**Communication Skills 1 – Arcadi Sanmartin**

**Critical review of a CIMNE Seminar – "Validation and Application of Computational Models for Fluid-Structure Interaction in Coastal and Hydraulic Engineering", by Chris Kees**

This critical review is on the seminar by Chris Kees who is working on the Coastal and Hydraulics Laboratory US Army Engineer Research & Development Center as presented by the moderator.

Mr. Kees starts giving credit to his collaborators and also mentionning a local laboratory, which gives a proximity feeling. Then introduces the topic showing some examples of works that his department has been working on. This first part is accessible to the general public and has a clear structure with explanatory images arising the interest in the audience.

After this first introduction the goals of his research are presented, explaining the microscale and macroscales models and how do they deal with this. Some quick explanation on the domain with three fases (air, solid, water) are also outlined. Then moves on to their modeling assumptions, governing equations and numerical methods. In this more technical part the lecturer takes time to explain the equations and references colleagues and other researchers. All this is quite technical and difficult to understand to general engineers, however the speaker knows he is talking to specialists in this field and even not going too deep into the equations outlines the main features and explains how they use them. He also explains his research and development on other numerical methods. This part is the tougher one since it is more a text based part and it is more difficult to keep the audience attention.

In the following slides the speaker shows some examples on results for interface management and convergence tests, test problems…, with videos. It is a good way to make people understand all the previous technical explanations and catching their attention. In addition, the examples are increasing in complexity so the audience can follow the evolution. For many results the speaker shows plots and explains them, but the text size is not very good though. Some of the results are explained too quickly and it seems some slides could be removed since the speaker is not using them and just moves on.

In the final part, the speaker shows correlations of simulations with laboratory data and the macroscale results with clarifying animations. He shows himself open to share the code including the links in the presentation and all the references, which enhances the feeling of cooperation and honesty. He explains it is one of the first tools that is officially open source, that at least to me is relevant coming from someone working for the US Army.

The final part answering the questions is correctly solved by the speaker, with confidence and showing his deep knowledge on the topic.

As general comment, the presentation is sober and straight to the point but with no clear structure, an initial outline would be helpful. In addition, a final summary and ongoing and future works slides would be appreciated. Even being rather an unstructured presentation one can tell the speaker knows very well the topic. However there are some slides too filled up, with too much text. This makes the presentation denser and even distracts the speaker who at times loses the thread with uncomfortable silences. Since the audience is highly technical, the presentation seems appropriate with enough details and without unnecessary information.