DESCRIPTION

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In this monograph, we present recent progress in geophysical modeling and observational tools related to the process of glacial isostatic adjustment (GIA). Rather than a retrospective view, however, we have been led by one over arching mission: to gather significant contributions that present the state-of-the-art in the field and beyond, just as it is being reshaped by new space-geodetic technologies. In this light, the monograph includes discussion on new progress in a number of long-standing problems: the modeling of the Earth's viscoelastic response; the prediction and analysis of sea-level changes and anomalies in the Earth's rotation and gravity field; and the inference of mantle viscosity. Such contributions are complemented by papers that focus on results obtained by GPS and constraints expected from impending satellite missions, as well as predictions of geophysical observables (e.g., present-day 3-D deformations, gravity signals and fault instability) related to these efforts. In these many applications it is important to understand recent progress in GIA research and the limitations that currently impact that research.

ABOUT THE AUTHOR

Jerry X. Mitrovica and Bert L. A. Vermeersen are the authors of Ice Sheets, Sea Level and the Dynamic Earth, published by Wiley.