

Skin biophysics: from experimental characterisation to advanced modelling

Deskripsi Lengkap: <https://lib.ui.ac.id/detail?id=20509782&lokasi=lokal>

Abstrak

This book presents state-of-the-art experimental and modelling techniques for skin biophysics that are currently used in academic and industrial research. It also identifies current and future challenges, as well as a growing number of opportunities in this exciting research field. The book covers the basics of skin physiology, biology, microstructural and material properties, and progressively introduces the reader to established experimental characterisation protocols and modelling approaches. Advanced topics in modelling theories and numerical implementation are also presented.

The book focusses especially on:

1. Basic physiology, molecular biology, microstructural and material properties of the skin.
2. Experimental characterisation techniques for the skin (including imaging): in vivo and in vitro techniques and combination of those with in silico approaches.
3. State-of-the-art constitutive models of the skin: elastic, anelastic and mechanobiological formulations (e.g. growth, ageing, healing).
4. Applications: mechanics, damage, biological growth, healing, ageing and skin tribology.