



Humanitarian Engineering Community of Practice

HumEng Update

News from Engineers Australia's
Humanitarian Engineering Community of Practice

Welcome to our November 2020 update

A special welcome to the group of new members who have joined us since our last newsletter. At the time of publication membership stands at 103.

In spite of the restrictions imposed by COVID-19, the community has again been very active, participating in various "virtual" events, and preparing for presentation of webinars in October and November. Check our website for details of these events.

Our discussion forums and BOK have also been busy, with numerous additions, views and comments.

Your participation is important

The value of the Community of Practice continues to be in the active participation of its members. We encourage you to participate (via the web portal) in the discussion forums, to add to the Body of Knowledge (BOK), and to participate in webinars and other events.

You may also contact us at humeng@engineersaustralia.org.au

We hope you will enjoy and benefit from membership of and participation in HECOP, and look forward to your participation in future webinars.

You will be notified separately about any forthcoming webinar content and registration details.

Recent activity

Key matters discussed at our recent Steering Committee meeting were:

Preparations for our webinar on November 26 – "Engaging with Humanitarian Engineering".

Sharing via the Community website of recordings from events conducted by related bodies, including UNSW and EWB Qld.

Progress towards the goal of "Professionalising HumEng"

Development of an inventory of expertise/research, available via the CoP website

Priorities for development of the Humanitarian Engineering Body of Knowledge.

Arrangement for formalisation of the status of the Community of Practice as an Engineers Australia entity, including the conduct of our first Annual general Meeting.

Join our community:



humeng.engineersaustralia.org.au



humeng@engineersaustralia.org.au



Jeremy Smith
BIT/BE(Hons), MPhil, Grad
Cert, PhD, SFHEA, FIEAust

Meet the team

With each issue of the newsletter we will introduce a member of the HECOP team and pose some questions which we hope will help others in their humanitarian endeavours.

In this issue we are featuring the Secretary of the Community of Practice, **Jeremy Smith** BIT/BE(Hons), MPhil, Grad Cert, PhD, SFHEA, FIEAust

How did you get into Humanitarian Engineering?

My engineering background is in systems engineering, applied in the automotive and aerospace sectors, so I did not initially think that would have any relevance for development or humanitarian work. Only after attending the first EWB Australia conference in 2005 did I realise that the way I viewed my engineering was limiting, assuming it was only for large-scale manufacturing. Once I started to explore, many of the techniques and tools I was using were also being applied in community development work. I started volunteering with EWB, first with my local chapter, then with the national office, and eventually was fortunate to be offered a paid staff role. All the while I learnt more about humanitarian engineering and development, and since then have been involved in numerous education initiatives in the area.

What humanitarian engineering projects are you currently working on?

We've had a long-term research partnership with Abundant Water, working on the manufacturing and use of ceramic water filters in Laos. These are made locally in Laos by mixing and firing clay and used coffee-grounds to create very effective micro-filters that can treat water for bacteria. We've been

assisting by running experiments looking at changes in flow-rates and hence effectiveness. We also have a project looking at cocoa bean drying in PNG, which occurs during the wet season and so additional energy is required to effectively dry beans to ensure their market value.

What has been your proudest moment as a humanitarian engineer or humanitarian engineering fan?

Working with Engineers Without Borders Australia (EWB) to establish a national undergraduate research program. This brings community groups and social enterprises together with students, researchers and universities to work on projects identified by the partners. By tapping into universities, this brings additional resources and capability to these organisations that they could potentially not access. We launched the program back in 2007, and it's still running now, although greatly expanded by others at EWB. I know a number of students who went through the program who have gone on to work in many roles to achieve positive social impact through engineering and technology.

Why is humanitarian engineering important?

The benefits and positive impacts of engineering and technology should be available to all, but so often we see engineering developed by those

with the most power, finances, or resources, often at the expense of others, and only available to those with similar resources or privilege. Humanitarian Engineering has a role in questioning such work, and working alongside other professions, disciplines, and people, ensure more equitable and appropriate access to technology and engineering and the benefits it can bring.

What is your top tip for engineers and engineering fans who want to apply their skills in humanitarian contexts?

Be humble, so recognise your strengths and skills, but also where your limitations are and the strengths that others bring. Look to work with those people, to achieve a more meaningful outcome but also to learn and grow yourself.

What should people get in touch with you about?

We have a long term research project looking at Humanitarian Engineering education, exploring student motivations, engagement and outcomes. We've been collecting data from students and graduates since 2015, looking at different learning experiences and approaches. This is an area of real interest and also happy to discuss, collaborate and sharing our work.

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