Hohenwarter, M. and Jones, K. (2007) Ways of linking geometry and algebra: the case of *Geogebra*. *Proceedings of the British Society for Research into Learning Mathematics*, 27, (3), 126-131.

Abstract
This paper discusses ways of enhancing the teaching of mathematics through enabling learners to gain stronger links between geometry and algebra. The vehicle for this is consideration of the affordances of *GeoGebra*, a form of freely-available open-source software that provides a versatile tool for visualising mathematical ideas from elementary through university level. Following exemplification of teaching ideas using *GeoGebra* for secondary school mathematics, the paper considers current emphases on geometry and algebra in the school curriculum and the current (and potential) impact of technology (such as *GeoGebra*). The paper concludes by raising the implications of technological developments such as *GeoGebra* for the pre-service education and inservice professional development of teachers of mathematics.

For the full text, please click on the following link:
http://www.bsrlm.org.uk/IPs/ip27-3/BSRLM-IP-27-3-22.pdf

**References**

Atiyah, M. (2001) Mathematics in the 20th Century: geometry versus algebra, *Mathematics Today*, 37(2), 46- 53.

Davis, R. (1998) The interplay of algebra, geometry, and logic, *Journal of Mathematical Behavior*, 7, 9-28.

Diemente, D. (2000) Algebra in the service of geometry: can Euler's Line be parallel to a side of a triangle? *Mathematics Teacher*, 93(5), 428-431.

Edwards, J. & Jones, K. (2006) Linking geometry and algebra with GeoGebra, *Mathematics Teaching*, 194, 28-30.

Erbas, A., Ledford, S., Orrill, C. & Polly, D. (2005) Promoting problem solving across geometry and algebra by using technology, *Mathematics Teacher*, 98 (9), 599-603.

Farrell, M. A. & Ranucci, E. R. (1973) On the occasional incompatibility of algebra and geometry, *Mathematics Teacher*, 66(6), 491-497.

Giaquinto, M. (2007) *Visual Thinking in Mathematics* (Oxford: Oxford University Press).

Hohenwarter, M. (2002) *GeoGebra - Ein Software system für dynamische Geometrie und Algebra der Ebene*. Master thesis, University of Salzburg.

Hohenwarter, M. & Lavicza, Z. (2007) Mathematics teacher development with ICT: towards an International GeoGebra Institute, *Proceedings of the British Society for Research into Learning Mathematics*, 26(3), 49-54.

Hohenwarter, M. & Preiner, J. (2007) Dynamic mathematics with GeoGebra. *Journal of Online Mathematics and its Applications* (MAA, ID 1448), vol. 7, March 2007

Jones, K. (2000) Critical issues in the design of the geometry curriculum, in: B. Barton (Ed), *Readings in Mathematics Education* (Auckland, New Zealand, University of Auckland), pp75-91.

Jones, K. (2002) Issues in the teaching and learning of geometry, in: L. Haggarty (Ed), *Aspects of Teaching Secondary Mathematics* (London, Routledge), pp121-139.

Jones, K. & Mooney, C. (2003) Making space for geometry in primary mathematics, in: I. Thompson (Ed), *Enhancing Primary Mathematics Teaching* (London, Open University Press), 3-15.

Kokol-Voljc, V. (2007) Use of mathematical software in pre-service teacher training: the case of GeoGebra, *Proceedings of the British Society for Research into Learning Mathematics*, 26(3), 55-60.

Kvasz, L. (2005) Similarities and differences between the development of geometry and of algebra, in C. Cellucci & D. Gillies (Eds) *Mathematical Reasoning and Heuristics* (London, King's College Publications).