

Advances in Computer Vision and Pattern Recognition

Sing Bing Kang *Series Editor*

Amir R. Zamir · Asaad Hakeem · Luc Van Gool · Mubarak Shah · Richard Szeliski *Editors*

## Large-Scale Visual Geo-Localization

This timely and authoritative volume explores the bidirectional relationship between images and locations. The text presents a comprehensive review of the state of the art in large-scale visual geo-localization, and discusses the emerging trends in this area. Valuable insights are supplied by a pre-eminent selection of experts in the field, into a varied range of real-world applications of geo-localization.

### Topics and features:

- Discusses the latest methods to exploit internet-scale image databases for devising geographically rich features and geo-localizing query images at different scales
- Investigates geo-localization techniques that are built upon high-level and semantic cues
- Describes methods that perform precise localization by geometrically aligning the query image against a 3D model
- Reviews techniques that accomplish image understanding assisted by the geo-location, as well as several approaches for geo-localization under practical, real-world settings
- Presents contributions from the leading and most active researchers in the field from both academia and industry

This invaluable text/reference is a must-read for all researchers interested in developing automatic methods for image geo-localization, whether for commercial, academic, or military domains. Professionals involved in computer vision, computer graphics, photogrammetry, computational optimization, geographic information systems, and other related disciplines, will also benefit from the detailed coverage of this emerging field.

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