This book deals with the latest achievements in the field of optical coherent microscopy. While many other books exist on microscopy and imaging, this book provides a unique resource dedicated solely to this subject. Similarly, many books describe applications of holography, interferometry and speckle to metrology but do not focus on their use for microscopy. The coherent light microscopy reference provided here does not focus on the experimental mechanics of such techniques but instead is meant to provide a users manual to illustrate the strengths and capabilities of developing techniques. The areas of application of this technique are in biomedicine, medicine, life sciences, nanotechnology and materials sciences.