

AUGUST 2010 / VOL. 98 / NO. 8

# ONIFN

#### SPECIAL ISSUE

# INTERNET VISION

Edited by S. Avidan, S. Baker, and Y. Shan

Scene Reconstruction and Visualization From Community Photo Collections By N. Snavely, I. Simon, M. Goesele, R. Szeliski, and S. M. Seitz INVITED PAPER | Recent progress is described in digitizing and visualizing the world from data captured by people taking photos and uploading them to the web.

#### Infinite Images: Creating and Exploring a Large Photorealistic 1391 **Virtual Space**

By B. Kaneva, J. Sivic, A. Torralba, S. Avidan, and W. T. Freeman | INVITED PAPER | This proposed system uses 3-D-based navigation to browse large photo collections, and arrange them into themes, such as city streets or skylines, in a large image database.

1408 Toward Large-Scale Face Recognition Using Social Network Context By Z. Stone, T. Zickler, and T. Darrell INVITED PAPER | The authors of this paper believe that social incentives can be used to obtain numerous facial images of faces and they propose a computational method for using these images.

### 1416 Contextual Internet Multimedia Advertising

By T. Mei and X.-S. Hua

INVITED PAPER | Automated analysis of images is used to increase the effectiveness of advertising by maximizing the relevance of content and minimizing confusion about contextual information.

#### 1434 It's All About the Data

By T. L. Berg, A. Sorokin, G. Wang, D. A. Forsyth, D. Hoiem, I. Endres, and A. Farhadi INVITED PAPER | This paper explains how training data is important for many computer vision algorithms and presents case studies of how the Internet can be used to obtain high-quality data.

#### **Learning Object Categories From Internet Image Searches** 1453

By R. Fergus, L. Fei-Fei, P. Perona, and A. Zisserman INVITED PAPER | This paper shows how the results returned by an image search engine can be used to construct models from Internet images and use them for object recognition.

# **LabelMe: Online Image Annotation and Applications**

By A. Torralba, B. C. Russell, and J. Yuen INVITED PAPER | By developing a publicly available tool that allows users to use the Internet to quickly and easily annotate images, the authors were able to collect many detailed image descriptions.

# DEPARTMENTS

### 1363 POINT OF VIEW

Cyber-Physical Systems: Close **Encounters Between** Two Parallel Worlds By R. Poovendran

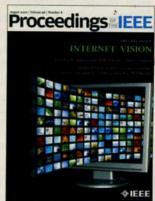
#### 1367 SCANNING THE ISSUE

Internet Vision By S. Avidan, S. Baker, and Y. Shan

# 1535 SCANNING OUR

**Electrical Engineering** Hall of Fame: Harry Nyquist By J. E. Brittain

1538 FUTURE SPECIAL ISSUES/SPECIAL SECTIONS



On the Cover: This month's cover illustrates the wide variety of images and multimedia information available today to convey the concept of Internet Vision, which can be defined as the field at the intersection of Computer Vision and the Internet.

[ Continued on page 1362>]



# SPECIAL ISSUE: INTERNET VISION

# 1485 I2T: Image Parsing to Text Description

By B. Z. Yao, X. Yang, L. Lin, M. W. Lee, and S.-C. Zhu | INVITED PAPER | The key component of this image parsing system is a database of annotated Internet data generated under the control of an independent organization.

# 1509 Image Interpretation Using Large Corpus: Wikipedia

By M. Rahurkar, S.-F. Tsai, C. Dagli, and T. S. Huang INVITED PAPER | This paper shows how to use the online Wikipedia encyclopedia to provide a method to represent high-level world knowledge in images.

# 1526 Vision of a Visipedia

By P. Perona

| INVITED PAPER | This paper envisions bringing together the knowhow and hard work of computer vision researchers into an online tool to form a repository of human understanding of visual imagery.

# **Proceedings**

# www.ieee.org/proceedings

Find the following information on our website.

How to Subscribe Journal Description

History

**Current Issue** 

Special Issue Schedule

Recent Highlights

The Publication Process

Information for Authors

Reader Opinions and Suggestions



### www.ieee.org

## MEMBERSHIP

Check out the many features available through the IEEE Membership Portal.

#### PUBLICATIONS

Find IEEE articles by using the search features of IEEE Xplore

#### SERVICES

The IEEE offers many services to Members, as well as other groups.

#### STANDARDS

The IEEE is the leader in the development of many industry standards.

### CONFERENCES

Search for the ideal IEEE Conference, on the subject of your choice

# CAREERS/JOBS

Find your next job through this IEEE service.