

# SEMINAR

## Grupo de Análise Funcional e Aplicações Functional Analysis and Applications Group

### Numerical modelling of the fire behaviour of steel structures

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#### Abstract

Given the importance of protecting people and goods, fire safety is one of the essential requirements for the design and construction of buildings. Moreover and in relation to the load-bearing capacity in buildings, it is known that steel, a common material in building structures, suffers reductions in its mechanical characteristics when subjected to elevated temperatures. This has justified the focus of different researches on the behaviour of steel structural elements subjected to fire. Given the high costs associated with experimental fire analysis of elements used in construction, the application of numerical methods both in fire action modelling and in mechanical behaviour modelling of structures (through for example the finite element method) has a key relevance in building stability design. This communication will describe numerical analysis methodologies used to predict the mechanical behaviour of steel structures when subjected to fire.

Joint work with Paulo Vila Real

*Room Sousa Pinto*  
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