



The A-FOOTPRINT project takes its 'first steps' to disseminate results at the leading International Orthotics and Prosthetics trade show and World Congress



The A-FOOTPRINT stand ready to receive its first visitors

The *Orthopädie + Reha-Technik* is held bi-annually in the city of Leipzig, Germany. It is one of the largest international trade fairs for prosthetics and orthotics, orthopaedic footwear technology and rehabilitation technologies. The trade fair is combined with a World Congress and together the event attracts around 20,000 visitors over three days.

The stand was located in the *Campus Area*, a space dedicated to orthotic, prosthetic and rehabilitation technology R&D initiatives. Materials on display included the standard project brochure and flyers, newsletters and evaluation forms. An eight minute digital presentation

was developed for the exhibition and provided a concise summary of the background, objectives and research and technology developments within the project. Four Ankle-Foot Orthotic (AFO) prototypes were manufactured for the event. These featured a standard device manufactured in nylon via selective laser sintering, a hinged AFO with several novel design features and customisable functional parts, a finite-element analysis device optimised for strength/mass, and a 'fun' concept device personalised with a 'skull' designed back-plate, to show the freeform design capabilities of additive manufacturing. Three foot orthotics (FO) prototypes were demonstrated. The first device was a standard rigid motion controlling FO. The second device was a standard FO manufactured by low-cost 3D printing. The final FO prototype was a standard device with a novel motion control design feature based on flexible hinged elements in the heel section.

Visitors crowd the A-FOOTPRINT stand



For the event, SME partner Peacocks Medical Group manufactured scaled models of both the AFO's and FO's at various stages of construction. These models were extremely useful to help explain the additive manufacturing process to visitors to the stand. Visiting traffic was high across the three days. This included representatives from large industry and SME orthotic companies, research and development companies and organisations, orthotic clinicians and technicians, and rehabilitation materials and product suppliers. The stand also had visits from trade ambassadors from Germany, France and the UK. The areas of the project that formed most of the discussion with visitors were based around the demonstration prototype AFO and FO products and how additive manufacturing techniques had been developed for that

purpose. There was significant interest in the patient information system, the development of the computer-aided design software system, technology integration, and the business model for commercialisation. Ninety-three countries were represented with 35% of visitors from abroad including nearly half of the 537 exhibiting companies thus ensuring the A-FOOTPRINT project reached a wide audience.

At the parallel World Congress event, the A-FOOTPRINT project was awarded a full symposium session. Under the title, 'A-FOOTPRINT: new generation ankle-foot and foot orthoses'. Consortium partners provided short podium presentations to give a general overview of the project with more detailed presentations on the development of computer-aided design software, functional customisation and the development of additive manufacturing techniques. The symposium was well attended and sufficient time was allowed for delegates to ask questions and discuss the various aspects of the project. An evaluation questionnaire was issued at both the stand and the congress symposium and the feedback for both was excellent. In particular a wide-range of industry experts requested an invitation to the final project demonstration events scheduled for 2013 at the pilot factory based in Newcastle, UK.



Staff from SME partner Peacocks Medical Group discuss the project with exhibition visitors

A-FOOTPRINT CONTACT

Michelle Connolly

EU Project Executive Administrator

Tel: +44 (0)141 331 8956

Email: michelle.connolly@gcu.ac.uk