

# PATTERN ANALYSIS AND MACHINE INTELLIGENCE

## Editorial Board

### ASSOCIATE EDITOR-IN-CHIEF

DAVID FLEET  
Dept. of Computer Science  
University of Toronto  
D.L. Pratt Building, 6 King's College Rd.  
Toronto, Ontario M5S 3H5, CANADA  
[fleet@cs.toronto.edu](mailto:fleet@cs.toronto.edu)

### EDITOR-IN-CHIEF

DAVID J. KRIEGMAN  
Dept. of Computer Science & Engineering  
University of California, San Diego  
Applied Physics & Mathematics Bldg., 9500  
Gilman Drive  
La Jolla, CA 92093-0114 USA  
[kriegman@cs.ucsd.edu](mailto:kriegman@cs.ucsd.edu)

### ASSOCIATE EDITOR-IN-CHIEF

ZOUBIN GHAHRAMANI  
Department of Engineering  
University of Cambridge  
Trumpington Street  
Cambridge, CB2 1PZ U.K.  
[zoubin@eng.cam.ac.uk](mailto:zoubin@eng.cam.ac.uk)

SIMON BAKER  
Microsoft Research  
[sbaker@microsoft.com](mailto:sbaker@microsoft.com)

THOMAS HOFMANN  
Google Switzerland  
[thofmann@google.com](mailto:thofmann@google.com)

JIE LUO  
Eastman Kodak Company  
[jiebo.luo@kodak.com](mailto:jiebo.luo@kodak.com)

MARC POLLEFFEY  
ETH Zurich  
[marc.polleffey@inf.ethz.ch](mailto:marc.polleffey@inf.ethz.ch)

ALEXANDER J. SMOLA  
National ICT Australia  
[Alex.Smol@nicta.com.au](mailto:Alex.Smol@nicta.com.au)

SERGE BELONGIE  
University of California, San Diego  
[s.belongie@ieee.org](mailto:s.belongie@ieee.org)

DAVID HOGG  
University of Leeds  
[d.c.hogg@leeds.ac.uk](mailto:d.c.hogg@leeds.ac.uk)

YI MA  
University of Illinois  
[yima@uiuc.edu](mailto:yima@uiuc.edu)

SALIL PRABHAKAR  
Digital Persona Inc.  
[salilp@digitalpersona.com](mailto:salilp@digitalpersona.com)

ANUJ SRIVASTAVA  
Florida State University  
[anuj@stat.fsu.edu](mailto:anuj@stat.fsu.edu)

LEON BOTTOU  
NEC Labs America  
[leon@bottou.org](mailto:leon@bottou.org)

JIANYING HU  
IBM T.J. Watson Research Center  
[jiyu@us.ibm.com](mailto:jiyu@us.ibm.com)

B.S. MANJUNATH  
Univ. of California, Santa Barbara  
[manj@ece.ucsb.edu](mailto:manj@ece.ucsb.edu)

A.N. RAJAGOPALAN  
IIT Madras  
[raju@ee.iitm.ac.in](mailto:raju@ee.iitm.ac.in)

XIAOOU TANG  
The Chinese University of Hong Kong  
[xtang@ie.cuhk.edu.hk](mailto:xtang@ie.cuhk.edu.hk)

STEFAN CARLSSON  
KTH  
[stefanc@csc.kth.se](mailto:stefanc@csc.kth.se)

FREDRIK KAHL  
Lund University  
[fredrik@maths.lth.se](mailto:fredrik@maths.lth.se)

PETROS MARAGOS  
National Technical University of Athens  
[maragos@cs.ntua.gr](mailto:maragos@cs.ntua.gr)

NALINI RATHA  
IBM T.J. Watson Research Center  
[ratha@us.ibm.com](mailto:ratha@us.ibm.com)

PHILIP TORR  
Oxford Brookes University  
[phillip.torr@brookes.ac.uk](mailto:phillip.torr@brookes.ac.uk)

SUBHASIS CHAUDHURI  
Indian Institute of Technology  
[sc@ee.iitb.ac.in](mailto:sc@ee.iitb.ac.in)

CHANDRA KAMBHAMETTU  
University of Delaware  
[chandra@cis.udel.edu](mailto:chandra@cis.udel.edu)

ALEX MARTINEZ  
The Ohio State University  
[alex@ece.osu.edu](mailto:alex@ece.osu.edu)

GUILLERMO SAPIRO  
University of Minnesota  
[guille@ece.umn.edu](mailto:guille@ece.umn.edu)

BILL TRIGGS  
GRAVIR-INRIA  
[william.triggs@inrialpes.fr](mailto:william.triggs@inrialpes.fr)

DORIN COMANICIU  
Siemens Corporate Research  
[Dorin.Comanicu@siemens.com](mailto:Dorin.Comanicu@siemens.com)

SING BING KANG  
Microsoft Research  
[sbkang@microsoft.com](mailto:sbkang@microsoft.com)

JIRI MATAS  
Czech Technical University in Prague  
[matas@cmp.felk.cvut.cz](mailto:matas@cmp.felk.cvut.cz)

YOICHI SATO  
The University of Tokyo  
[ysato@iis.u-tokyo.ac.jp](mailto:ysato@iis.u-tokyo.ac.jp)

LUC VAN GOOL  
Katholieke Universiteit Leuven  
[vangoool@vision.ee.ethz.ch](mailto:vangoool@vision.ee.ethz.ch)

TREVOR DARRELL  
MIT CS & AL Laboratory  
[trevor@csail.mit.edu](mailto:trevor@csail.mit.edu)

JANA KOSECKA  
George Mason University  
[kosecka@cs.gmu.edu](mailto:kosecka@cs.gmu.edu)

MARINA MEILA  
University of Washington  
[mmp@stat.washington.edu](mailto:mmp@stat.washington.edu)

ERIC SAUND  
Palo Alto Research Center  
[sound@parc.com](mailto:sound@parc.com)

HARRY WECHSLER  
George Mason University  
[wechsler@cs.gmu.edu](mailto:wechsler@cs.gmu.edu)

FRANK DELLAERT  
Georgia Tech College of Computing  
[dellaert@cc.gatech.edu](mailto:dellaert@cc.gatech.edu)

KIRIAKOS N. KUTULAKOS  
University of Toronto  
[kyros@cs.toronto.edu](mailto:kyros@cs.toronto.edu)

KEVIN MURPHY  
University of British Columbia  
[murphyk@cs.ubc.ca](mailto:murphyk@cs.ubc.ca)

HARPREET S. SAWHNEY  
Sarnoff Corporation  
[hsawhney@sarnoff.com](mailto:hsawhney@sarnoff.com)

JOACHIM WEICKERT  
Saarland University  
[weickert@mia.uni-saarland.de](mailto:weickert@mia.uni-saarland.de)

MÁRIO A.T. FIGUEIREDO  
Instituto Superior Tecnico  
[mario.figueiredo@lx.it.pt](mailto:mario.figueiredo@lx.it.pt)

NEIL LAWRENCE  
University of Manchester  
[neill@cs.man.ac.uk](mailto:neill@cs.man.ac.uk)

LAWRENCE O'GORMAN  
Avaya Labs  
[logorman@avaya.com](mailto:logorman@avaya.com)

BERNHARD SCHÖLKOPF  
MPI for Biological Cybernetics  
[bernhard.schoelkopf@tuebingen.mpg.de](mailto:bernhard.schoelkopf@tuebingen.mpg.de)

MAX WELLING  
University of California  
[Email:welling@ics.uci.edu](mailto:Email:welling@ics.uci.edu)

GRAHAM FINLAYSON  
University of East Anglia  
[graham@cmp.uea.ac.uk](mailto:graham@cmp.uea.ac.uk)

DANIEL D. LEE  
University of Pennsylvania  
[ddlee@seas.upenn.edu](mailto:ddlee@seas.upenn.edu)

JOHN OLIENSIS  
Stevens Institute of Technology  
[oliensis@cs.stevens.edu](mailto:oliensis@cs.stevens.edu)

DALE SCHUURMANS  
University of Alberta  
[dale@cs.ualberta.ca](mailto:dale@cs.ualberta.ca)

MING-HSUAN YANG  
Honda Research Institute  
[myhang@ieee.org](mailto:myhang@ieee.org)

WOLFGANG FÖRSTNER  
Institut für Photogrammetrie  
[wf@ipb.uni-bonn.de](mailto:wf@ipb.uni-bonn.de)

STAN Z. LI  
National Lab of Pattern Recognition  
[szli@nlpr.ia.ac.cn](mailto:szli@nlpr.ia.ac.cn)

MARCELLO PELILLO  
Università Ca' Foscari di Venezia  
[pelillo@dsi.unive.it](mailto:pelillo@dsi.unive.it)

STAN SCLAROFF  
Boston University  
[sclaroff@cs.bu.edu](mailto:sclaroff@cs.bu.edu)

RAMIN ZABIH  
Cornell University  
[rdz@cs.cornell.edu](mailto:rdz@cs.cornell.edu)

PASCAL FUA  
EPFL  
[pascal.fua@epfl.ch](mailto:pascal.fua@epfl.ch)

MICHAEL LINDENBAUM  
Technion/Israel Institute of Technology  
[mic@cs.technion.ac.il](mailto:mic@cs.technion.ac.il)

PATRICK PEREZ  
Irisa/Inria-Rennes  
[perez@irisa.fr](mailto:perez@irisa.fr)

JIANBO SHI  
University of Pennsylvania  
[jshi@cis.upenn.edu](mailto:jshi@cis.upenn.edu)

SONG-CHUN ZHU  
Univ of California, Los Angeles  
[sczhu@stat.ucla.edu](mailto:sczhu@stat.ucla.edu)

MARTIAL HEBERT  
Carnegie Mellon University  
[Martial\\_Hebert@gibson.ius.cs.cmu.edu](mailto:Martial_Hebert@gibson.ius.cs.cmu.edu)

DAN LOPRESTI  
Lehigh University  
[lopresti@cse.lehigh.edu](mailto:lopresti@cse.lehigh.edu)

JONATHAN PHILLIPS  
NIST  
[jonathon@nist.gov](mailto:jonathon@nist.gov)

KALEEM SIDDIQI  
McGill University  
[siddiqi@cim.mcgill.ca](mailto:siddiqi@cim.mcgill.ca)

## IEEE COMPUTER SOCIETY

### Transactions Operations Committee

Vice President: SOREL REISMAN  
Transactions Operations Chair: STEVEN TANIMOTO

#### Members-at-Large

RICHARD H. ECKHOUSE  
VAN EDEN  
FRANK E. FERRANTE  
PAMELA JONES  
SIMON LIU  
PAOLO MONTUSCHI  
JON ROKNE

#### Transactions

Computational Biology & Bioinformatics  
Computers  
Dependable and Secure Computing  
Haptics  
Knowledge & Data Engineering  
Learning Technologies  
Mobile Computing  
Multimedia  
NanoBioscience  
Networking  
Parallel & Distributed Systems  
Pattern Analysis & Machine Intelligence  
Services Computing  
Software Engineering  
Very Large Scale Integration  
Visualization & Computer Graphics

#### Editors-in-Chief

DAN GUSFIELD  
FABRIZIO LOMBARDI  
VIRGIL D. GLIGOR  
J. EDWARD COLGATE  
XINDONG WU  
WOLFGANG NEJDL  
MANI SRIVASTAVA  
HONGJIANG ZHANG  
CARMELINA RUGGIERO  
DON TOWSLEY  
LAXMI BHUVAN  
DAVID J. KRIEGMAN  
L.J. ZHANG  
JEFF KRAMER  
N. RANGANATHAN  
THOMAS ERTL

#### Publishing Services Staff

Senior Manager, Publishing Services: ALICIA L. STICKLEY  
Transactions Production Supervisor: EKIN ESPIRU  
Senior Production Editor: JULIE HICKS  
Digital Production Supervisor: STEVE WAREHAM  
Digital Production Specialist: MARK BARTOSIK  
Associate Manager of Peer Review and Publication Administration: JENNIFER CARRUTH  
Publications Coordinator: ELAINE STEPHENSON