

# **Dominic C. Esposito**

Thesis

Economic Impact of Fires in Buildings

Abstract

With a move towards performance based building codes, building designs are evaluated not only on the basis of whether or not they provide acceptable levels of safety but also on whether they are cost-effective. Cost-effectiveness can be determined by considering the cost of fire protection and the expected damages resulting from fires during the life of the building. In addition to the resulting damages that fires may cause, the impact that they may have on business production may also be significant. To help identify cost-effective fire safety designs, this thesis describes a computer model which assesses the economic impact of fires in buildings. This model calculates the cost of both direct and indirect damages to building construction, fire protection systems and contents that result from fire. This economic computer model is part of the fire hazard and fire risk analysis computer model being developed at Carleton University.

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Supervisor

Hadjisophocleous