# Modelling Fluvial Processes using the Finite Volume Method

On Wednesday, November 23rd Ernest Bladé, who is the deputy director of Flumen, came to the UPC to present practical implementation of Finite Volume Method based numerical schemes to solve fluvial processes and how this may help to get further results needed in different engineering problems.

In the beginning Mr Blade gave a short introduction about himself and tried already to motivate the audience to participate. Furthermore he showed an existing relation to the UPC which makes more clear why he was chosen to give a presentation here. After this lead-in he presented the program his company had been working on and declared what it is capable to do.

Thereafter he starts with the theoretical background and the Navier-Stokes-Equation. For the first slides he took a little too long according to what he explained us in the end. But he might have realized that the course already knows some of the theory and that is why he speeded up after some slides. Anyway he could have skipped some more slides, but somebody should have told him that we already dealt with these equations. However his way of explaining things is pretty strict and direct. This is perfect for a class which has no further knowledge. But for us it might have been a little to slowly. Sometimes it seemed like that he first had to look up the slides what would come next and that made the whole performance kind of sluggish. In addition to that he struggled with a restricted vocabulary and he spoke without any dynamics in his voice and very tiring.

Though after the theory part it became better again. Frequently he was using the blackboard to visualize the problems and that was helping to improve the understanding of the subject. The slides in general are in a well order and often good organized but occasionally too crowded by text which he is not even referring to. In the middle of the presentation he reacted more actively on the knowledge we already had and proceeded faster. The foreshadowing he often did was really helpful. If you see why this might be useful to know, it immediately becomes more interesting.

After the complete theoretical background he made sure that everybody understood the facts. In theory he often included some examples and visualizations which made the presentation less strict. During the practical examples you were able to see that Mr Blade is owning a highly deepened knowledge in his area of research. The use of the animations showed us in a simple way how the program is working and what its aims are.

Noticeable is that he always gave a short introduction and closed every chapter he wanted to present with something smooth. Over and above that he used many examples from the local area to make it more relevant and shows how train delays may be predictable through the water flows on the rail way. He included that to show an impact on everyday life. As the time was passing by and due to his slow speed in the beginning he skipped many slides to go on with some more examples. Through those examples he showed us what we can do and why this is important.

To sum it up you can say that the presentation was in the beginning too slow but the the content of it was in a high quality. The slides were probably not especially prepared for this presentation which might also have been a reason why he was skipping a lot and had some time pressure in the end.

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