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Industrial dust dispersion in a nuetral atmosphere over complex terrain

The problem addressed in this talk is that of suitable concentrating solar (CS) plant site selection in the vicinity of a ferromanganese smelter. Proper CS site selection is important if a CS plant supplying process heat to an industrial application is to perform properly. The focus will be on the numerical work conducted during the course of this investigation, which included large scale CFD of the neutral atmospheric boundary layer and dust dispersion resulting from various predominant wind directions. Visualisations of mesh construction, flow-field solutions, and dispersion solutions will be given in the talk. The domain used for the majority of the runs is ~14mil mesh cells in size and has consumed ~35,000 CPU-hours to date. ANSYS Fluent was used for all simulation work.

Student?

Yes

Supervisor name

Prof. Ken Craig; Prof Quinn Reynolds

Supervisor email

ken.craig@up.ac.za; quinnr@mintek.co.za

Primary author: SWART, Milan (University of Pretoria / Mintek)

Presenter: SWART, Milan (University of Pretoria / Mintek)

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