

## Foreword

**T**HIS NOVEMBER 1984 issue of IEEE TRANSACTIONS ON SONICS AND ULTRASONICS is dedicated to the IEEE on the celebration of its centennial year. As we celebrate the centennial (1884-1984) year of the IEEE, it is also a special year for our Group on Sonics and Ultrasonics since the first issue of this TRANSACTIONS was published in 1954, thus marking three decades (1954-1984) of publication.

This issue is divided into two sections. The first section deals with the historical beginning and formulation of the Group and publication of the first TRANSACTIONS. The endeavors of the early founders of our Professional Group on Ultrasonic Engineering and their overcoming the difficult financial times laid a strong foundation for the present Group on Sonics and Ultrasonics. And yet, let us not forget their predecessors, the early pioneers of sonics and ultrasonics: Simeon Denis Poisson who was first to consider the propagation of sound in an isotropic solid, Pierre Simon Laplace who derived the first formula for the velocity of sound in air and water, J. P. Joule for his discovery of the magnetostrictive effect in 1847, Pierre and Jacques Curie for discovering the piezoelectric effect in 1880, Paul Langevin for transmitting the first ultrasonic wave in water and Lord Rayleigh for his discovery of surface waves in 1887. All of their early discoveries have been the origin for the growth and applications of sonics and ultrasonics. The second section contains discussions on some present activities of the group and new papers that comprise this November issue publication.

Although the issue contains dates and statistics dealing with the Sonics and Ultrasonics Group, we hope the reader will gain an appreciation of the foresight and accomplishments of the early pioneers of our technology and our group. To them we are indebted, as well as to the founders of the IEEE, and we hope that their dedication and achievements will inspire us to carry forward into the future the progress and advancement of sonics and ultrasonics for the betterment of serving technology and mankind.

STEPHEN WANUGA  
*Editor*

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