Last advances of the PFEM for coupled problems - A. Franci
Communication skills: Critical Review

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Abstract

After participating on different speeches organized by CIMNE, the evaluation of the communicating skills of one of these speakers is required. The communication skills evaluated are those from the speech called '*Last advances of the PFEM for coupled problems*' presented by Alessandro Franci. Even though the subject was very interesting, the presentation was too long, contained different sub-subjects and the structure did not help the audience to follow it correctly.

Communication skills review

The presentation named *Last advances of the Particle Finite Element Method (PFEM) for coupled problems* initiated with the clarification that the name was wrong as Alessandro talked about the PFEM cases in *Kratos Multiphysics*. This way the audience may have thought that the presentation was not prepared enough.

The presentation began with the questions *'why/when PFEM?'* that introduced the subject in a very interesting way, showing applications for the industry and simulation of natural disasters. In this point, the human factor could have been used to enforce the importance of the job, but the presentation was more focused in the strictly academic branch. Once the use and motivation for the PFEM was presented, Alessandro showed an outline of the presentation. A brief introduction before the outline was correct to help the audience understanding the structure of the presentation.

To begin with the core of the presentation, the concept of what PFEM is and the general explanation of how it works was clearly stated and some concepts as *lagrangian description* were not further explained (as a clear demonstration of how the speaker knew the audience attending this presentation). While explaining the steps developed by the PFEM implementation some very clear and useful animations were used, as the re-meshing procedure, and some concepts related to the low order elements, among others. Conversely, once the speaker finished presenting the PFEM method, he started talking about the *GiD* and *Kratos* implementations and most of the concepts were not clear. The particularities of the coded method in *Kratos* were mentioned too fast and some other concepts seemed to be irrelevant, but were introduced, making this really confusing.

After reaching this point, almost half an hour after the presentation began, Alessandro introduced the first of the three applications to be presented *Landslides and Multi-Hazard simulation*. From this first point, the impression was that the theoretical presentation was too detailed but not accurately executed as sometimes the speaker was going too fast. Also, the speaker presented the implementation achievements, the non voice-tone variation make these achievements pass along. Finally, a real-life example was used of a case in Italy, in which he mentioned the importance of this case for Italians as around two thousand people died in it. He showed some of the results, compared them with the bibliography on this case in a very efficient and logic way to prove it. Then, the next cases of study were presented, *nodal integration PFEM* and *particle-flow*. The second case structured correctly by presenting the motivation of using it, a road map of the advancement of the study, but after presenting the pros and cons the speaker focused too much in showing the mathematics and then it got hard to follow. The last case was simpler, some graphs were projected and it was the clearest part of the presentation.

As a conclusion the presentation was too long and seemed to be poorly connected between itself, as if the speaker has made a mix of different presentations without a proper selection of the main characteristics of each. In general, the presentation was very interesting but the communication skills could have been better by spreading the word about the worthiness of the method, enhancing a stronger connection with the audience, considering the natural disasters that may be studied and working on the voice tone variation and the body language.