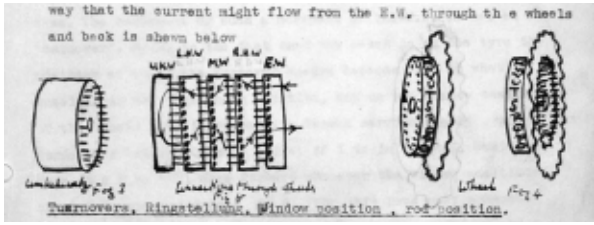
About the Cover

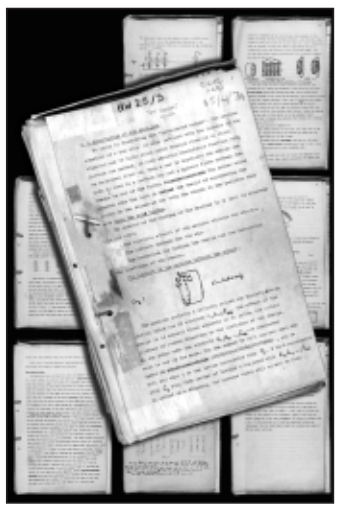
Mathematical theory of the Enigma machine

This month's cover shows the first few pages of Alan Turing's treatise on the Enigma machine, from the master copy typed by Turing himself in 1940, and also containing Turing's sketches and annotations.



It is now held as document HW25/3 in the National Archives of the U. K. (http://www.nationalarchives.gov.uk). A copy made from microfilm, originating in American archives, can also be found in the Turing Digital Archive at http://www.turingarchive.org/browse.php/C/30.

This year's theme for Mathematics Awareness Month is "Mathematics and Internet Security". (The official website is http://www.mathaware.org/index.html.) Mathematics pervades security measures on the Internet, as Susan Landau showed in her article on hash functions in the March issue of the *Notices*, but it's a tough topic to illustrate. The theme is closely connected to the more general one of mathematics in cryptography, however, and in this regard little can compare in dramatic interest to the British work on reading German codes and ciphers at Bletchley Park during World War II. Polish mathematicians began the process early in the 1930s and British mathematicians, most prominently Alan Turing, were major contributors during the war. Turing also made extremely important contributions to the theory of computability, not far removed from the interests of Kurt Gödel, so it seems particularly appropriate that his work appear in this issue, which contains several articles on Gödel.



—Bill Casselman, Graphics Editor
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