

ARU Health Hackathon: A project where a multidisciplinary team of students come together to engage in solving health related issues

Dr Domenico Vicinanza and Dr Genevieve Williams
FSE: Computing and Technology/Life Sciences

The aim	Benefits
<p>This Health Hackathon was the first event at our university where our FST students (from 4 courses) combined their expertise to hack a health problem. The main focus was supporting gait retraining for amputees through designing cheap, portable and smart devices able to give support to patients, monitor progress and help motivating them through the journey.</p>	<ul style="list-style-type: none"> • Learning of new technical skills (QAA 2012 CH B3) through problem solving and knowledge transfer • Enhancing soft skills such as team collaboration and effective communication • Increase students' satisfaction and enhancing CV through extracurricular activity • Improve the link between teaching and research • Create a sense of belonging fostered by multidisciplinary approach and shared ownership
	<h3>The approach</h3> <p>From 10th May and for two full days, Anglia Ruskin students from Electronic Engineering, Computer Science and Sport Science took part to the first ARU Health Hackathon, led by Dr Genevieve Williams and Dr Domenico Vicinanza. Tackling challenges about physical therapy and rehabilitation, they focused on how physiotherapy could be provided in poor countries and, in particular, in crisis regions and war zones. A Hackathon is an event where multidisciplinary teams collaborate for an intense period of time on a specific project where the goal is to create something useable and tangible.</p> <p>This Health Hackathon was the first event at our university where our FST students combined their expertise to hack a health problem. The main focus was supporting gait retraining for amputees (a quite common problem in conflict zones) through designing cheap, portable and smart devices able to give support to patients, monitor progress and help motivating them through the journey. The starting point was a document published by Red Cross International (http://icrcndresourcecentre.org/wp-content/uploads/2016/04/icrc_002_0936.pdf) describing a set of exercises for lower-limb amputees. Students brought their expertise in movement science, physical therapy, coaching, designing human-machine interfaces, programming micro controllers, installing sensors to create original solutions to an increasingly important problem.</p>
	<h3>The outcome(s)</h3> <p>At the end of the hackathon the teams created at least two prototypes really close to be ready to be used as actual physiotherapy tools for amputee gait retraining in war or crisis zones! Everybody is looking forward to the next one...</p>

Profile	Future Development	
<p>Tutor name: Dr Domenico Vicinanza and Dr Genevieve Williams</p> <p>Faculty/Service: FSE: Computing and Technology/Life Sciences</p>	<p>The tutor plans to: look at sustainable ways of organising future editions of the hackathon:</p> <ul style="list-style-type: none"> • Opening to students from other faculties • Looking at possible sponsors • Liaising with other universities/organisations 	
	<th data-bbox="512 483 1401 546">Recommendations</th> <p data-bbox="512 551 1401 591">The tutor advises that:</p> <ul style="list-style-type: none"> • Good planning • Careful team building • Specific focus <p data-bbox="512 748 1401 792">are key to the success of the hackathon</p>	Recommendations