

## **Diffraction Revisited**

A. David Trubatch

Department of Mathematical Sciences  
United States Military Academy  
West point, New York

ARL Sponsor: Gary L. Wood

U.S. Army Research Laboratory  
Adelphi, Maryland

### **ABSTRACT:**

The classical problem of the description of diffraction through a plane screen is surprisingly complex. A closely-related and similarly important problem is the propagation of a beam. Classical solutions to these problems make use of a number of simplifying assumptions, some explicit and others unstated. A systematic examination of these assumptions clarifies their relative importance in the solution and points the way for further refinements.

**KEY WORDS:** diffraction, beam propagation

**CONTACT:** A. David Trubatch, USMA, West Point, NY 10996  
Tel: (845) 938-4257 email: [david.trubatch@usma.edu](mailto:david.trubatch@usma.edu)