

# Preface

This text originated from a Master's degree in RF Communications Engineering offered since the mid-1980s at the University of Bradford in the UK. The (one-year) degree, which has now graduated several hundred students, was divided into essentially three parts:

- Part 1 – RF devices and subsystems
- Part 2 – RF communications systems
- Part 3 – Dissertation project.

Part 1 was delivered principally in Semester 1 (October to mid-February), Part 2 in Semester 2 (mid-February to June) and Part 3 during the undergraduate summer vacation (July to September). Parts 1 and 2 comprised the taught component of the degree consisting of lectures, tutorials, laboratory work and design exercises. Part 3 comprised an individual and substantial project drawing on skills acquired in Parts 1 and 2 for its successful completion.

In the mid-1990s it was decided that a distance-learning version of the degree should be offered which would allow practising scientists and technologists to retrain as RF and microwave communications engineers. (At that time there was a European shortage of such engineers and the perception was that a significant market existed for the conversion of numerate graduates from other disciplines, e.g. physics and maths, and the retraining of existing engineers from other specialisations, e.g. digital electronics and software design.) In order to broaden the market yet further, it was intended that the University of Bradford would collaborate with other European universities running similar degree programmes so that the text could be expanded for use in all. The final list of collaborating institutions was:

- University of Bradford, UK
- University of Cantabria, Spain
- University of Bologna, Italy
- Telecommunications Systems Institute/Technical University of Crete, Greece

*Microwave Devices, Circuits and Subsystems for Communications Engineering* is a result of this collaboration and contains the material delivered in Part 1 of the Bradford degree plus additional material required to match courses delivered at the other institutions.

In addition to benefiting students studying the relevant degrees in the collaborating institutions, it is hoped that the book will prove useful to both the wider student population and to the practising engineer looking for a refresher or conversion text.

A companion website containing a sample chapter, solutions to selected problems and figures in electronic form (for the use of instructors adopting the book as a course text) is available at <ftp://ftp.wiley.co.uk/pub/books/glover>.