



# BRIDGE MANAGEMENT

SECOND EDITION

MICHAEL J. RYALL



# Contents

PREFACE TO THE SECOND EDITION .....	vii
PREFACE TO THE FIRST EDITION .....	ix
ACKNOWLEDGEMENTS.....	xi
AUTHOR BIOGRAPHIES.....	xii
<b>CHAPTER 1</b> Bridge management systems.....	1
<b>CHAPTER 2</b> Inspection and condition rating.....	43
<b>CHAPTER 3</b> Assessment and evaluation .....	103
<b>CHAPTER 4</b> Non-destructive testing .....	141
<b>CHAPTER 5</b> Load testing .....	177
<b>CHAPTER 6</b> Repair.....	205
<b>CHAPTER 7</b> Strengthening.....	243
<b>CHAPTER 8</b> Bridge modification.....	301
<b>CHAPTER 9</b> Whole-life costing, maintenance strategies and asset management.....	355
<b>CHAPTER 10</b> Durability and protection .....	379
<b>CHAPTER 11</b> Stress measurement and monitoring .....	449
<b>CHAPTER 12</b> Risk and reliability .....	493
<b>CHAPTER 13</b> Deterioration modelling .....	525
<b>CHAPTER 14</b> Heavy goods vehicles (HGVs).....	543
INDEX .....	553