Summary:
The 31st annual PLEA 2015 conference titled Architecture in (R)Evolution, in Bologna, Italy was attended by Chris Timusk and Steffanie Adams of CCET. The conference presented useful information and provided opportunities for collaboration. The conference was organized by Building Green Futures for September 9th to 11th, 2015 and was attended by hundreds of professionals from around the world, and focused on passive and low energy architecture with themes of universal design and ageing populations, access to water, improving sanitation facilities as well as access to energy, extreme weather events and energy expenditures.

An objective for ARGILE, our 5 year research project, included attending conferences to support our innovation activities and this conference allowed the Principal and Co-Investigators to present the summary of their work and to share their expertise.

Event Overview:
The opening key note speech on Wednesday morning, given by Antonio Navarra, a physicist specializing in climate science with a PhD in Geophysical Fluid Dynamics from Princeton University, focused on climate prediction, associated challenges, and the current state of the world’s climate. He showed many graphs with ranges of predictions for sea level rises, atmospheric CO2 levels, and temperatures, and discussed the sources of variability in the range of predictions. The overall conclusion, as could be predicted, was that even if drastic action is taken now to slow down global emissions to the most optimistic levels, the planet will still see an overall temperature rise of up to two degrees Celsius.

Wednesday afternoon consisted of the first set of parallel sessions, in which groups of presenters gathered around each of 12 round tables equipped with a projection screen, a microphone, and a set of listening headphones for each presenter. Non-presenters gathered around (behind) the presenters, and also wore headphones so they could listen in on the presentations. Topics including “right for a quality shelter”, “post carbon cities”, “improving performance”, “knowledge transfer” and “resilience vulnerability”. The most interesting sessions included a presentation on “The effect of thermal insulation and thermal mass of exterior walls on office building cooling loads in Taiwan”. The building was not actually built, but the concept was presented during a design competition. One of the authors was an engineer from a progressive German company called TransSolar who also designed the Manitoba Hydro building in Canada.

After the parallel sessions was the second keynote speech by Rab Bennetts, who is an architect and owner (with his wife Denise) of one of the largest architectural firms in the UK, Bennetts Associates. He gave a fascinating talk on a number of institutional and commercial projects his company has completed with attention to occupant...
health, comfort and overall sustainability. He explained how they use a variety of software packages for simulating and calculating ventilation, temperatures and energy consumption, and gave examples of modeled vs measured energy densities.

The next parallel session started the following morning (September 10th), and Chris Timusk presented at Table 8 for the group session on “improving performance.” The presentation was titled “An Innovative Building Enclosure Retrofit For An Existing Solid Masonry Double Wythe Brick Home In A Cold Climate”, with co-authors listed as Steffanie Adams and James Henderson. The presentation went well overall, and the other presentations during the session were also interesting and were on the same topics described for Wednesday afternoon.

Before lunch was the third key note speech, by Luca De Biasa, an innovation editor at Il Sole 24 Ore, and runs Nòva, which he founded in 2005. He discussed the need for new media: civic media vs social media.

After lunch was the third parallel session, again on the same overall topics described earlier, at 12 different tables. Steffanie Adams presented at Table 9 in the session on Knowledge Transfer on the “Retrofit Guide for Existing Buildings in a Cold Climate”, with co-authors listed as Chris Timusk. The presentation was well received and questions were related to the conditions in the GTA with regards to zoning and applicable building codes. A small discussion followed on the need for more documents aimed at non-industry readers.

At 5:00 after the third parallel sessions finished, was the fourth key note speech by Andreas Kipar, a landscape architect and owner of a company called LAND (Landscape Architecture Nature Development), in Duisburg, Germany. His talk was on several brownfield sites in cities around Europe which his company had reclaimed and turned into
much needed greenspaces and parks. He talked about the vision that went into each project, objectives, challenges, and showed lots of photos of the before and after.

On the morning of the 11th was the fifth and final keynote speech by Carlo Ratti and discussed Technology is Changing our interaction with Space and how we should be using BigData to better understand the Consequences of what we do and drive - Behaviour change. Carlo Ratti won the PLEA2015 “Innovator Award” for his inspiring lecture.

Summary/Outcomes:

Chris met a professor James Wong from the RMIT University in Australia, where he teaches Building Science among other topics in their Construction Management degree program. They also have a Masters and PhD in Construction Management, and conduct a great deal of interesting research. Dr. Wong is eager to share details on their program if anyone is interested, and Chris will keep in contact with him with respect to research.

The conference was interesting with many innovative proposals from Universities around the Globe and we found an opportunity to see how their research was being reviewed and conducted. There was only a handful of Canadians at the Conference so it provided us to see first hand how research was vital to the academic institutions in Europe, Africa and Asia.
Hall layout

12 tables for 3 parallel sessions

Table 1. chairmen
- Enrico Patrizio (1st day afternoon)
- Alessandro Rogora (2nd morning)
- Rajat Gupta (2nd day afternoon)
- Giulia Pentella (supporter)

Table 2. chairmen
- Rosa Bonano (1st day afternoon)
- Giulia Pantella (2nd morning)
- Nicolo Adze (2nd day afternoon)

Table 3. chairmen
- Alberto Bruno (1st day afternoon)
- Marco Dall’Aga (2nd morning)
- Werner Lang (2nd day afternoon)

Table 4. chairmen
- Harde Schuster (1st day afternoon)
- Joana Gomes (2nd morning)
- Edoardo Zanchini (2nd day afternoon)

Table 5. chairmen
- Edward NO (1st day afternoon)
- Olcardi Noud (2nd day morning)
- Alberto Bruno (2nd day afternoon)

Table 6. chairmen
- Maria Teresa Ottoni (1st day afternoon)
- Filippo Weber (2nd day morning)
- Edoardo Tonelli (2nd day afternoon)

Table 7. chairmen
- Simos Yannis (1st day afternoon)
- Francesca De Filippi (2nd day morning)
- Giulia Pentella (2nd day afternoon)

Table 8. chairmen
- Brian Ford (1st day afternoon)
- Andrea Formisano (2nd day morning)
- Riccardo Arambula (2nd day afternoon)

Table 9. chairmen
- Michele Oliveri (1st day afternoon)
- Pablo Le Roche (2nd day morning)
- Paula Cicalma (2nd day afternoon)

Table 10. chairmen
- Mauro Tentin (1st day afternoon)
- Juan Vallejo (2nd day morning)
- Alessandro Specchio (2nd day afternoon)

Table 11. chairmen
- Daniele Dantas (1st day afternoon)
- Alberto De Rito (2nd day morning)
- Valentina receives (2nd day afternoon)

Table 12. chairmen
- Dario De Rito (1st day afternoon)
- Alberto De Rito (2nd day morning)
- Valentina Recev (2nd day afternoon)