humanitarian Roster

AWARDS AND HONOURS

- Dean’s Award for Outstanding Research and Teaching by an Early Career Academic (2022)
- Supervisor of the Year, Sydney University Postgraduate Representative Association (2022)
- Citation for Outstanding Early Career Contributions to Engineering Education, Australasian Association for Engineering Education (2021)
- New Face of Civil Engineering, American Society of Civil Engineers (2021)
- Dean’s Award for Teaching Innovation (2020)
- Best Paper, Information and Research for Post-Disaster Reconstruction (i-Rec) Conference (2019)
- Best Paper, Engineering Project Organization Conference (2016)
- USAID Humanitarian Shelter and Settlements Fellow (2016)

REFEREED JOURNAL ARTICLES

Underline indicates student advisee.

- [J30] **Opdyke, A.**, Bodo, D.D., and Smyth, J. (2024) “Higher Ground or into Harm’s Way? Household Storm Surge Sheltering and Evacuation Plans.” *International Journal of Disaster Risk Reduction*. 106, 104452. doi: 10.1016/j.ijdr.2024.104452
- [J29] Reza, N., **Opdyke, A.**, and Ochai, C. (2024) “Disrupted Sense of Place and Infrastructure Reconstruction after the 2011 Great East Japan Earthquake and Tsunami.” *Progress in Disaster Science*. 22, 100322. doi: 10.1016/j.pdisas.2024.100322
- [J28] **Opdyke, A.** and Fatima, K. (2024) “Comparing the Suitability of Global Gridded Population Datasets for Local Landslide Risk Assessments.” *Natural Hazards*. 120(3), 2415–2432. doi: 10.1007/s11069-023-06283-5
- [J27] Skwarko, T., He, I., Cross, S., **Opdyke, A.**, Handayani, T., Kendall, J., Hapsoro, A., and McDonald, G., and Idris, Y. (2024) “The Long-Term Impact of Humanitarian Housing Interventions following the 2010 Merapi Eruption.” *International Journal of Disaster Risk Reduction*. 100, 104076. doi: 10.1016/j.ijdr.2023.104076
- [J26] Taylor, J., Poleacovschi, C., **Opdyke, A.**, and Cetin, K. (2024) “Leveraging Inter-Organizational Coordination Networks for Housing Climate Change Adaptation across Rural Alaska.” *Sustainable and Resilient Infrastructure*. 9(1), 16-31. doi: 10.1080/23789689.2023.2232580
- [J25] Hadlos, A., **Opdyke, A.**, and Hadigheh, A. (2023) “Deriving Expert-Driven Seismic and Wind Fragility Functions for Non-Engineered Residential Typologies in Batanes, Philippines.” *Scientific Reports*. 13, 22008. doi:10.1038/s41598-023-49398-2
- [J24] Alac, R., Hammad, A.M.A., Hadigheh, A., **Opdyke, A.** (2023) “Optimising Egress Location in School Buildings Using Mathematical Modelling and Agent-Based Simulation.” *Safety Science*. 167, 106265. doi: 10.1016/j.ssci.2023.106265
- [J23] Nabong, E., Hocking, L., **Opdyke, A.**, and Walters, J. (2023) “Decision-Making Factor Interactions Influencing Climate Migration: A Systems-Based Systematic Review” *WIREs Climate Change*. 14(4), e828. doi: 10.1002/wcc828
- [J22] Healey, S., Lloyd, S., Gray, J., and **Opdyke, A.** (2023) “Does Safer Housing Save Lives? An Analysis of Typhoon Mortality and Dwellings in the Philippines.” *International Journal of Disaster Risk Reduction*. 84, 103433. doi: 10.1016/j.ijdr.2022.103433
- [J21] Nabong, E. and **Opdyke, A.** (2023) “Promoting Migration as Adaptation to Climate Change: Addressing Mobility Barriers.” *Development in Practice*. 33(1), 128-132. doi: 10.1080/09614524.2022.2043829

- [J20] Nabong, E., **Opdyke, A.**, and Walters, J. (2022) “Identifying Leverage Points in Climate Change Migration Systems through Expert Mental Models.” *Climatic Change*. 175(3-4), 12. doi: 10.1007/s10584-022-03468-y
- [J19] Hadlos, A., **Opdyke, A.**, and Hadigheh, A. (2022) “Where Does Local and Indigenous Knowledge in Disaster Risk Reduction Go from Here? A Systematic Literature Review.” *International Journal of Disaster Risk Reduction*. 79, 103160. doi: 10.1016/j.ijdr.2022.103160
- [J18] Lloyd, S., Gray, J., Healey, S., and **Opdyke, A.** (2022) “Social Vulnerability to Natural Hazards in the Philippines.” *International Journal of Disaster Risk Reduction*. 79, 103103. doi: 10.1016/j.ijdr.2022.103103
- [J17] **Opdyke, A.**, Chiang, D., Tsang, A., and Smyth, J. (2022) “Benchmarking Household Storm Surge Risk Perceptions to Scientific Models in the Philippines.” *Natural Hazards*. 114(2), 1285-1305. doi: 10.1007/s11069-022-05425-5
- [J16] Gray, J., Lloyd, S., Healey, S., and **Opdyke, A.** (2022) “Urban and Rural Patterns of Typhoon Mortality in the Philippines” *Progress in Disaster Science*. 14, 100234. doi: 10.1016/j.pdisas.2022.100234
- [J15] Hendriks, E. and **Opdyke, A.** (2022) “The Influence of Technical Assistance and Funding on Perceptions of Post-Disaster Housing Safety after the 2015 Gorkha Earthquakes in Nepal.” *International Journal of Disaster Risk Reduction*. 73, 102906. doi: 10.1016/j.ijdr.2022.102906
- [J14] Healey, S., Lloyd, S., Gray, J., and **Opdyke, A.** (2022) “A Census-Based Housing Vulnerability Index for Typhoon Hazards in the Philippines.” *Progress in Disaster Science*. 13, 100211. doi: 10.1016/j.pdisas.2021.100211
- [J13] **Opdyke, A.** and Wang, Z. (2021) “Prioritising Build Back Safer Messaging for Humanitarian Shelter.” *International Journal of Disaster Risk Reduction*. 64, 102475. doi: 10.1016/j.ijdr.2021.102475.
- [J12] Hendriks, E. and **Opdyke, A.** (2021) “Adoption of Seismic Resistant Techniques in Reconstructed Housing in the Aftermath of Nepal’s 2015 Gorkha Earthquake.” *Earthquake Spectra*. 37(4), 2662-2686. doi: 10.1177/87552930211009530
- [J11] Mastroianni, E., Lancaster, J., Korkmann, B., **Opdyke, A.**, and Beitelmal, W. (2021) “Mitigating Infrastructure Disaster Losses Through Asset Management Practices in the Middle East and North Africa Region.” *International Journal of Disaster Risk Reduction*. 53, 102011. doi: 10.1016/j.ijdr.2020.102011
- [J10] **Opdyke, A.**, Goldwyn, B., and Javernick-Will, A. (2021). “Defining a Humanitarian Shelter and Settlements Research Agenda.” *International Journal of Disaster Risk Reduction*. 52, 101950. doi: 10.1016/j.ijdr.2020.101950
- [J9] Hendriks, E. and **Opdyke, A.** (2020) “Knowledge Adoption in Post-Disaster Housing Self-Recovery.” *Disaster Prevention and Management*. 29(6), 849-864. doi: 10.1108/DPM-01-2020-0025
- [J8] See, L.S., Calo, L., Bannon, B., and **Opdyke, A.** (2020) “An Open Data Approach to Mapping Urban Drainage Infrastructure in Developing Communities.” *Water*. 12(7), 1880. doi:10.3390/w12071880
- [J7] **Opdyke, A.**, Javernick-Will, A., and Koschmann, M. (2019) “Assessing the Impact of Household Participation on Satisfaction and Safe Design in Humanitarian Shelter Projects.” *Disasters*. 43(4), 926-953. doi: 10.1111/disa.12405
- [J6] **Opdyke, A.**, Javernick-Will, A., and Koschmann, M. (2018) “A Comparative Analysis of Coordination, Participation, and Training in Post-Disaster Shelter Projects.” *Sustainability*. 10(11), 4241. doi: 10.3390/su10114241

- [J5] **Opdyke, A.**, Javernick-Will, A., and Koschmann, M. (2018) “Household Construction Knowledge Acquisition in Humanitarian Shelter Projects.” *International Journal of Disaster Risk Reduction*. 28, 131-139. doi: 10.1016/j.ijdr.2018.02.038
- [J4] **Opdyke, A.**, Lepropre, F., Javernick-Will, A., and Koschmann, M. (2017) “Inter-Organizational Resource Coordination in Post-Disaster Infrastructure Recovery.” *Construction Management and Economics*. 35(8-9), 514-530. doi: 10.1080/01446193.2016.1247973
- [J3] Koschmann, M., Kopczynski, J., **Opdyke, A.**, and Javernick-Will, A. (2017) “Constructing Authority in Disaster Relief Coordination.” *Electronic Journal of Communication*. 29(1-2).
- [J2] **Opdyke, A.**, Javernick-Will, A., and Koschmann, M. (2017) “Infrastructure Hazard Resilience Trends: An Analysis of 25 Years of Research.” *Natural Hazards*. 87(2), 773-789. doi: 10.1007/s11069-017-2792-8
- [J1] Zerio, A., **Opdyke, A.**, and Javernick-Will, A. (2016) “Characterizing Post-Disaster Reconstruction Training Methods and Learning Styles.” *Engineering Project Organization Journal*. 6(2-4), 142-154. doi: 10.1080/21573727.2016.1257484

REFEREED JOURNAL ARTICLES (UNDER REVIEW)

- [JX] Lin, S. and **Opdyke, A.** “University Student Flood Risk Perceptions and Flood Probability Knowledge in Greater Sydney.” *Natural Hazards*.
- [JX] Besarra, I., **Opdyke, A.**, Aquino, D.H., Santiago, J., and Mendoza, J., Lagmay, A.M.F.A. “Residential Building Flood Fragility and Vulnerability Curves for the Province of Leyte, Philippines.” *Journal of Flood Risk Management*.
- [JX] **Opdyke, A.** and Hickman, J. “Post-Disaster Renting and Hosting in Urban Environments: Global to Local Humanitarian Shelter Challenges.” *Habitat International*.
- [JX] Hadlos, A., **Opdyke, A.**, Hadigheh, A., and Gato, C. “Pathways of Multi-Hazard Post-Disaster Housing Reconstruction among Ivatan Indigenous Households.” *Journal of Building Engineering*.
- [JX] Latham, Z., Barrett-Lennard, G., and **Opdyke, A.** “Archetypes of Local Governance for Flood Risk Reduction Decision-Making Under Uncertain Climate Change Futures.” *Sustainable Cities and Society*.
- [JX] See, S., **Opdyke, A.**, and Banki, S. “A Review of the Climate Change-Disaster-Conflict Nexus and Humanitarian Framing of Complex Displacement Contexts.” *Climate and Development*.
- [JX] Muir, G. and **Opdyke, A.** “Deconstructing Disaster Risk Creation Discourses.” *International Journal of Disaster Risk Reduction*.
- [JX] Alac, R., Hammad, A., Hadigheh, A., **Opdyke, A.** “A Stochastic Bilevel Programming Problem for Safe Evacuation and Protection of Public Buildings.” *Reliability Engineering & System Safety*.
- [JX] Nabong, E. and **Opdyke, A.** “Designing Serious Games to Advance Climate Change Adaptation.” *Environmental Research Communications*.

BOOKS (IN PRESS)

- [B1] **Opdyke, A.** and de Rivera, L.P (Eds) *Inclusive and Integrated Disaster Risk Reduction*. Springer.

EDITORIALS

- [E1] **Opdyke, A.** Guest Editorial. *Journal of Humanitarian Engineering*. 9(1). doi: 10.36479/jhe.v9i1.216

REFEREED CONFERENCE PROCEEDINGS

- [C12] Alfian, D., Meilianda, E., Ahmad, A., Syukri, M., and **Opdyke, A.** (2024) “Application of Spatial Model the Contribution of Land Subsidence Caused by Palm Oil Plantations Land Clearing to the Escalating Flood Risk in the Trumon Area, South Aceh Regency, Indonesia.”

- Aceh International Symposium on Civil Engineering*. Banda Aceh, Indonesia. October 2023. doi: 10.1051/e3sconf/202447601056
- [C11] Alfian, D., Meilianda, E., Ahmad, A., Syukri, M., and **Opdyke, A.** (2023) “Flood Simulation to Determine Flood Hazard Susceptibility of Downstream Singkil Watershed in Aceh Province” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Yogyakarta, Indonesia. October 2023. doi: 10.1051/e3sconf/202344701007
- [C10] **Opdyke, A.** and Warren, I. (2021) “Service-Learning Remotely: Lessons from Delivery in Humanitarian Engineering During the COVID-19 Pandemic.” *Australasian Association for Engineering Education Conference*. Perth, WA, Australia, December 2021.
- [C9] Hadigheh, A., Vulic, J., Burrige, M., Goldfinch, T., Thomas, J. and **Opdyke, A.** (2019) “Preliminary Evaluation of Immersive and Collaborative Virtual Labs in a Structural Engineering Unit of Study.” *Australasian Association for Engineering Education Conference*. Brisbane, QLD, Australia, December 2019.
- [C8] Goldwyn, B., **Opdyke, A.**, and Javernick-Will, A. (2019) “Humanitarian Shelter and Settlements Research Priorities.” *Engineering Project Organization Conference*. Vail, CO, USA, June 2019.
- [C7] Venable, C., **Opdyke, A.**, Javernick-Will, A., and Liel, A. (2018) “Community Participation in Post-Disaster Shelter Programs: Examining the Evolution of Participation in Planning, Design, and Construction.” *Construction Research Congress*, New Orleans, LA, USA, April 2018. doi: 10.1061/9780784481295.023
- [C6] **Opdyke, A.**, Javernick-Will, A., Koschmann, M., and Moench, H. (2016) “Characterizing Post-Disaster Shelter Design and Material Selection: Lessons from Typhoon Yolanda in the Philippines.” *Construction Research Congress*, San Juan, Puerto Rico, USA, June 2016. doi: 10.1061/9780784479827.148
- [C5] **Opdyke, A.**, Javernick-Will, A., Koschmann, M., and Moench, H. (2016) “A Constitutive Communication Lens of Stakeholder Participation in Post-Disaster Recovery.” *Engineering Project Organization Conference*, Cle Elum, WA, USA, June 2016. ***Awarded Best Paper***
- [C4] Zerio, A., **Opdyke, A.**, and Javernick-Will, A. (2016) “Post-Disaster Reconstruction Training Effectiveness.” *Engineering Project Organization Conference*, Cle Elum, WA, USA, June 2016.
- [C3] **Opdyke, A.**, Javernick-Will, A., Koschmann, M., and Moench, H. (2015) “Emergent Coordination Practice in Post-Disaster Planning of Infrastructure Systems.” *Engineering Project Organization Conference*, Edinburgh, UK, June 2015.
- [C2] **Opdyke, A.** and Javernick-Will, A. (2014) “Building Coordination Capacity: Post-Disaster Organizational Twitter Networks.” *Institute of Electrical and Electronics Engineers Global Humanitarian Technology Conference*, San Jose, CA, USA, October 2014. doi: 10.1109/GHTC.2014.6970265
- [C1] **Opdyke, A.** and Javernick-Will, A. (2014) “Resilient and Sustainable Infrastructure Systems: The Role of Coordination, Stakeholder Participation, and Training in Post-Disaster Construction.” *Engineering Project Organization Conference*, Granby, CO, USA, July 2014

REFEREED CONFERENCE PROCEEDINGS (IN PRESS)

- [CX] Nabong, E., Verder, K., Mars, A., and **Opdyke, A.** “Using Agent-Based Modelling to Identify Areas of Displacement Stress Post-Typhoons.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022.
- [CX] Hadlos, A., **Opdyke, A.**, and Hadigheh, A. “Development of a Survey Tool for Multi-Hazard Housing Safety of Non-Engineered Construction” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022.

REFEREED CONFERENCE PROCEEDINGS (ACCEPTED)

- [CX] Nabong, E., Walters, J., and **Opdyke, A.** “Maintaining and Improving Habitability in the Pacific.” *International System Dynamics Conference*. Bergen, Germany. August 2024.

REPORTS AND REPORT CHAPTERS

- [R6] Babister, L., **Opdyke, A.**, Hadlos, A., Parrack, C., and Flinn, B. (2023) “Constructive Ambiguity: Supporting Recovery from Humanitarian Crises” *Shelter Projects 9th Edition*.
- [R5] Nabong, E., **Opdyke, A.**, Alinsunurin, M.K., Merrill, S., McDonald, G., Jensen, P. (2021) “Exploring the Role of Shelter and Livelihoods Recovery.” *Roadmap for Research: A Collaborative Research Framework for Humanitarian Shelter and Settlements Assistance*. Twigg, J. and Babister, L. (Eds.), 97-104. *InterAction*.
- [R4] Crété, E., Hosta, J., Hendriks, E., **Opdyke, A.**, Yadav, S., Rakotnirina, M., Moles, O., Maskey, P.M., Guragain, R., Joshi, L., Sieffert, Y., Garnier, P., Flinn, B. (2021) “Incorporating Local Building Practices in Response.” *Roadmap for Research: A Collaborative Research Framework for Humanitarian Shelter and Settlements Assistance*. Twigg, J. and Babister, L. (Eds.), 129-136. *InterAction*.
- [R3] Keogh, R., Birzer, C., Brown, N., Cheng, E., Machado, M., Newman, C., **Opdyke, A.**, Smith, J., Stoakley, A., Turner, J. (2020) “Humanitarian Engineering in Australia & New Zealand: Past, Present, and a Way Forward.” Burleson, G. (Ed.), *Engineering for Change*.
- [R2] **Opdyke, A.**, Dalgado, D., and Maynard, V. (2017) “Overview of Typhoon Haiyan.” *Shelter Projects 2015-2016*. A. Piccioli, J. Ashmore, K. Kosareff, and J. Mamo, eds., *International Organization for Migration (IOM)*, 32-35. ISBN: 978-92-9068-736-8
- [R1] **Opdyke, A.**, Javernick-Will, A., and Koschmann, M. (2017) “Typhoon Haiyan: Shelter Case Studies.” *Mortenson Center in Engineering for Developing Communities, University of Colorado Boulder*.

EXTERNAL BLOGS AND COMMENTARY

- [E6] **Opdyke, A.** “[Secondary crises after the Turkey-Syria earthquakes are now the greatest threat to life.](#)” *The Conversation*. February 2023. (also available in [Indonesian](#))
- [E5] Dibley, T., **Opdyke, A.**, Howard, A., and Pertiwi, P. P. “[Why involving people with disability in preparing for disasters leads to better outcomes.](#)” *The Conversation*. September 2021. (also available in [Indonesian](#))
- [E4] **Opdyke, A.** and Bodo, D. “[Lessons from Mainstreaming Disaster Risk Reduction in the Education Sector from the Philippines.](#)” *PreventionWeb, UNDRR International Disaster Reduction Day*. October 2017.
- [E3] **Opdyke, A.**, Tabo, P., and Javernick-Will, A. “[Urban Sheltering: Evidence on Hosting and Rental Support.](#)” *Overseas Development Institute Humanitarian Practice Network*. January 2017.
- [E2] **Opdyke, A.** and Javernick-Will, A. “[Re-Envisioning Evacuation: Reducing Mortality Through Social Development and Community Sheltering.](#)” *PreventionWeb, UNDRR International Disaster Reduction Day*. September 2016.
- [E1] **Opdyke, A.** and Javernick-Will, A. “[Co-Creating Knowledge of Resilience Principles through Local Stories.](#)” *PreventionWeb, UNDRR International Disaster Reduction Day*. October 2015.

CONFERENCE PRESENTATIONS

Presented as a talk or abstract without refereed paper. Presentations with accompanying refereed papers are listed above separately.

- [CP50] Muir, G. and **Opdyke, A.** “Uncovering the Factors Contributing to Disaster Risk Creation.” *Association for Pacific Rim Universities (APRU) Multi-Hazards Symposium*. Singapore. November 2023.

- [CP49] Besarra, I., **Opdyke, A.**, Santiago, J., Mendoza, J., Delmendo, P., Evangelista, D., Lagmay, M., and Webber, S., “Climate Change-Induced Flood Risk Scenarios for Residential Buildings in the Philippines. *Association for Pacific Rim Universities (APRU) Multi-Hazards Symposium*. Singapore. November 2023
- [CP48] See, S., **Opdyke, A.**, and Banki, S. “Understanding Humanitarian Responses to Complex Displacement Situations in the Context of Climate Change.” *IHSA Conference on Humanitarian Studies*. Dhaka, Bangladesh. November 2023.
- [CP47] **Opdyke, A.** “Modelling Vulnerability to Build Safer Infrastructure and Communities.” (**Keynote Presentation**) *Aceh International Symposium on Civil Engineering*. Banda Aceh, Indonesia. October 2023.
- [CP46] Muir, G. and **Opdyke, A.** “Uncovering Patterns of Risk Creation in Settlement Planning and Design to Inform Resilient Adaptation Strategies.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Yogyakarta, Indonesia. October 2023.
- [CP45] Nabong, E., Barrett-Lennard, G., Latham, Z., **Opdyke, A.** “Using Serious Games to Advance Understanding of Climate Change Impacts.” *i-Rec Conference*. Sendai, Japan. June 2023.
- [CP44] **Opdyke, A.**, Hadlos, A., Babister, L., Parrack, C., and Flinn, B. “Identifying Barriers from Relief to Recovery in Humanitarian Shelter and Settlements Programming.” *i-Rec Conference*. Sendai, Japan. June 2023.
- [CP43] Hadlos, A., **Opdyke, A.**, and Hadigheh, A. “Deriving Expert-Driven, Multi-Hazard Fragility Curves for Non-Engineered Residential Typologies.” *i-Rec Conference*. Sendai, Japan. June 2023.
- [CP42] Besarra, I., **Opdyke, A.**, Webber, S., Santiago, J., Mendoza, J., Delmendo, P., Evangelista, D., and Lagmay, M. “Modelling Flood Risk Patterns Under Climate Change in the Philippines.” *i-Rec Conference*. Sendai, Japan. June 2023.
- [CP41] Babister, L., **Opdyke, A.**, Parrack, C., Flinn, B., and Hadlos, A. “Negotiating the Space to Move from Relief to Recovery.” *UK Shelter Forum*. London, UK, May 2023.
- [CP40] Naderpajouh, N., **Opdyke, A.**, and Morgan, S. “Community Risk Assessment.” *Natural Hazard Research Forum*. Melbourne, Australia. May 2023.
- [CP39] Hadlos, A., **Opdyke, A.**, Babister, L., Parrack, C., and Flinn, B. “Moving from Relief to Recovery.” *Asia Shelter Forum*. Dhaka, Bangladesh. November 2022.
- [CP38] **Opdyke, A.** “Participatory Technologies as a Catalyst to Reduce Disaster Risk.” (**Keynote Presentation**) *Association for Pacific Rim Universities (APRU) Multi-Hazards Symposium*. Bangkok, Thailand. November 2022.
- [CP37] Alfian, D., Meilianda, E., and **Opdyke, A.** “The Role of Land Subsidence Induced by Palm Oil Plantation Land Clearing to Escalating Flood Disaster Events at Trumon Area, South Aceh Regency of Indonesia” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022.
- [CP36] Besarra, I., **Opdyke, A.**, Santiago, J., Lagmay, M., and Mendoza, J. “Developing Flood Vulnerability Curves for Leyte, Philippines.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022.
- [CP35] Meilianda, E., Alfian, D., and **Opdyke, A.** “Overview of Spatiotemporal Dynamics of Coastal Residential Areas Affected by Tsunami, Co-seismic Land Subsidence, and River Flood at Aceh Singkil Regency of Indonesia.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022.
- [CP34] Costantino, S., Reza, N., Ha, E., and **Opdyke, A.** The ‘Tsunagari’ to Recovery: Social Capital and Place in Facilitating Infrastructure Reconstruction after the 2011 Tōhoku Earthquake and Tsunami.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022. ***Awarded Best Student Presentation***

- [CP33] Caro, R., Costanzo, J., Sheth, P., and Opdyke, A. “Development of an Indicator Approach for Measuring Building Flood Vulnerability in Data-Scarce Regions of the Philippines: A Case Study in Carigara, Leyte.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sydney, Australia. September 2022.
- [CP32] Nabong, E., Opdyke, A., and Walters, J. “Climate Migration System Causal Loop Diagramming using the Mental Models of Experts.” *International System Dynamics Conference*. Frankfurt, Germany, July 2022.
- [CP31] Smith, J., Daniel, S., Opdyke, A., and Dansie, A. “Humanitarian Engineering - Weaving Engineering and Development for Impact.” *Development Studies Association of Australia Conference*. Sydney, Australia, July 2022.
- [CP30] Opdyke, A. “Cash and Shelter: What do We (Not) Know?” *Asia-Pacific Housing Forum*. Bangkok, Thailand, December 2021.
- [CP29] Taylor, J., Opdyke, A., Matous, P., Poleacovschi, C., Hobson, E., Stump, O., Ferguson, A. (2021) “Climate Change Adaptation in Indigenous Housing: A Case Study of Bourke, NSW.” *Climate Smart Engineering Conference*. Sydney, Australia, November 2021.
- [CP28] Skwarko, T., He, I., Cross, S., Opdyke, A., Kendall, J., Hapsoro, A., Hadayani, T., Idris, Y., and McDonald, G. (2021) “The Long Game: Tools for Evaluating Housing Recovery Following the 2010 Merapi Eruption.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Banda Aceh, Indonesia. November 2021.
- [CP27] Nabong, E. and Opdyke, A. (2021) “A Systematic Review of Climate Change and Migration Decision Factors in the Philippines.” *Sydney Southeast Asia Centre Emerging Scholars Conference*. Sydney, Australia, July 2021.
- [CP26] Llyod, S., Gray, J., Healey, S., and Opdyke, A. (2021) “Understanding and Mapping the Spatial Variability of Social Vulnerability in the Philippines.” *Disaster Resilience and Sustainable Development Symposium*. Bangkok, Thailand, June 2021. **(Invited paper and published in Progress in Disaster Science)**
- [CP25] Opdyke, A., Pertiwi, D., Aluninurin, M. K., Walters, J. (2021) “Inclusive Development: Ensuring Equitable Benefit and Voice.” **(Keynote Presentation)** *Engineers Without Borders-USA West Coast Conference*, San Luis Obispo, CA, USA, April 2021.
- [CP24] Opdyke, A. (2020) “Confronting Informality in Conflict: Examining the Role of Humanitarian Organisations in Marawi.” *International Conference on Building Resilience*. Bali, Indonesia, January 2020.
- [CP23] Wu, M., Tran, N., Woodley, L., Hendriks, E., and Opdyke, A. (2020) “The Influence of Community Participation, Technical Assistance, and Government Funding on Post Disaster Housing.” *International Conference on Building Resilience*. Bali, Indonesia, January 2020.
- [CP22] Opdyke, A. (2019) “Mobilising Local Knowledge in Local Disaster Risk Reduction Strategies.” *World Bosai Forum*. Sendai, Japan, November 2019.
- [CP21] Opdyke, A. (2019) “Assessing Virtual Reality as an Education Tool for Participatory Coastal Vulnerability Appraisal.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Sendai, Japan, November 2019.
- [CP20] Opdyke, A. and Hilmi, M. (2019) “What Do You Need to Know?: The Role of Research and Evidence in Practice.” *Global Shelter Cluster Annual Meeting*, Geneva, Switzerland, October 2019.
- [CP19] Groves, C., Opdyke, A., Latianara, M., and Vahanvati, M. (2019) “Supporting Shelter Self-Recovery: Challenging Aid Models.” *Australian Council for International Development Conference*. Sydney, NSW, Australia, October 2019.
- [CP18] Opdyke, A., Hodgkin, D., Maea, L., and Shrestha, C.B. (2019) “Humanitarian Shelter Response: Coordinating for Better Recovery.” *Asia-Pacific Housing Forum*. Bangkok, Thailand, September 2019.

- [CP17] Ahmed, M., Chutarat, A., Bahsoon, W., Jalandoni, M., and **Opdyke, A.** (2019) “Window to Appropriate Construction Technologies” *Asia-Pacific Housing Forum*. Bangkok, Thailand, September 2019.
- [CP16] Hendriks, E. and **Opdyke, A.** (2019) “Understanding the Role of Knowledge Sources in Housing Self-Recovery Processes in the Philippines.” *i-Rec Conference*. Gainesville, FL, USA, June 2019. *Awarded Best Paper* (Invited and published in **Disaster Prevention and Management**)
- [CP15] Vahanvati, M. and **Opdyke, A.** (2019) “Reviewing Housing Reconstruction Frameworks: Stages, Scales and Dimensions” *i-Rec Conference*. Gainesville, FL, USA, June 2019.
- [CP14] **Opdyke, A.**, Goldwyn, B. and Javernick-Will, A. (2019) “Identifying and Prioritizing Sectoral Research Evidence Gaps.” (Plenary Session) *InterAction Collaborative Academic-Practitioner Research Forum*. Washington, DC, USA, June 2019.
- [CP13] **Opdyke, A.** (2018) “Examining the Efficacy of Community Participation in Hazard Mapping for Disaster Risk Reduction.” *International Conference on Building Resilience*. Lisbon, Portugal, November 2018.
- [CP12] **Opdyke, A.**, Palagi, S., Venable, C., and Javernick-Will, A. (2018) “Homeowner Expansions and Modifications: Implications of Household Income and Land Tenure for Incremental Shelter.” *International Conference on Building Resilience*. Lisbon, Portugal, November 2018.
- [CP11] **Opdyke, A.**, Thomas, J., Johnson, F., and Bruce, A. (2018) “Moving Beyond Resilience Rhetoric: Urban Infrastructure and Rethinking the Disaster Cycle.” *Urban Resilience Asia Pacific Conference*. Sydney, NSW, Australia, November 2018.
- [CP10] **Opdyke, A.**, Goldwyn, B. and Javernick-Will, A. (2018) “Moving Toward Consensus in Humanitarian Shelter and Settlements Research Priorities.” (Plenary Session) *UK Shelter Forum*. London, UK, November 2018.
- [CP9] **Opdyke, A.** (2018) “Sheltering in Place: Revisiting Opportunities for Post-Disaster Hosting and Rental Subsidies.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Banda Aceh, Indonesia. October 2018.
- [CP8] **Opdyke, A.**, Goldwyn, B. and Javernick-Will, A. (2018) “Defining a Humanitarian Shelter and Settlements Research Agenda.” *Shelter Centre Shelter Meeting*. Geneva, Switzerland, July 2018.
- [CP7] **Opdyke, A.**, Collins, M., and Vicariot, L. (2017) “Assessment, Research, and Technical Issues in the Settlements Approach.” *Stakeholders Conference for Operationalizing the Settlements Approach*. Washington, DC, USA, June 2017.
- [CP 6] **Opdyke, A.** and Javernick-Will, A. (2017) “Participation Pathways to Increased Social Capital in Humanitarian Shelter Projects.” *i-Rec Conference*. June 2017.
- [CP5] Linden, K., Javernick-Will, A., Amadei, B., Klees, K., and Sandekian, R. – presented by **Opdyke, A.** (2016) “Engineering for Developing Communities: Graduate Certificate and Professional MS Programs.” *Engineering Education for Sustainable Development Conference*. Bruges, Belgium, September 2016.
- [CP4] **Opdyke, A.** and Martindale, T. (2016) “Participatory Community Engagement.” *Engineers Without Borders-USA International Summit*. Denver, CO, USA, March 2016.
- [CP3] **Opdyke, A.**, Moench, M., and Bergh, F. (2016) “Applying Resilience in Practice.” *Engineers Without Borders-USA International Summit*. Denver, CO, USA, March 2016.
- [CP2] **Opdyke, A.** (2015) “Participatory Assessment and Implementation Strategies for Projects.” *Engineers Without Borders-USA West Coast Conference*, San Luis Obispo, CA, USA, November 2015.
- [CP1] **Opdyke, A.** (2015) “Engaging with Communities: Achieving Meaningful Participation in Development Projects.” (Plenary Session) *Engineers Without Borders-USA West Coast Conference*, San Luis Obispo, CA, USA, November 2015.

CONFERENCE PRESENTATIONS (ACCEPTED)

- [CPX] See, J., Cuaton, G., **Opdyke, A.**, Alday, S., and Webber, S. “Promises and Perils of Climate Buffer Infrastructure as Adaptation: A Case Study from Tacloban City, Philippines.” *7th Annual Conference of the Association of Pacific Rim Universities – Sustainable Cities and Landscapes and 3rd International Conference on Human Settlements Planning and Development*. Manila, Philippines. August 2024.
- [CPX] Besarra I., **Opdyke A.**, Delmendo P., Mendoza J., Santiago J., Evangelista E., and Lagmay A., Webber, S. “What is the Cost of Climate Change? Examining Flood Risk at the Municipal Scale in the Philippines.” *7th Annual Conference of the Association of Pacific Rim Universities – Sustainable Cities and Landscapes and 3rd International Conference on Human Settlements Planning and Development*. Manila, Philippines. August 2024.

CONFERENCE PRESENTATIONS (SUBMITTED)

- [CPX] Muir, G. and **Opdyke A.** “Methods for Classifying Disaster Risk Creation in Housing Reconstruction Projects.” *Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery*. Banda Aceh, Indonesia. November 2024.

INVITED TALKS

- [T9] **Opdyke, A.** (2024) “Identifying Archetypes of Participatory Flood Risk Governance under Uncertain Climate Futures.” *University of the Philippines Resilience Institute – Resilience Live Webinar Series*. January 2024.
- [T8] **Opdyke, A.** (2023) “Navigating Knowledge Co-Production of Disaster Risk for Resilient Buildings and Communities.” *Joint Centre for Disaster Research, Massey University*. December 2023.
- [T7] **Opdyke, A.** (2023) “Navigating Knowledge Co-Production of Disaster Risk and Climate Change Adaptation.” *The University of Auckland and Auckland University of Technology – Disaster Prevention and Management Seminar Series*, Auckland, New Zealand. November 2023.
- [T6] **Opdyke, A.** (2023) “Navigating Knowledge Co-Production of Disaster Risk for Resilient Buildings.” *QuakeCoRE – New Zealand Centre for Earthquake Resilience*. October 2023.
- [T5] **Opdyke, A.** (2023) “Understanding Housing Vulnerability in the Philippines.” *Environmental Data Journalism Academy for the Philippines*. August 2023.
- [T4] **Opdyke, A.** (2023) “Strengthen Housing Knowledge Systems: Lessons from Post-Disaster Technical Assistance in the Philippines and Nepal.” *QuakeCoRE – New Zealand Centre for Earthquake Resilience*. March 2023.
- [T3] **Opdyke, A.** (2022) “Local and Scientific Knowledge Convergence in Housing Disaster Risk Reduction” *The University of Auckland and Auckland University of Technology – Disaster Prevention and Management Seminar Series*. November 2022.
- [T2] **Opdyke, A.** (2022) “Enabling Safer Housing: Disaster Risk through a Knowledge Lens” *Massey University*. November 2022.
- [T1] Pertiwi, D. and **Opdyke, A.** (2021) “Inclusion and Role of People with Disabilities and Older Persons in Disaster and Humanitarian Response.” *Universitas Gadjah Mada*. April 2021.

RESEARCH POSTERS

- [RP3] Nabong, E., **Opdyke, A.**, and Walters, J. “Modeling Climate Change Impacts on Habitability and Mobility Dynamics in Kiribati.” *Managed Retreat Conference*. New York, United States. July 2023.
- [RP2] Nabong, E. and **Opdyke, A.** “Exploring Our Understanding of Climate Migration through Complex Systems Thinking.” *International System Dynamics Conference*. Frankfurt, Germany, July 2022.

- [RP1] **Nabong, E.** and **Opdyke, A.** (2021) “A Systematic Review of Climate-Induced Migration and Displacement Decision Factors.” *Climate Smart Engineering Conference*. Sydney, Australia, November 2021.

MEDIA AND COVERAGE

- Al Jazeera, [Syria: what’s needed for earthquake recovery?](#), 16 February 2023.
- Discovery Education, [What is a humanitarian engineer?](#), 5 August 2022.
- Al Jazeera, [Progress or folly? Jokowi’s vision for Indonesia’s new capital](#), 21 January 2022
- Radio Tagumpay Triple H 100.1 FM (Sydney), Research Interview, July 5, 2021.
- American Society of Civil Engineers [New Faces of Civil Engineering](#), February 22, 2021.
- Sydney Southeast Asia Centre Stories Podcast, [Disaster Resilience and Humanitarian Response in the Philippines](#), June 25, 2020.
- BBC Radio, [Commentary on relocation of Indonesia’s capital and disaster risk reduction considerations](#) (3:06:20 – 3:12:24), August 27, 2019.
- News.com.au, [‘Very risky’: Expert fears over plans to move traffic-choked, overcrowded city](#), August 17, 2019.
- Disasters Deconstructed Podcast, [i-Rec Conference Live](#) (Season 1, Episode 3), June 17, 2019.
- The Warren Centre, Expert Hour Webinar: Humanitarian Innovation. April 29, 2019.

CONTRACTS AND GRANTS

Opdyke Total: \$1,177,658 AUD (External: \$966,418 AUD)

AUD values listed at exchange rate at time of award if awarded in other currency. Proportion of total award noted after by “Opdyke:” or “USYD”, if subcontracted. Where underlying project funds were from a different organisation, this is noted by “Donor:” if applicable.

- [19] GHD Foundation. “Building Resilience in Developing Countries through Access to Engineering Research Education.” \$349,790. May 2024 – December 2028. Jacqueline Thomas and **Aaron Opdyke**.
- [18] Australian Department of Foreign Affairs and Trade New Colombo Plan Mobility Grant. “Disaster Risk in the Philippines.” 33,000 AUD. January 2024 – December 2025. **Aaron Opdyke**
- [17] Sydney Environment Institute Collaborative Grant. “Promises and Perils of Climate Buffer Infrastructures as Adaptation: Case Studies from the Philippines.” January – December 2024 AUD 20,305. Justin See, Sophie Webber, **Aaron Opdyke**, Sandra Seno Alday, and Ginbert Cuaton.
- [16] Sydney Environment Institute Collaborative Grant. “Places of Refuge amidst Climate Change in Complex Displacement Contexts.” January – December 2023 AUD 40,950. **Aaron Opdyke** and Susan Banki.
- [15] Natural Hazards Research Australia. “Project T3-A3: Community Risk Assessment.” 120,000 AUD. October 2022 – June 2023. Nader Naderpajouh, Mary Crock, Amanda Howard, David Shlosberg, Floris Van Ogtrop, Jodie Bailie, **Aaron Opdyke**, Petr Matous, Hao Zhang, Willem Vervoort, Ali Hadigheh.
- [14] University of Sydney Office of the Deputy Vice Chancellor (Indigenous Strategy and Services). “Understanding Aboriginal Infrastructure Needs: Identifying Research Priorities and Embedding Knowledge in the Engineering Curriculum.” 9,000 AUD. July 2021 – December 2021. **Aaron Opdyke**, Petr Matous.
- [13] Asia-Pacific Network for Global Change Research Collaborative Regional Research Programme. “Advancing Local Flood Decision-Making for Disaster Risk Reduction.” 70,000 USD (94,493 AUD). October 2021 – September 2023. **Aaron Opdyke**, Emily Nabong, Ella Meilianda, Dedy Alfian, Yopi Ilhamsyah, Joy Santiago, Mahar Lagmay, Jerico Mendoza.

- [12] American Council for Voluntary International Action (InterAction). “Roadmap for Research – Humanitarian Shelter and Settlements.” 2,000 USD (2,713 AUD). Donor: United States Agency for International Development Office for U.S. Foreign Disaster Assistance (USAID/OFDA). September 2020 – December 2020. Eugénie Crété, Julien Hosta, Eefje Hendriks Mampionana Rakotnirina, **Aaron Opdyke**, Santosh Yadav, Oliver Moles, Prem Nath Maskey, Lumanti Joshi, Ramesh Guragain, Yannick Sieffert, Philippe Garnier, Bill Flinn.
- [11] American Council for Voluntary International Action (InterAction). “Roadmap for Research – Humanitarian Shelter and Settlements.” 2,000 USD (2,713 AUD). Donor: United States Agency for International Development Office for U.S. Foreign Disaster Assistance (USAID/OFDA). September 2020 – December 2020. **Aaron Opdyke**, Emily Nabong, Scott Merrill, Gregg McDonald, Pia Jensen, Maria Kristina Alinsunurin.
- [10] Office of the Deputy Vice-Chancellor (Indigenous Strategy and Services). “Participatory Research on Community-Led Housing Development in Remote Communities.” 9,500 AUD. January – December 2020. Petr Matous and **Aaron Opdyke**.
- [9] Catholic Relief Services. “Anibong Resettlement End of Project Evaluation.” 51,622 USD (73,528 AUD). Donor: Catholic Relief Services and American Red Cross. November 2019 – July 2020. **Aaron Opdyke**, Yvonne Su, Ladylyn Maganda, Ara Joy Pacoma.
- [8] Faculty of Engineering Early Career Researcher Development Grant. “Transforming Disaster Risk Assessments at the Nexus of Local Knowledge and Engineering Tools.” 50,000 AUD. November 2019 – November 2020. **Aaron Opdyke**.
- [7] Australian Department of Foreign Affairs and Trade New Colombo Plan Mobility Grant. “Disaster Risk Reduction in the Philippines.” 247,500 AUD. October 2019 – June 2023. **Aaron Opdyke**
- [6] Faculty of Engineering Strategic Education Grant. “Towards a Research-Informed Design for Immersive Virtual Reality (IVR) Environments.” 29,518 AUD. March – December 2019. Ali Hadigheh, Jacqueline Thomas, Tom Goldfinch, **Aaron Opdyke**, Ali Nezhad.
- [5] Sydney Southeast Asia Centre Partnership Grant. “Informal Sheltering Practices in the Philippines: Adaptive Urban Resilience Processes.” 49,967 AUD. November 2018 – December 2021. **Aaron Opdyke**, Benigno Balgos, Paul Jones, Acram Latiph, Erlinda Yape.
- [4] Sydney Southeast Asia Centre Conference Grant. 2,000 AUD. November 2018. **Aaron Opdyke**.
- [3] Project Concern International. “The Neighborhood Approach: Establishing Best Practices, Lessons Learned, and Guidelines on Implementation.” 9,000 USD (12,797 AUD). Donor: United States Agency for International Development Office for U.S. Foreign Disaster Assistance (USAID/OFDA). January 2019 – May 2019. Jim DiFrancesca, Laura Jones, **Aaron Opdyke**.
- [2] World Connect. “Participatory Hazard Mapping for Carigara” 4,999 USD (6,556 AUD) December 2017 – April 2018. **Aaron Opdyke**, Daryl Daniel Bodo.
- [1] United States Agency for International Development (USAID). “Humanitarian Shelter and Settlements Fellowship.” 16,900 USD (23,330AUD) June 2016 – December 2016. **Aaron Opdyke**.

CONTRACTS AND GRANTS UNDER REVIEW

AUD values listed at exchange rate at time of application.

- [1] Australian Research Council Linkage Project. “Flood-related displacement: housing pathways, social and health services.” 640,050 AUD. Ross Bailie, M. Rebecca McNaught, Jo Longman, Justin See, Emma Walke, Jodie Bailie, Nicole Gurrán, Marlee Bower, **Aaron Opdyke**, Susan Banki, Anna Boucher, Federico Tartarini, Rosemary Lyster, David Schlosberg, Lani McNeill, Bridget Tehan, Jennifer London.

CONTRACTED TRAINING ACTIVITIES

- [CT2] Government of Bangladesh. “Multipurpose Disaster Shelter Project (MDSP) – Principles of Evacuation Centres” Donor: World Bank. August 2018.
- [CT1] International Organisation for Migration (IOM). “Diaspora for Safer Shelter Construction in the Philippines.” Donor: United States Agency for International Development Office for U.S. Foreign Disaster Assistance (USAID/OFDA). May 2018.

TEACHING**CIVL5320/9320 – Engineering for Sustainable Development**

2024 (S2) – TBC

2023 (S2) – 17 students (4.67/5 overall student evaluation)

2022 (S2) – 18 students (4.67/5 overall student evaluation*)

2021 (S2) – 22 students (4.45/5 overall student evaluation*)

2020 (S2) – 21 students (4.79/5 overall student evaluation*)

2019 (S2) – 11 students (4.61/5 overall student evaluation)

2018 (S2) – 16 students (4.78/5 overall student evaluation*)

CIVL5330 – Global Engineering Fieldwork

2023 (July Intensive), Philippines – 20 students (4.98/5 overall student evaluation)

2022 (July Intensive), Philippines (Remote) – 5 students (4.67/5 overall student evaluation)

2019 (July Intensive), India – 32 students (4.43/5 overall student evaluation* ^{CC})2018 (December Intensive), India – 16 students (4.35/5 overall student evaluation* ^{CC})2018 (July Intensive), Samoa – 23 students (4.68/5 overall student evaluation* ^{CC})*Selected for Faculty of Engineering teaching commendation ^{CC} Co-coordinated unit of study**STUDENT RESEARCH SUPERVISION****Total Completions (Lead Supervisor):** ME/MPE (6), BE (39)**Total in Progress (Lead Supervisor):** PhD (3), MPhil (2), BE (5)**Total Completions (Non-Lead Supervisor):** PhD (1), MPhil (1)

Denotes non-lead supervision role. Expected completions are noted by (*) BE – Bachelor of Engineering, MPE – Master of Professional Engineering; ME – Master of Engineering; MPhil – Master of Philosophy, PhD – Doctor of Philosophy

PhD Students

- [4] Muir, Grace (PhD) 2026* – Uncovering Patterns of Disaster Risk Creation in Settlement Planning and Design to Inform Resilient Adaptation Strategies
- [3] Hadlos, Arvin (PhD) 2024* – Local and Indigenous Knowledge for Disaster Risk Reduction: Analysing Multi-Hazard Housing Reconstruction Strategies in the Philippines
- [2] Nabong, Emily (PhD) 2024* – Mobility Dynamics in Climate Change Affected Settlements
- [1] Alac, Ruken (PhD[#]) 2023 – Enhancing Evacuation Planning in Public Buildings: Optimising Egress Location and Protection

MPhil Students

- [3] See, Lay Shien (MPhil) 2024* – Understanding Humanitarian Responses to Complex Displacement Situations in the Context of Climate Change
- [2] Besarra, Isaac, (MPhil) 2024* – Assessing Climate Change Impacts on Flood Risk in the Philippines
- [1] Valadkhani, Amir (MPhil[#]) 2021 – Dynamic Control and Modelling of Ride-Sourcing Systems in Large Urban Cities”

Masters (with Coursework) Students

- [6] Hickman, Jack (MPE) 2022 – Humanitarian Minimum Living Space Standards in Hosted Urban Environments
- [5] Lin, Shen (MPE) 2022 – University Students’ Understanding of Flood Risk Communication in Sydney
- [4] Jiang, Xinyang (ME) 2021 – Comparing Storm surge Risk Determined by the Depth-Damage Curves Method and the Indicator-Based Approach in the Municipality of Carigara, The Philippines
- [3] Fatima, Khadija (ME) – Comparing the Suitability of Population Datasets for Landslide Risk Estimation
- [2] Nagabhyrava, Servani (ME) 2019 – Finite Element Analysis of Location and Type of Braced Timber Frames Under Wind Loads in Elevated Light-Weight Humanitarian Shelter
- [1] Wang, Zhenwen (MPE) 2019 – Prioritising Key Messages for Humanitarian Shelter

Undergraduate Honours Students

- [44] De Pasquale, Philip (BE) 2024*
- [43] Kamath, Sangeetha (BE) 2024*
- [42] Lynn, Isabella (BE) 2024*
- [41] Tuit, Molly (BE) 2024*
- [40] Hocking, Lauren (BE) 2024*
- [39] Barrett-Lennard, Grace (BE) 2023 – Strengthening Disaster Risk Reduction Governance to Cope with Climate Change Uncertainty
- [38] Latham, Zoe (BE) 2023 – Understanding Local Government Decision-Making for Flood Risk Reduction under Climate Change Uncertainties
- [37] Ekins, Luca (BE) 2023 – Analysing the Influence of Dynamic, Linear, and Stationary Vulnerability Metrics on Hazard Risk Assessment
- [36] Wu, Benjamin (BE) 2023 – A Multi-Hazard Risk Assessment for the MidCoast Council
- [35] Betina, Rowzen (BE) 2022 – Analysing the Physical Flood Vulnerability of Buildings: Case Study of Carigara in Leyte Province of the Philippines
- [34] Sheth, Parin (BE) 2022 – Investigating Community Flood Risk Perceptions and their Impact on Drainage Infrastructure in Carigara, Philippines
- [33] Costanzo, Juliet (BE) 2022 – How is Physical Vulnerability Measured in Respect to Building Damage in Flooding Events? A Case Study using Fragility Curves in Leyte, Philippines
- [32] Douglass, Connor (BE) 2022 – Understanding the Determinants of Economic Damages from Typhoons in the Philippines
- [31] Cruikshank, Claudia (BE) 2022 – Indicators of Typhoon Displacement in the Philippines
- [30] Gallardo-Gallan, Juan (BE) 2022 – Does Housing Aid go to Where it is Most Needed? A Study of Typhoon Rai (Odette)
- [29] Ha, Emily (BE) 2022 – The Extents of the Role of Social Capital in Relation to Long-term Post Disaster Recovery Processes
- [28] Costantino, Sophia (BE) 2022 – Community Participation in Rural Infrastructure and Recovery after the 2011 Tōhoku Earthquake and Tsunami
- [27] Reza, Nanako (BE) 2022 – The role of Infrastructure Reconstruction in Post-Disaster Disrupted Sense of Place
- [26] Gray, Jasmine (BE) 2021 – Understanding Rural and Urban Patterns of Typhoon-Related Mortality in the Philippines
- [25] Lloyd, Sophie (BE) 2021 – A Census-Based Social Vulnerability Index for Typhoon Hazards in the Philippines
- [24] Healey, Sarah (BE) 2021 – The Spatial Distribution of Housing Vulnerability and the Relationship to Typhoon Related Mortality in the Philippines

- [23] Crosby, Dominica (BE) 2021 – Sheltering Pathways for Internally Displaced Persons in The Philippines
- [22] Arudselvan, Vanathy (BE) 2021 – Post-Conflict Housing and Self-Isolation Ability: A Study of Internally Displaced Persons in Marawi, the Philippines During the COVID Pandemic
- [21] Besarra, Isaac (BE) 2021 – Analysing Post-Conflict Housing Pathways for Displaced Communities: Case Study – Marawi Philippines
- [20] He, Ivy (BE) 2021 – The Impact of Housing Assistance on Long-Term Post-Disaster Recovery: A Case Study of the 2010 Mt Merapi Eruption
- [19] Skwarko, Tatiana (BE) 2021 – The Long-Term Impact of Humanitarian Interventions: An Assessment of Assistance following the 2010 Merapi Eruption
- [18] Cross, Sarah (BE) 2021 – Assessing Determinants of Housing Quality for Disaster Risk Reduction: A Case Study of the 2010 Merapi Disaster
- [17] Dunbar, Lachlan (BE) 2020 – Landslides in the Philippines: Comparing Exposure Models and Household Hazard Perceptions in the Municipality of Carigara
- [16] Rovelli, Laura (BE) 2020 – The Role of Community-Based Approaches in Flood Hazard Assessments: A Case Study of the Municipality of Carigara, Philippines
- [15] Johns, Tyler (BE) 2020 – Community Risk Perceptions to Flood in Carigara, Philippines
- [14] Chiang, Desmond (BE) 2020 – Comparing Household Perceptions with Scientific Methods in Estimating Disaster Risk of Storm Surge Hazards in the Philippines
- [13] Smyth, Jacob (BE) 2020 – Do Household Evacuation Plans Minimise Storm Surge Risk?
- [12] Tsang, Anthony (BE) 2020 – How Does Storm Surge Risk Affect the Satisfaction of Barangays in Government Produced Hazard Maps?
- [11] Hobson, Edwina (BE) 2020 – The Implementation of Climate Change Adaptation Strategies Into Remote Indigenous Housing in NSW
- [10] Stump, Oliver (BE) 2020 – Climate Change Adaptation in Aboriginal Social Housing in Rural NSW
- [9] Lancaster, James (BE) 2019 – Mitigating Infrastructure Losses due to Disasters in the Middle East and North Africa (MENA) Region through Asset Management
- [8] Mastroianni, Elyssa (BE) 2019 – Mitigating Infrastructure Losses During Disasters Through Asset Management in The Middle East and North Africa Region
- [7] Korkmann, Benjamin (BE) 2019 – Mitigating Infrastructure Losses from Disasters in the Middle East and North Africa Region Through Asset Management
- [6] Calo, Luke (BE) 2019 – Reducing Flood Risk through an Investigation of Urbanisation and Land Use Changes in the Philippines
- [5] Bannon, Benjamin (BE) 2019 – Reducing Flood Risk through an Investigation of Urbanisation and Land-Use Changes in the Philippines
- [4] See, Lay Shen (BE) 2019 – Investigating the Impacts of Climate Change on Flooding in the Philippines
- [3] Woodley, Lucy (BE) 2019 – The Influence of Participation, Technical Assistance, and Funding on the Safe and Sustainable Reconstruction of Housing Following the 2015 Nepal Earthquake
- [2] Tran, Nha Vy (BE) 2019 – The Influence of Technical Assistance, Participation and Funding on Building Safe and Sustainable Shelters
- [1] Wu, Mei Feng (BE) 2019 – The Influence of Technical Assistance, Participation and Funding on Building Safe and Sustainable Houses

Visiting Scholars

Taylor, Jessica	PhD	Iowa State University	2020
Hendriks, Eefje	PhD	Eindhoven University of Technology	2019

Examiner/External Committee Member

Howard, Ashley	PhD	Universität Internacional de Catalunya	Expected 2027
Siddiq, Ilham	PhD	University of Colorado Boulder	Expected 2024
Hendriks, Eefje	PhD	Eindhoven University of Technology	2020
Palagi, Shaye	PhD	University of Colorado Boulder	2020

Student Awards

- Lauren Hocking (2024), Sydney Environment Institute Honours Research Fellowship (AUD 2,000)
- Arvin Hadlos (2023), 1st Place Warren Centre Humanitarian Innovation Awards Pitch (AUD 1,000)
- Isaac Besarra (2023), 3rd Place Warren Centre Humanitarian Innovation Awards Pitch (AUD 1,000)
- Nanako Reza (2023), JW Roderick Prize for Best Thesis in Civil Engineering
- Emily Nabong (2023), USAID Humanitarian Shelter and Settlements Fellowship (USD 19,000)
- Grace Barrett-Lennard (2023), Sydney Environment Institute Honours Research Fellowship (AUD 2,000)
- Emily Nabong (2022), American Australian Association Graduate Education Fund Scholarship (USD 30,000)
- Sophia Costantino, Nanako Reza, and Emily Ha (2022), Best Student Presentation, Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery (AIWEST-DR 2022)
- Benjamin Bannon (2021), Eleanor Sophia Wood Postgraduate Research Travelling Scholarship (AUD 44,000)

SERVICE ACTIVITIES***University:***

- Higher Degree by Research Examinations Subcommittee (2022 – 2025)
- Philippines Country Coordinator – Sydney Southeast Asia Centre (2019 – present)
- Theme Lead for Projects for Sustainable, Resilient and Just Futures, John Grill Institute for Project Leadership (2024 - present)

Faculty of Engineering:

- Chair – Low Risk Human Research Ethics Committee (2024 – present)
- Humanitarian Engineering Hub Executive Committee (2021 – present)
- Humanitarian Engineering Innovation Awards Committee (2019 – present)
- Research Education Committee (2019 – 2022)

School of Civil Engineering:

- Director of Research Training (2019 – 2022)
- Research Committee (2018 – 2022)
- External Engagement Committee (2018 – 2022)
- Infrastructure and Resources Committee (2018 – 2022)
- Undergraduate and Postgraduate Research Event Coordinator (2018)

Guest Editor:

- Journal of Construction Engineering and Management – Special Issue on *Advances in Sustainability in the Built Environment* (forthcoming 2024)
- Sustainability – Special Issue on Sheltering and Housing Displaced Populations (2021)

Conferences:

- Scientific Committee, 16th Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery (2024)
- Scientific Committee, i-Rec Conference (2023)
- Scientific Committee, 15th Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery (2023)
- Chair, 14th Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery (2022)
- Scientific Committee, 13th Aceh International Workshop and Expo on Sustainable Tsunami Disaster Recovery (2021)

Peer-Reviewer (Journals, listed alphabetically):

ASCE Open, Asia-Pacific Network Science Bulletin; Construction Management and Economics, Disaster Prevention and Management, Earth's Future; Engineering Project Organization Journal; H2Open; Indoor and Built Environment; International Journal for Disaster Risk Reduction; International Journal of Disaster Risk Science; International Journal of Disaster Resilience in the Built Environment; Journal of Construction Engineering and Management; Journal of International Humanitarian Action; Journal of Humanitarian Engineering; Journal of Management in Engineering; Journal of Water Resources Planning and Management; Journal of Water, Sanitation, and Hygiene for Development; Natural Hazards Review; Nature Climate Change; One Earth; Science of the Total Environment; Scientific Reports; SN Applied Sciences; Sustainable and Resilient Infrastructure; Sustainable Cities and Society

Peer-Reviewer (Standards):

- Sphere Handbook (2018 Edition) – Minimum Standards for Shelter, Settlement, and Non-Food Items

Peer-Reviewer (Reports):

- United Nations Office of Disaster Risk Reduction Global Assessment Report Contributing Papers (2021)

Peer-Reviewer (Funding Agencies):

- Asia-Pacific Network for Global Change Research (2019, 2022)
- UK Economic and Social Research Council (2019)

Engineers Australia Accreditation:

- Discipline Expert (Civil/Humanitarian) – Central Queensland University Review (2021)

Committee Participation:

- Australian Council for International Development (ACFID) Urban Community of Practice (2018 – Present)
- Humanitarian Engineering Network Australasia (2018 – Present)
- Global Shelter Cluster Recovery Community of Practice (2017 – Present)
- InterAction Humanitarian Shelter and Settlements Working Group (2016 – Present)

Professional Societies:

- Member, Engineers Australia (2018 – Present)
- Member, Australasian Association for Engineering Education (2019 – Present)
- Member, RedR Australia (2018 – Present)
- Member, Research for Development Impact Network (2018 – Present)
- Member, American Society of Civil Engineers (2009 – Present)

TRAINING AND PROFESSIONAL DEVELOPMENT

- Hostile Environment Awareness Training (HEAT), RedR Australia (November 2022)
- Essentials of Humanitarian Practice (EHP), RedR Australia (January 2023)
- HLTAID009: Provide CPR (8 February 2023)
- HLTAID011: Provide First Aid (8 February 2023)

LANGUAGES

- English – Native (C2)
- Spanish – Beginner (A1)
- Waray (Philippines) – Beginner (A1)