

Study for contaminant dispersion model in urban areas

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The importance of prevention and assessment of hazards(or contaminants) are no more novel issues. But prediction of these plumes in urban areas and plants is still tough to meet enough accuracy. It is due to complexity of geometry of these areas. Simple and easy to use solution is Finite Difference Method. But it can be applied in shape of rectangular boxes so that complex buildings or terrains are hard to be applied. To solve this problem, the Finite Element Method(FEM) is more proper than Finite Difference Method. There are many available commercial tools using FEM(i.e. COMSOL, FLACS, etc). But we need to know what is more important in hazard assessment in urban areas. So we studied about thinkable physics phenomena in CFD dispersion model in FEM method for urban areas.