

ZMATH 2015a.00348

Button, Tom

Programming in mathematics A level.

Math. Sch. (Leicester) 43, No. 4, 4-5 (2014).

From the text: The links between programming and mathematics have always been strong. From the early pioneers such as Charles Babbage, Ada Lovelace and Alan Turing computing was seen as a branch of mathematics. Even up to the days of my own schooling in the late 1980s those teaching computing were often members of the mathematics department. With the advent of IT as a school subject the emphasis shifted to students learning to be users of programs and applications. This coincided with a decrease in both the amount of computing, and hence programming, taught in schools and reduced the explicit link with mathematics. Fortunately the tide is turning on this – the new curriculum in schools has shifted to emphasize the use of IT within subject areas whilst there is a new found interest in programming. This is evident through the popularity of devices such as the Raspberry Pi and the Computing At School initiative (this goes by the confusing acronym CAS which to many technologically interested mathematicians also stands for computer algebra system!). In this article I will describe the programming element to MEI's new A level further mathematics unit: Further Pure with Technology (FPT), as well as considering the opportunities for using programming in the mathematics classroom.

Classification: D30 F60 P50

Keywords: computer science education; upper secondary; university teaching; computer programming; number theory; computer as educational medium; information technology