# Abstracts

## Microwaves and Mathematics

*S.A. Schelkunoff. "Microwaves and Mathematics." 1957 Transactions on Microwave Theory and Techniques 5.3 (Jul. 1957 [T-MTT]): 173-173.*

Mathematics and mathematicians play an essential role in the development of science and engineering. This is particularly conspicuous in the case of electromagnetic theory and microwave engineering. In the preface to his famous treatise, Maxwell refers to Gauss as the man who " . . . brought his powerful intellect to bear on the theory of magnetism, and on the methods of observing it, and [who] not only added greatly to our knowledge of the theory of attractions, but reconstructed the whole of magnetic science as regards the instruments used, the methods of observation, and the calculation of the results. . . . " Maxwell also adds: "The great success which these eminent men [Gauss, Weber, Riemann, J. & C. Neumann, Lorentz, etc.] attained in the application of mathematics to electrical phenomena, gives, as is natural, additional weight to their theoretical speculations. . ." But a note of dissatisfaction is sounded in "There is also a considerable mass of mathematical memoirs which are of great importance in electrical science, but . . . they are for the most part beyond the comprehension of any but professed mathematicians."

❑ Return to main document.