

Does Industry need Mathematicians?

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Nowadays hardly any branch of industry can do without mathematics. It provides the essential tools for the design, the optimisation and the control of products and processes (production and decision processes). The reason for this new role of mathematics lies in the strongly increased importance of computer simulation and in the fact, that reliable computer simulations are based on:

- mathematical models and
- efficient algorithms to evaluate these models.

Industrial mathematics is mathematical modelling + scientific computing. Modelling not only of scientific or technical processes, but also of decision processes, of the structure of organisations. Of course, mathematicians do it together with engineers, scientists (computer and natural scientists), and economists. But since mathematics is the raw material of the models, mathematicians play a key role in modelling; and they play a key role in computing too, since improving the algorithms, using sophisticated mathematics has at least as much contributed to the increase of computing power as hardware development has.