DESCRIPTION

Hands-on resource to understand and successfully process biological image data

In *Imaging Life: Image Acquisition and Analysis in Biology and Medicine*, distinguished biologist Dr. Lawrence R. Griffing delivers a comprehensive and accessible exploration of scientific imaging, including but not limited to the different scientific imaging technologies, image processing, and analysis. The author discusses technical features, challenges, and solutions of the various imaging modalities to obtain the best possible image.

Divided into three sections, the book opens with the basics such as the various image media, their representation and evaluation. It explains in exceptional detail pre- and postprocessing of an image. The last section concludes with common microscopic and biomedical imaging modalities in light of technical limitations and solutions to achieve the best possible image acquisition of the specimen.

*Imaging Life: Image Acquisition and Analysis in Biology and Medicine* is written specifically for readers with limited mathematical and programming backgrounds and includes tutorials on image processing in relevant chapters. It also contains exercises in the use of popular, open-source software.

- A thorough introduction to imaging methods, technical features, challenges, and solutions to successfully capture biological images
- Offers tutorials on image processing using open-source software in relevant chapter
- Discusses details of acquisition needs and image media covering pixels, pixel values, contrast, tonal range, and image formats
• In-depth presentation of microscopic and biomedical imaging modalities

Perfect for professionals and students in the biological sciences and engineering, *Imaging Life: Image Acquisition and Analysis in Biology and Medicine* is an ideal resource for research labs, biotech companies, and equipment vendors.

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**ABOUT THE AUTHOR**

**Lawrence R. Griffing, PhD**, is Associate Professor of Biology at Texas A&M University. He formerly served as Program Director for Cell Biology at the National Science Foundation and was Associate Director of the ITS-Center for Teaching and Learning. He teaches several undergraduate courses and graduate seminars on plant cell biology, 3D biology, and biological imaging.

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