

## Report on Pedometrics Conference by Grant Campbell



*Pedometrics 25<sup>th</sup> Anniversary, 26th June - 1st July 2017.*

At the end of June, I attended my first ever international PhD conference in Wageningen, the Netherlands. This was an extra special conference for me because I was a part of the conference's 25th anniversary and it provided me with a great opportunity to meet fellow PhD students and experts in my research field of Digital Soil Mapping (DSM) in an international environment. It also provided me with an opportunity to present my latest work I've been doing on DSM of soil properties across Great Britain. During the week there were a lot of things on offer and I will explain my experiences in this post below. According to the book, there were 5 workshops, 6 keynote speakers, 130 oral talks and 120 poster presentations: a LOT of science! The conference was attended by 260 participants from 51 countries.

Day 1: After an initial welcome from Gerard Heuvelink to the conference, we were treated to two excellent keynote presentations from speakers Alfred Hartemink who discussed how the pedon is at the core of Digital Soil Morphometrics and Laura Poggio who looked into fusing data and expert knowledge for Digital Soil Assessment. I personally found both presentations thought provoking and very insightful.

The day then moved into some parallel sessions where attendees could go along to a range of oral presentation sessions on themes centred on soil monitoring, uncertainty in soil data and predictions & geostatistics, data fusion in soil mapping and modelling, proximal soil sensing and Digital Soil Morphometrics.

Day 2: The next day kick started with two keynote presentations from Tom Orton on sample support in connection to soils data and Jianghao Wang on what Pedometrics can learn from big data.

After lunch, we were then introduced to a few presentations at a very exciting and interesting 25<sup>th</sup> anniversary celebration session. The session began with the Alex McBratney and Jaap De Gruitjer

talking about the start of Pedometrics and the journey it has undertaken to date. After the duo completed their presentation, Murray Lark stepped up to discuss the past, present and future methods of mathematical models in Pedometrics – another very entertaining session.

The session was then suspended for a coffee break featuring excellent 25<sup>th</sup> anniversary cake and a quiz centred on soils!

Day 3: The penultimate day of the Pedometrics Conference began with a talk from Mike Kirkby from the University of Leeds who looked into implementing a conceptual model of physical and chemical soil profile evolution. This was another engaging talk and made us think about the soils more specifically that what we may not have thought about on a regular basis.

The Conference dinner was a rather interesting evening which took place in a Zoo. Yes, you may laugh, but the busses took us to the Burgers Zoo just outside Wageningen for the meal at night! A rather interesting and unusual choice of location but one that worked extremely well! After a great evening of food, drink and terrible dancing, the conference rolled onto the final day for me on the Friday.

Day 4: The final day, after an excellent night before, began with a keynote talk from Rob Beens and Peter van Erp talk who were discussing the marketability and business concept for fast and reliable soil sensing. This was very different from the other talks and I found it particularly interesting indeed.

The session was ended by an excellent final keynote from another one of the founders of DSM research Budiman Minasny who looked at unearthing soil change with what he called 'dirty' data! It was a very thought provoking talk which certainly got me thinking about how to deal with data that may be incomplete or not ideal to work with.

### **Winners**

A short mention to congratulate the students who won awards at the Pedometrics Conference notably Wartini Ng from The University of Sydney for Best Oral Presentation entitled: Rapid sensing of petroleum-contaminated soils with mid infrared spectrometers and Alexandre M.J-C. Wadoux from Wageningen University for Best Poster Presentation entitled: Modelling the soil information content of mid-infrared spectra at European scale.

### **Reflections**

As the conference closed, I reflected on one of the best experiences I have ever had since I started my PhD. Being my first international conference made it extra special and I would encourage all students during the PhD's to try to attend a conference internationally. It is definitely a different experience from attending a conference at national level as you can mix it up with different colleagues and networks from different countries and get a sense of the different philosophies that people are implementing in their own research. The Pedometrics Conference was an invaluable experience for me and I'll certainly take a lot of the feedback, connections and thoughts on board going forward for the rest of my own PhD.

For photos and further information see [www.pedometrics2017.org](http://www.pedometrics2017.org)

*Grant Campbell is a PhD student based at The James Hutton institute and Cranfield University. Grant's PhD aims to improve the scale of Scotland and England and Wales soils data by using Digital Soil Mapping (DSM) and modelling algorithms for a range of stakeholders.*