Report on ATRIUM 3D Models Training School

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Between September 15 and 19, 2025, I attended the 3D Model Summer School hosted by the Archaeological Information System of the Czech Republic (AISCR) research infrastructure at the Institute of Archaeology, Czech Academy of Sciences, Brno.

The one-week long summer school was attended by students and researchers across Europe to learn the rudiments of creating 3D models for archaeological artefacts, structures, and landscapes using a wide variety of software.

Personally, it was quite a timely opportunity to learn the basics of photogrammetry and 3D models in archaeology. As a landscape archaeologist who is versed in the use of several GIS and remote sensing software for analysing archaeological landscapes, I have never had the opportunity to attend an in-person workshop or training designed solely for this purpose. Although I have attended virtual classes that lasted few hours on the use of some of the software that we were taught during the summer school, these virtual classes cannot be compared to attending an in-person training with people on ground to assist you as and when due. Attending this summer school has therefore started in me a lifelong interest of 3D modelling and photogrammetry in archaeology.

One of the objectives of my current research is to to do a 3D documentation of a hilltop palace in northern Nigeria and so, I have learned the basic skills and expertise required to do so from this summer school and I cannot wait to get started. The summer school is also timely because I will be going to the field next week and I do know how to collect excellent data for the purpose of creating the 3D model.

Trip to Brno

I flew from Manchester to Vienna and my flight landed around 9.15pm on Sunday, September 14. Then, I got on FlixBus from Vienna International Airport and arrived in Brno around 12.55am on September 15 and so, I had a short night as I needed to be ready for the first day of the summer school.

Day 1

I arrived at the venue of the summer school where I was warmly received by David and Zuzana (amazing people) and I met other colleagues from different institutions in Europe who have also come for the summer school. There were 18 of us in this cohort with varying degrees of expertise in digital archaeology. We introduced ourselves and what we are hoping to learn at the summer school after which David introduced us to our instructors for the day (Vojtěch and Tomas).

During the morning class, we were introduced to 3D models in archaeology by Vojtech and I was so amazed at the possibilities of using 3D models in archaeology. Examples ranged from 3D models for large sites to the smallest artefact. In the afternoon, we were taught about photography by Tomas. It was quite important for us all because an excellent model will only be created when accurate input data (photographs) are taken. In the evening, we had a keynote titled Scanning the Past- Photogrammetry, LiDAR, and HBIM in Archaeology and Heritage Care by Dr. Lenka Starková where she presented a case study of the application of 3D models in built archaeological monuments. We ended the day with a social gathering with drinks and bites available.

Day 2

On the second day of the summer school, we converged at Petra (A historic building in Brno) where we were to take pictures of part of the building for our practical class. It was an opportunity to practice the class on photography that we had a day before.

After we have been lectured on the best way to take pictures of this type of monument, we were divided into a 6 groups of 3 people and each was asked to look for a part of the building that they would like to create a 3D scan for. For me and my group, we chose one of the tombstones on the building. When all the groups have taken their pictures, we proceeded to the summer school venue to process the data for the afternoon session. For the processing, we were taught on the use of RealityScan and Metashape, RTI for creating the model of the tombstone. The facilitators were on ground to assist us as we embarked on the task. Each group was able to produce a rough sketch of the model and if felt so great to finally see ourselves create these models.

Day 3

In the morning of day 3, we focused on photogrammetry of small objects as opposed to built structures that we did on Day 2. There were a range of artefacts that were brought to the class and each group set up their photography station and chose one artefact to be processed. This also tests our understanding about taking photographs in different conditions (open place or closed room). After many trials and with the assistance of the facilitators, we were able to get the correct settings for the camera and we started taking pictures. In the afternoon, we started processing the pictures to create the

photogrammetric model and the facilitators were on ground to provide assistance as and when due. We also used digital scanners for scanning some of the archaeological materials.

After the day's session, we were treated to a dinner with so much to eat and drink. It was an opportunity to be away from the computers for most people but for me, my laptop was right behind me because the model I was running was not finished. In all, it was a good and fun day, like every other day!

Day 4

On day 4, we had J. Unger give us a presentation about virtual archaeology. It was a detailed presentation with so many case studies showing how 3D models have been used in the reconstruction of archaeological landscapes during the Medieval Period in an animated format. After his presentation, we had series of practical case studies from other researchers across Europe on their works on the use of 3D models for reconstruction. In the evening, we stumbled on a beer festival at the city centre and we decided to join in. What a way to end the day!!!

Day 5

On the last day of the summer school, we had several photography stations that were set up for another practical session. There was a RTI station and small finds cubicles available for groups to make use of. After this, we had a practical class on the use of Blender and CloudCompare for editing 3D models and

creating animations. Despite the fact that it was for half day, we achieved so much and we were all excited to end the summer school on that note.

Acknowledgment

I am grateful to the ATRIUM Transnational Scheme for the scholarship to attend this summer school in Brno, it is one summer school that I will not forget in a hurry. Special thanks to David Spáčil and Zuzana Kopáčová for the smooth facilitation of this summer school and for making sure that we all had a beautiful experience in Brno.

To our main teacher, Vojtěch Nosek, you are amazing and fabulous. Thank you for coming down to our level and for pouring so much knowledge into us in the past five days, you are appreciated. To the always smiling Tomas Chlup, thank you for the photography lessons and for always responsive to our plights, you are recognised. To all the online presenters and the ones who were available in person to show us the amazing works they are doing in the area of digital archaeology, we are grateful to you. Finally, to all my colleagues in this cohort, it was great making this memory with you and I hope we keep in touch while making extraordinary models in our various spheres of influence.