DESCRIPTION

The fundamentals needed to design and realize microwave and RF filters.

Microwave and RF filters play an important role in communication systems and, owing to the proliferation of radar, satellite, and mobile wireless systems, there is a need for design methods that can satisfy the ever-increasing demand for accuracy, reliability, and shorter development times.

Beginning with a brief review of scattering and chain matrices, filter approximations and synthesis, waveguides and transmission lines, and fundamental electromagnetic equations, the book then covers design techniques for microwave and RF filters operating across a frequency range from 1 GHz to 35 GHz.

Each design chapter:

- Is dedicated to only one filter and is organized by the type of filter response
- Provides several design examples, including the analysis and modeling of the structures discussed and the methodologies employed
Advanced Design Techniques and Realizations of Microwave and RF Filters is an essential resource for wireless and telecommunication engineers, as well as for researchers interested in current microwave and RF filter design practices. It is also appropriate as a supplementary textbook for advanced undergraduate courses in filter design.

![ABOUT THE AUTHOR](image)

**Pierre Jarry, PhD**, began his research in the area of microwaves at the University of Limoges in France and at Dublin University in Ireland. He was later appointed professor at the University of Brest (France), where he created and directed the Laboratory of Electronics and Telecommunication Systems, which is affiliated with the French National Science Research Center (CNRS). Dr. Jarry now serves as Professor at the University of Bordeaux (France) and the CNRS laboratory IMS (Intégration du Materiau au Système). His research focuses on the areas of microwave filters, distributed filters, multimode filters, and genetic microwave filters, among others.

**Jacques Beneat, PhD**, is an Assistant Professor at Norwich University in Vermont. His research interests include microwave and filter design, radio propagation measurements, and modeling for emerging wireless networks.

![SERIES](image)

Wiley - IEEE