



## MUSEUM OF FINE ARTS, LEIPZIG, GERMANY

**PROJECT SUMMARY.** The Museum of Fine Arts in Leipzig ranks among the most important cultural institutions in East Germany. In 2004, the art museum's cuboid new building was inaugurated in the center of Leipzig. Paintings, graphics and sculptures from the Late Middle Ages up to the present are on display in air-conditioned, spacious exhibition rooms. Indoor patios with daylight are inviting places for visitors to rest.

**FOCUS OF CONSULTING SERVICES.** Museum exhibition rooms need to ensure special climatic conditions in order to protect the works of art. The high transparency between indoors and outdoors required the building envelope to be optimized energetically. By means of extensive building physics analyses, the hygrothermal properties of the double-glazed facade were evaluated and the temperature changes in the courtyards were simulated. The aim was to minimize the outdoor climate's influence on the exhibition space despite its open-plan layout and large glazed surfaces. For achieving the desired constant indoor climate in the underground storerooms including a constant relative humidity, the effect created by the hygric properties of watertight concrete structures exposed to water pressure was examined.

For the purpose of optimizing the planned sound-reflecting interior surfaces in terms of acoustics, a computer-based auralisation was performed in order to make "audible" the reverberation times to be expected.



### CLIENT

Hochbauamt Stadt Leipzig

### ARCHITECT

Hufnagel Pütz Rafaelian, Berlin

### PROJECT DATA

Planning and construction period	1998 - 2004
Gross floor area / gross volume	16,730 m <sup>2</sup> / 125,365 m <sup>3</sup>
Cost of construction	75 million euros

### SERVICES RENDERED

Room acoustics, building acoustics, sound insulation, thermal building physics  
 Consulting during all work phases, planning, simulations, auralisation, site supervision, final acceptance testing

1+3 Indoor patios with natural daylight  
 2 Exterior view  
 4+5 Circulation and access areas  
 Pictures: Werner Huthmacher, Berlin