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| **Abstract Title (maximum 150 Characters)** | | | |
| *Faulting and stability in a Chalk quarry* | | | |
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| **Technical Theme 1 – Highlight the technical theme most relevant to this abstract** | | | |
| Case histories of construction and engineering | Earthworks | Foundations and piling | Future engineering issues |
| Geological hazards | Offshore engineering | Site investigation/ characterization | Testing – in situ and laboratory |
| Tunnelling | Water and the environment |  |  |
| **Technical Theme 2 – Highlight the 2nd technical theme most relevant to this abstract** | | | |
| Case histories of construction and engineering | Earthworks | Foundations and piling | Future engineering issues |
| Geological hazards | Offshore engineering | Site investigation/ characterization | Testing – in situ and laboratory |
| Tunnelling | Water and the environment |  |  |
| **Technical Theme 3 – Highlight the 3rd technical theme most relevant to this abstract** | | | |
| Case histories of construction and engineering | Earthworks | Foundations and piling | Future engineering issues |
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| Tunnelling | Water and the environment |  |  |
| **Paper type – Highlight the preferred format of the submission, if abstract is accepted** | | | |
| Paper | | Poster | |
| **Abstract** | | | |
| *Fractures and faulting in Chalk result from a brittle tectonic context leading to structures with preferred definitions and geometries. When quarrying, the geometry of the exploitation should account for the directions of major fractures and faults for stability purposes.*  *A systematic structural survey was performed in a Chalk quarry with localization and measurement of geometry (dip, direction) and classification of fractures. Two major faulting directions are identified, with a high dip angle (above 60°) to the South.* *136 faults are identified and well distributed throughout the site. Most of them are normal faults but some strike-slip faults clearly appear. Joints are generally vertical with 2 main directions and a regularly spaced.*  *Structural data are first integrated in a three-dimensional geological and geometrical model of the quarry. This model shows, in some places, that the direction of the bench face and structural features are in condition of developing hazardous slope failure.*  *The structural model is then used for building typical 2D geomechanical models of the behaviour of discontinuities that may induce displacements. Several cases are considered depending on dip, direction and joint properties. The quality of the rock mass is assessed by means of the GSI and RQD indices and mechanical properties are modified accordingly. to the influence of saturation is also considered.*  *The combination of structural and mechanical models helps the quarry managers in optimizing the geometry of their exploitation, particularly to manage potential hazardous areas.* | | | |