

# PE&RS

Photogrammetric Engineering

Remote Sensing

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## Inflight Calibration of SPOT CCD Detector Geometry

By simultaneously imaging the same area with the panchromatic sensors in the two independent instruments carried by the SPOT satellite, detector errors in one instrument can be measured by comparison with the image from the other instrument.

*Torbjörn Westin* .....1313

## Progressive Generation of Control Frameworks for Image Registration

An original scheme to automatically generate, in a progressive way, control point pairs for image-to-image registration is presented.

*Liang-Chien Chen and Liang-Hwei Lee* .....1321

## Image Alignment by Line Triples

The feasibility of using simple image features for image alignment has been demonstrated.

*Scott O. Mason and Kam W. Wong* .....1329

## Derivation and Applications of Probabilistic Measures of Class Membership from the Maximum-Likelihood Classification

Probabilistic measures of class membership derived in the maximum-likelihood classification convey valuable information on class membership properties and can enhance the output of the analysis.

*G. M. Foody, N. A. Campbell, N. M. Trodd, and T. F. Wood* .....1335

## Comparison of Systematic and Random Sampling for Estimating the Accuracy of Maps Generated from Remotely Sensed Data

A small simulation study showed that the usual standard error formula for the estimated Kappa coefficient of agreement can perform poorly for systematic designs.

*Stephen V. Stehman* .....1343

## Use of Aerial Photographs to Measure the Historical Areal Extent of Lake Erie Coastal Wetlands

Eleven sets of photos spanning 45 years were evaluated, and the areal extent of wetlands was compared to Lake Erie water levels.

*John Grimson Lyon and Richard G. Greene* .....1355

## Software Review: VGA-ERDAS, Version 7.5 .....1350

### PE&RS

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Cover Image—This digital orthophotomap at scale 1:12,000 of San Francisco, California shows the city's southern part, including the San Miguel Hills and San Bruno Mountain area, San Francisco Golf Club, Harding Park, and Daly City. The cartographic matching is a result of the use of the EUDICORT® (EUrosense Digital Cartographic ORThophoto) system for converting original aerial photographs into digital orthophotomaps.

The aerial photographs for the San Francisco map were taken in 1990 at a scale of 1:35,000. Digital orthophotomap production by means of the EUDICORT® system consists of three main steps: a *geometric correction* of the scanned original photographs, a *radiometric correction* for color enhancement, and a *mosaicking* of the different orthophoto images. Besides being printed together with cartographic information, the digital orthophoto data, which have a ground resolution of  $1.5 \times 1.5$  m, can also be used as a reference layer in Geographical Information Systems.

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