

Ways of thinking, ways of seeing: mathematical and other modelling in engineering and technology

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20399052&lokasi=lokal>

Abstrak

Themes that are highlighted include :

- the role of language : the models developed for engineering design have resulted in new ways of talking about technological systems
- communities of practice : related to the previous point, particular engineering communities have particular ways of sharing and developing knowledge
- graphical (re)presentation : engineers have developed many ways of reducing quite complex mathematical models to more simple representations
- reification : highly abstract mathematical models are turned into 'objects' that can be manipulated almost like components of a physical system
- machines : not only the currently ubiquitous digital computer, but also older analogue devices, slide rules, physical models, wind tunnels and other small-scale simulators, as well as mechanical, electrical and electronic analogue computers
- mathematics and modelling as a bridging tool between disciplines