



# ICFHR 2008



*Eleventh International Conference on Frontiers in Handwriting Recognition  
Montréal, Québec - Canada  
August 19-21, 2008*

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## **SESSION KS1: Keynote Speech 1**

**Date:** August 19, 2008

**Time:** 09:20 - 10:20

**Location:** J.A. De Sève Amphitheatre

## **SESSION S1.1: Offline Recognition**

**Date:** August 19, 2008

**Time:** 10:40 - 12:00

**Location:** J.A. De Sève Amphitheatre

- 10:40 [1146] - EVALUATION OF INCREMENTAL LEARNING ALGORITHMS FOR AN HMM-BASED HANDWRITTEN ISOLATED DIGITS RECOGNIZE  
Paulo Cavalin, Robert Sabourin, *École de Technologie Supérieure, Canada*; Ching Y. Suen, *Concordia University, Canada*; Alceu Britto, *Pontifícia Universidade Católica do Paraná, Brazil*
- 11:00 [1015] - LOCAL GRADIENT HISTOGRAM FEATURES FOR WORD SPOTTING IN UNCONSTRAINED HANDWRITTEN DOCUMENT  
Jose A. Rodriguez, *Universitat Autònoma de Barcelona, Spain*; Florent Perronnin, *Xerox Research Centre Europe, France*
- 11:20 [1038] - UNCONSTRAINED LANGUAGE IDENTIFICATION USING A SHAPE CODEBOOK  
Guangyu Zhu, Xiaodong Yu, Yi Li, David Doermann, *University of Maryland, United States*
- 11:40 [1130] - EFFICIENT SEARCH STRATEGY IN STRUCTURAL ANALYSIS FOR HANDWRITTEN MATHEMATICAL EXPRESSION RECOGNITION  
Taik Heon Rhee, Jin Hyung Kim, *Korea Advanced Institute of Science and Technology, South Korea*

## **SESSION S1.2: Classification / Decision Theory**

**Date:** August 19, 2008

**Time:** 13:40 - 15:00

**Location:** J.A. De Sève Amphitheatre

- 13:40 [1004] - INCLUDING LANGUAGE MODEL INFORMATION IN THE COMBINATION OF HANDWRITTEN TEXT LINE RECOGNISER  
Roman Bertolami, Horst Bunke, *University of Bern, Switzerland*
- 14:00 [1010] - COMBINING ON-LINE AND OFF-LINE BIDIRECTIONAL LONG SHORT-TERM MEMORY NETWORKS FOR HANDWRITTEN TEXT LINE RECOGNITION  
Marcus Liwicki, *DFKI, Germany*; Horst Bunke, *IAM, Switzerland*
- 14:20 [1068] - PHRASE BASED DIRECT MODEL FOR IMPROVING HANDWRITING RECOGNITION ACCURACIE!  
Faisal Farooq, Damien Jose, Venu Govindaraju, *SUNY at Buffalo, United States*
- 14:40 [1098] - MAX-MARGIN LEARNING OF GAUSSIAN MIXTURES WITH SEQUENTIAL MINIMAL OPTIMIZATION!  
Trinh M. T. Do, Thierry Artières, *Université Pierre et Marie Curie, France*

## **SESSION PS.1: Poster Session I**

**Date:** August 19, 2008

**Time:** 15:00 - 16:00

**Location:** Concordia Library Building Atrium

- [1007] - COMBINING GLOBAL AND LOCAL FEATURES FOR WRITER IDENTIFICATION!  
Imran Siddiqi, Nicole Vincent, *CRIP5-SIP University Paris Descartes, France*
- [1031] - ON THE DESIGN OF OPTIMAL ZONING FOR PATTERN CLASSIFICATION  
Anna Ferrante, Sebastiano Impedovo, Giuseppe Pirlo, Claudia Adamita Trullo, *University of Bari, Italy*
- [1032] - CALLIGRAPHIC BEAUTIFICATION OF HANDWRITTEN CHINESE CHARACTERS: A PATTERNIZED APPROACH TO HANDWRITING  
Xinghua Zhu, Lianwen Jin, *School of Electronics and Information Engineering, SCUT, China*
- [1036] - GLOBAL/LOCAL AFFINE TRANSFORMATION CORRELATION FOR HANDWRITTEN CHARACTER RECOGNITION AS DISTORTION-TOLERANT MATCHING  
Toru Wakahara, *Hosei University, Japan*



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- [1037] - A MULTI-STREAM HMM-BASED APPROACH FOR OFF-LINE MULTI-SCRIPT HANDWRITTEN WORD RECOGNITION  
 Youstri Kessentini, Thierry Paquet, *LITIS Laboratory, France* ; AbdelMajid Benhamadou, *MIRACL Laboratory, Tunisia*
- [1044] - ONLINE HANDWRITING RECOGNITION OF ETHIOPIC SCRIPT  
 Yaregal Assabie, Josef Bigun, *Halmstad University, Sweden*
- [1045] - RECOGNITION-BASED VS SYNTAX-DIRECTED MODELS FOR NUMERICAL FIELD EXTRACTION IN HANDWRITTEN DOCUMENT  
 Clément Chatelain, Laurent Heutte, Thierry Paquet, *LITIS Lab., France*
- [1046] - SCUT-COUCH2008: A COMPREHENSIVE ONLINE UNCONSTRAINED CHINESE HANDWRITING DATASET  
 Yunyang Li, Lianwen Jin, Xinghua Zhu, Teng Long, *Department of Electronics and Information Engineering, South China University of Technology, China*
- [1047] - THRESHOLD EQUALIZATION METHODS FOR ON-LINE SIGNATURE VERIFICATION  
 Shouta Koike, Isao Nakanishi, Yoshio Itoh, *Tottori University, Japan*
- [1050] - INCORPORATING TANGENT VECTORS IN SVM KERNELS FOR HANDWRITTEN DIGIT RECOGNITION  
 Hassiba Nemmour, Youcef Chibani, *USTHB, Algeria*
- [1052] - REJECT RULES AND COMBINATION METHODS TO IMPROVE ARABIC HANDWRITTEN WORD RECOGNIZERS  
 Haikal El Abed, Volker Märgner, *TU Braunschweig / Institute for Communications Technology (IfN), Germany*
- [1053] - RECOGNITION OF HANDWRITTEN HISTORICAL DOCUMENTS: HMM-ADAPTATION VS. WRITER SPECIFIC TRAINING  
 Emanuel Indermühle, *University of Bern, Switzerland* ; Marcus Liwicki, *DFKI, Germany* ; Horst Bunke, *University of Bern, Switzerland*
- [1030] - HANDWRITTEN SIGNATURE VERIFICATION BY MULTIPLE REFERENCE SET  
 Donato Impedovo, *Polytechnic of Bari, Italy* ; Raffaele Modugno, Giuseppe Pirlo, Erasmo Stasolla, *University of Bari, Italy*
- [1028] - HANDWRITTEN EMAIL ADDRESS RECOGNITION WITH SYNTAX AND LEXICON  
 Danian Zheng, Jun Sun, Satoshi Naoi, *Fujitsu R&D Center Co., Ltd., China* ; Hotta Yoshinobu, *Fujitsu Laboratories Ltd., Japan* ; Minagawa Akihiro, *Fujitsu Laboratories Ltd., China* ; Suwa Misako, Fujimoto Katsuhito, *Fujitsu Laboratories Ltd., Japan*
- [1008] - A HOLISTIC APPROACH TO HANDWRITTEN NUMERAL PAIR RECOGNITION BASED ON GENERATIVE MODELS OF NUMERAL PAIR  
 Yanjie Wang, Xiabi Liu, Yunde Jia, *Beijing Institute of Technology, China*
- [1009] - A SOFT TARGET LEARNING METHOD OF POSTERIOR PSEUDO-PROBABILITIES BASED CLASSIFIERS WITH ITS APPLICATION TO HANDWRITTEN DIGIT RECOGNITION  
 Xuefeng Chen, Xiabi Liu, Yunde Jia, *Beijing Institute of Technology, China*
- [1011] - BRAZILIAN FORENSIC LETTER DATABASE  
 Cinthia O. A. Freitas, Luiz E. S. Oliveira, *PUCPR, Brazil* ; Robert Sabourin, *ETS, Canada* ; Flavio Bortolozzi, *PUCPR, Brazil*
- [1013] - HMM-BASED OFFLINE RECOGNITION OF HANDWRITTEN WORDS CROSSED OUT WITH DIFFERENT KINDS OF STROKE  
 Laurence Likforman-Sulem, *ENST/Telecom ParisTech, France* ; Alessandro Vinciarelli, *IDIA, Switzerland*
- [1014] - STROKE WIDTH INDEPENDENT FEATURE FOR WRITER IDENTIFICATION AND HANDWRITING CLASSIFICATION  
 Imran Siddiqi, Nicole Vincent, *CRIP5-SIP University Paris Descartes, France*
- [1016] - SCORE NORMALIZATION FOR HMM-BASED WORD SPOTTING USING A UNIVERSAL BACKGROUND MODEL  
 Jose A. Rodriguez, *Universitat Autònoma de Barcelona, Spain* ; Florent Perronnin, *Xerox Research Centre Europe, France*
- [1017] - TWO DIMENSIONAL PRINCIPAL COMPONENT ANALYSIS FOR ONLINE TAMIL CHARACTER RECOGNITION  
 Suresh Sundaram, Ramakrishnan A G, *Indian Institute of Science, India*
- [1019] - OCR-CLASSIFICATION INTERACTION MATHEMATICAL MODEL  
 Jean-Marie Brodin, *A2iA, France*
- [1021] - SEMI-TEXT-INDEPENDENT WRITER VERIFICATION OF CHINESE HANDWRITING  
 Xin Li, Xiaoqing Ding, Xianliang Wang, *Tsinghua University, China*



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[1023] - MULTIPLE FILTER MASK LEARNING OF FEATURE EXTRACTION IN CHARACTER RECOGNITION  
Yoshiaki Kurosawa, *Toshiba Solutions Co., Japan*

[1026] - A NEW METHODOLOGY TO IMPROVE MYOELECTRIC SIGNAL PROCESSING USING HANDWRITING  
Moussa Djioua, Réjean Plamondon, *École Polytechnique de Montréal, Canada*

[1054] - IAUT/PHCN :ISLAMIC AZAD UNIVERSITY OF TEHRAN / PERSIAN HANDWRITTEN CITY NAMES, A VERY LARGE DATABASE OF HANDWRITTEN PERSIAN WORD  
Amir Masoud Bidgoli, Mehdi Sarhadi, *Islamic Azad University of Tehran North branch, Iran*

**SESSION S1.3: Historical Document Processing**

**Date:** August 19, 2008

**Time:** 16:00 - 17:00

**Location:** J.A. De Sève Amphitheatre

16:00 [1059] - GLOBAL AND LOCAL SHAPE PRIOR FOR VARIATIONAL SEGMENTATION OF DEGRADED HISTORICAL CHARACTER  
Itay Bar-Yosef, Klara Kedem, Its'hak Dinstein, Alik Mokeichev, *Ben-Gurion University, Israel*

16:20 [1138] - EFDN: RESTORATION OF SINGLE-SIDED LOW-QUALITY DOCUMENT IMAGE  
Reza Farrahi-Moghaddam, Mohamed Cheriet, *ETS, Canada*

16:40 [1152] - A HIDDEN MARKOV MODEL FOR ALPHABET-SOUP WORD RECOGNITION  
Shaolei Feng, *University of Massachusetts, Amherst, United States*; Nicholas Howe, *Smith College, United States*; R. Manmatha, *University of Massachusetts, Amherst, United States*

**SESSION S1.4: Forensics**

**Date:** August 19, 2008

**Time:** 17:00 - 17:40

**Location:** J.A. De Sève Amphitheatre

17:00 [1020] - AUTOMATIC EXTRACTION OF SIGMA-LOGNORMAL PARAMETERS ON SIGNATURE  
Christian O'Reilly, Réjean Plamondon, *Laboratoire Scribens - École Polytechnique de Montreal, Canada*

17:20 [1157] - ONLINE SIGNATURE VERIFICATION USING SEGMENT-TO-SEGMENT MATCHING  
Jian Zhang, Sei-ichiro Kamata, *Waseda University, Japan*



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**SESSION S2.1: Segmentation**

**Date:** August 20, 2008

**Time:** 08:40 - 10:20

**Location:** J.A. De Sève Amphitheatre

- 08:40 [1022] - HANDWRITTEN TEXT LINE SEGMENTATION BY CLUSTERING WITH DISTANCE METRIC LEARNING  
 Yin Fei, Liu Cheng-Lin, *National Laboratory of Pattern Recognition, Chinese Academy of Sciences, China*
- 09:00 [1087] - A METHOD FOR COMBINING COMPLEMENTARY TECHNIQUES FOR DOCUMENT IMAGE SEGMENTATION  
 Nikolaos Stamatopoulos, Basilis Gatos, Stavros Perantonis, *National Center for Scientific Research "Demokritos", Greece*
- 09:20 [1111] - MORPHOLOGY BASED HANDWRITTEN LINE SEGMENTATION USING FOREGROUND AND BACKGROUND INFORMATION  
 Partha Roy, *CVC, UAB, Spain* ; Umapada Pal, *Indian Statistical Institute, India* ; Josep LLados, *CVC, UAB, Spain*
- 09:40 [1115] - LINE AND WORD SEGMENTATION OF HANDWRITTEN DOCUMENTS  
 Georgios Louloudis, *Department of Informatics and Telecommunications, University of Athens, Greece* ; Basilis Gatos, Ioannis Pratikakis, *Institute of Informatics and Telecommunications, National Center for Scientific Research "Demokritos", Greece* ; Constantin Halatsis, *Department of Informatics and Telecommunications, University of Athens, Greece*
- 10:00 [1132] - TEXT LINE SEGMENTATION IN HANDWRITTEN DOCUMENTS USING MUMFORD-SHAH MODEL  
 Xiaojun Du, Wumo Pan, Tien D. Bui, *Department of Computer Science and Software Engineering, Concordia University, Canada*

**SESSION S2.2: Arabic Related**

**Date:** August 20, 2008

**Time:** 10:40 - 12:00

**Location:** J.A. De Sève Amphitheatre

- 10:40 [1055] - ON-LINE ARABIC HANDWRITING RECOGNITION WITH TEMPLATE  
 Jakob Sternby, *Centre for Mathematical Sciences, Sweden* ; Jonas Morwing, Jonas Andersson, Christer Friberg, *Zi Decuma AB, Sweden*
- 11:06 [1100] - HOW TO CONVERT A LATIN HANDWRITING RECOGNITION SYSTEM TO ARABIC  
 Marc-Peter Schambach, Jörg Rottland, *Siemens AG, Germany* ; Théophile Alary, *Université de Technologie Troyes, France*
- 11:32 [1134] - KEYWORD SEARCHING FOR ARABIC HANDWRITTEN DOCUMENTS  
 Raid Saabni, Jihad El-Sana, *Ben-Guion University of the Negev, Israel*

**SESSION S2.3: Multilingual Recognition**

**Date:** August 20, 2008

**Time:** 13:40 - 15:00

**Location:** J.A. De Sève Amphitheatre

- 13:40 [1027] - A NEW BENCHMARK ON THE RECOGNITION OF HANDWRITTEN BANGLA AND FARSI NUMERAL CHARACTER  
 Cheng-Lin Liu, *Institute of Automation, Chinese Academy of Sciences, China* ; Ching Y. Suen, *CENPARMI, Concordia University, Canada*
- 14:00 [1062] - MODELING INVERSE COVARIANCE MATRICES BY EXPANSION OF TIED BASIS MATRICES FOR ONLINE HANDWRITTEN CHINESE CHARACTER RECOGNITION  
 Yongqiang Wang, *Department of Computer Science, The University of Hong Kong, Hong Kong* ; Qiang Huo, *Microsoft Research Asia, China*
- 14:20 [1076] - BANGLA HANDWRITTEN PIN CODE STRING RECOGNITION FOR INDIAN POSTAL AUTOMATION  
 Umopada Pal, *Indian Statistical Institute, India* ; Kaushik Roy, *West Bengal University of Technology, India* ; Fumitaka Kimura, *Mie University, Japan*
- 14:40 [1084] - THE NICICON DATABASE OF HANDWRITTEN ICONS FOR CRISIS MANAGEMENT  
 Ralph Niels, Don Willems, Louis Vuurpijl, *Nijmegen Institute for Cognition and Information, Netherlands*



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### SESSION PS.2: Poster Session II

**Date:** August 20, 2008

**Time:** 15:00 - 16:00

**Location:** Concordia Library Building Atrium

[1058] - A NEW APPROACH FOR THE EXTRACTION OF HANDWRITING PERCEPTUAL CODES USING FUZZY LOGIC  
Sourour Njah, Hala Bezine, *ENIS-REGIM, Tunisia*; Adel M. Alimi, *enis-regim, Tunisia*

[1089] - CAMERA-BASED WHITEBOARD READING: NEW APPROACHES TO A CHALLENGING TASK  
Thomas Plötz, *Robotics Research Institute, Dortmund University of Technology, Germany*; Christian Thureau, Gernot A. Fink, *Department of Computer Science, Dortmund University of Technology, Germany*

[1091] - A SKEW-TOLERANT STRATEGY AND CONFIDENCE MEASURE FOR K-NN CLASSIFICATION OF ONLINE HANDWRITTEN CHARACTER  
Vandana Roy, Sriganesh Madhvanath, *Hewlett Packard Labs, India*

[1093] - IFN/FARSI-DATABASE: A DATABASE OF FARSI HANDWRITTEN CITY NAME:  
Saeed Mozaffari, *Faculty of Engineering, Semnan University, Iran*; Haikal El Abed, Volker Märgner, *TU Braunschweig / Institute for Communications Technology (IfN), Germany*; Karim Faez, Ali Amirshahi, *Amirkabir University of Technology, Tehran, Iran*

[1094] - A TWO-STAGE APPROACH FOR SEGMENTATION OF HANDWRITTEN BANGLA WORD IMAGE:  
Ram Sarkar, Nibaran Das, Subhadip Basu, Mahantapas Kundu, Mita Nasipuri, Dipak Kumar Basu, *Jadavpur University, India*

[1096] - OFF-LINE SIGNATURE VERIFICATION USING CONTOUR FEATURE:  
Almudena Gilperez, Fernando Alonso-Fernandez, Susana Pecharroman, Julian Fierrez, Javier Ortega-Garcia, *Universidad Autonoma de Madrid, Spain*

[1101] - A TEMPLATE MATCHING DISTANCE FOR RECOGNITION OF ON-LINE MATHEMATICAL SYMBOL  
Fotini Simistira, *National Technical University of Athens, Greece*; Vassilis Katsouros, George Carayannis, *Institute for Language and Speech Processing of Athena, Greece*

[1102] - SEGMENTATION OF HANDWRITTEN NUMERAL STRINGS BY INTRODUCTION OF STRUCTURAL MODEL  
Misako Suwa, *Fujitsu Laboratories LTD., Japan*

[1103] - USING AN ARTIFICIAL NEURAL NETWORK APPROACH FOR OFF-LINE SENTENCE SEGMENTATION  
César Carvalho, George Cavalcanti, *Federal University of Pernambuco - UFPE, Brazil*

[1105] - DYNAMIC SELECTION OF CLASSIFIERS: WHEN FEW ARE BETTER THAN ALL  
Claudio De Stefano, *Università degli Studi di Cassino, Italy*; Antonio Della Cioppa, Angelo Marcelli, *University of Salerno, Italy*

[1106] - DETECTING AND TREATING INVASION IN THE COURTESY AMOUNT FIELD ON BANK CHECKS  
Byron L. D. Bezerra, George Cavalcanti, Cleber Zanchettin, Juliano C. B. Rabelo, *AiLeader Pattern Recognition, Brazil*

[1108] - RECOGNITION OF EYES-FREE HANDWRITING INPUT FOR PEN AND TOUCH INTERFACES  
Bharath A, Sriganesh Madhvanath, *Hewlett-Packard Labs, India*

[1085] - ON-LINE HANDWRITTEN JAPANESE TEXT RECOGNITION BY IMPROVING SEGMENTATION QUALITY  
Bilan Zhu, Masaki Nakagawa, *Tokyo University of Agriculture and Technology, Japan*

[1082] - OFF-LINE SIGNATURE VERIFICATION BASED ON HIGH PRESSURE POLAR DISTRIBUTION  
Jesus F. Vargas, *Universidad de Antioquia - Universidad de Las Palmas de Gran Canaria, Colombia*; Miguel A. Ferrer, Carlos M. Travieso, Jesus B. Alonso, *Universidad de las Palmas de Gran Canaria, Spain*

[1060] - A NEW ADABOOST ALGORITHM FOR LARGE SCALE CLASSIFICATION AND ITS APPLICATION TO CHINESE HANDWRITTEN CHARACTER RECOGNITION  
Qiang Fu, Xiaoqing Ding, Changsong Liu, *Tsinghua University, China*

[1061] - A MODELLED CLASSIFICATION APPROACH TO THE AUTOMATIC ANALYSIS OF HAND DRAWN NEUROPSYCHOLOGICAL TEST  
Richard Guest, *University of Kent, United Kingdom*



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[1063] - AN ANALYTIC SCHEME FOR ONLINE HANDWRITTEN BANGLA CURSIVE WORD RECOGNITION  
Ujjwal Bhattacharya, *Indian Statistical Institute, India*; Aditya Nigam, Yogesh Rawat, *Banaras Hindu University, India*; Swapan Parui, *Indian Statistical Institute, India*

[1064] - INCORPORATING SIGNATURE VERIFICATION ON HANDHELD DEVICES WITH USER-DEPENDENT HIDDEN MARKOV MODEL  
Marcos Martinez-Diaz, Julian Fierrez, Javier Ortega-Garcia, *ATVS - Biometric Recognition Group, UAM, Spain*

[1067] - NOVEL STATISTICAL DESCRIPTION FOR THE STRUCTURE OF ISOLATED FARSI/ARABIC HANDWRITTEN CHARACTER  
Majid Ziaratban, Karim Faez, Farshid Allahveiradi, *Amirkabir University of Technology, Iran*

[1072] - FEATURE SET SELECTION AND WEIGHTING FOR LEGAL AMOUNT RECOGNITION ON BRAZILIAN BANK CHECK  
Adélia Barros, George Cavalcanti, *Center of Informatics, UFPE, Brazil*

[1075] - CONTINUOUS CHINESE HANDWRITING RECOGNITION WITH LANGUAGE MODEL  
Yanming Zou, *NOKIA, China*; Kun Yu, Kongqiao Wang, *Nokia, China*

[1077] - THE ON/OFF (LMCA) DUAL ARABIC HANDWRITING DATABASE  
Monji Kherallah, Abdelkarim El-Baati, *REGIM, Tunisia*; Haikal El Abed, *Technical University Braunschweig, Germany*; Adel M. Alimi, *REGIM, Tunisia*

[1078] - TEXT DEPENDENT WRITER VERIFICATION USING BOOSTING  
Sachin Gupta, Anoop Namboodiri, *International Institute of Information Technology, India*

[1079] - SYNTHESIS OF INDIVIDUAL HANDWRITING IN BANGLA SCRIP  
Bidyut Baran Chaudhuri, *Indian Statistical Institute, India*; Abhisek Kundu, *CSE Department, Jadavpur University, India*

[1080] - ACCURACY IMPROVEMENT OF DEVNAGARI CHARACTER RECOGNITION COMBINING SVM AND MQDI  
Umapada Pal, Sukalpa Chanda, *Indian Statistical Institute, India*; Tetsushi Wakabayashi, Fumitaka Kimura, *Mie University, Japan*

[1114] - LAYOUT ANALYSIS OF HANDWRITTEN LETTERS BASED ON TEXTURAL AND SPATIAL INFORMATION AND A 2D MARKOVIAN  
Mélanie Lemaitre, *ULCO/LIL, France*; Emmanuèle Grosicki, Edouard Geoffrois, *DGA/CEP/GIP, France*; Françoise Prêteux, *TELECOM Sud Paris/Dpt Artemis, France*

**SESSION S2.4: Applications**

**Date:** August 20, 2008

**Time:** 16:00 - 17:00

**Location:** J.A. De Séve Amphitheatre

16:00 [1071] - GENERATION AND PERFORMANCE EVALUATION OF SYNTHETIC HANDWRITTEN CAPTCHAs  
Achint Thomas, Venu Govindaraju, *CEDAR, CUBS, United States*

16:20 [1095] - TRACING OF HANDWRITING ON PRINTED DOCUMENT BY VIDEO CAMERA  
Jae-Hyun Seok, *KAIST, South Korea*; Simon Levasseur, *University of Technologies of Belfort-Montbéliard, France*; Kee-Eung Kim, Jin Hyung Kim, *KAIST, South Korea*

16:40 [1116] - LINE-MEMBERS - A NOVEL FEATURE IN ON-LINE WHITEBOARD NOTE RECOGNITION  
Joachim Schenk, Johannes Lenz, Gerhard Rigoll, *TU München, Germany*



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**SESSION KS2: Keynote Speech 2**

**Date:** August 21, 2008

**Time:** 08:40 - 09:40

**Location:** J.A. De Sève Amphitheatre

**SESSION S3.1: Writer Identification**

**Date:** August 21, 2008

**Time:** 09:40 - 10:20

**Location:** J.A. De Sève Amphitheatre

09:40 [1070] - ONLINE WRITER IDENTIFICATION USING FUZZY C-MEANS CLUSTERING OF CHARACTER PROTOTYPE

Guo Xian Tan, *Nanyang Technological University, Singapore*; Christian Viard-Gaudin, *Ecole Polytechnique de l'universite de Nantes, France*; Alex C. Kot, *Nanyang Technological University, Singapore*

10:00 [1135] - WRITER IDENTIFICATION THROUGH INFORMATION RETRIEVAL: THE ALLOGRAPH WEIGHT VECTOR

Ralph Niels, Franc Grootjen, Louis Vuurpijl, *Nijmegen Institute for Cognition and Information, Netherlands*

**SESSION S3.2: Online Recognition**

**Date:** August 21, 2008

**Time:** 10:40 - 12:00

**Location:** J.A. De Sève Amphitheatre

10:40 [1040] - A PROBABILISTIC METHOD FOR KEYWORD RETRIEVAL IN HANDWRITTEN DOCUMENT IMAGE

Huairguo Cao, Anurag Bhardwaj, Venu Govindaraju, *CUBS, University at Buffalo, United States*

11:00 [1056] - HAND-DRAWN ELECTRIC CIRCUIT DIAGRAM UNDERSTANDING USING 2D DYNAMIC PROGRAMMING

Guihuan Feng, Zhengxing Sun, *Nanjing University, China*; Christian Viard-Gaudin, *Ecole Polytechnique de l'Université de Nantes, France*

11:20 [1065] - INCREMENTAL INTERPRETATION OF ON-LINE HAND-DRAWN STRUCTURED DOCUMENTS

Sébastien Macé, Eric Anquetil, *IRISA - INSA, France*

11:40 [1156] - FEATURE DESYNCHRONIZATION IN ONLINE CHARACTER RECOGNITION

Seichi Uchida, Kazuya Niyagawa, Hiroaki Sakoe, *Kyushu University, Japan*

**SESSION S3.3: Classification / Decision Theory**

**Date:** August 21, 2008

**Time:** 13:40 - 15:00

**Location:** J.A. De Sève Amphitheatre

13:40 [1099] - MODEL SELECTION WITH SUPPORT VECTOR MACHINES

Trinh M. T. Do, Thierry Artières, *Université Pierre et Marie Curie, France*

14:00 [1136] - MODEL SELECTION FOR LS-SVM : APPLICATION TO HANDWRITING RECOGNITION

Mathias Adankon, Mohamed Cheriet, *ETS, Canada*

14:20 [1158] - INTEGRATING PRIOR DOMAIN KNOWLEDGE INTO DISCRIMINATIVE LEARNING USING PHANTOM EXAMPLE

Shiau Hong Lim, Li-Lun Wang, Gerald DeJong, *University of Illinois, Urbana-Champaign, United States*

14:40 [1137] - PROTOTYPE INTEGRATION IN OFF-LINE HANDWRITING RECOGNITION ADAPTATION

Gregory R. Ball, Sargur Srihari, *Center of Excellence for Document Analysis and Recognition, United States*



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**SESSION PS.3: Poster Session III**

**Date:** August 21, 2008

**Time:** 15:00 - 16:00

**Location:** Concordia Library Building Atrium

- [1117] - HIERARCHICAL CLASSIFICATION OF HANDWRITTEN CHARACTERS BASED ON NOVEL STRUCTURAL FEATURE  
Giorgos Vamvakas, Basilis Gatos, Stavros Perantonis, *NCSR "Demokritos", Greece*
- [1144] - ALLWRITE: THE FIRST INTERNET-BASED PLATFORM FOR ON-DEMAND BENCHMARKING HANDWRITING RECOGNITION SYSTEM  
Matthieu Carré, Françoise Prêteux, Benoît Le Bonhomme, *TELECOM & Management SudParis / ARTEMIS, France*
- [1148] - FAST ONLINE INCREMENTAL LEARNING WITH FEW EXAMPLES FOR ONLINE HANDWRITTEN CHARACTER RECOGNITION  
Abdullah Almaksour, Harold Mouchère, Eric Anquetil, *IRISA/INSA de Rennes, France*
- [1149] - A PRIORITY-DRIVEN GENERAL APPROACH OF SEGMENTATION-RECOGNITION OF CONNECTED SYMBOLS  
Christophe Renaudin, Yann Ricquebourg, Jean Camillerapp, *IRISA / INSA de Rennes, France*
- [1151] - A NEW MULTIPURPOSE COMPREHENSIVE DATABASE FOR HANDWRITTEN DARI RECOGNITION  
M. Ismail Shah, Javad Sadri, Ching Y. Suen, Nicola Nobile, *CENPARMI, Concordia University, Canada*
- [1153] - DETECTION AND RECONSTRUCTION OF CONTACT SHAPE FOR CALLIGRAPHY EDUCATION BY USING HORIZON VIEW CAMERA  
Kazuhiko Yamamoto, Kensuke Tobitani, *Gifu University, Japan*
- [1159] - BIOMETRIC KEY GENERATION USING PSEUDO-SIGNATURES  
Lucas Ballard, *Johns Hopkins University, United States*; Jin Chen, Daniel Lopresti, *Lehigh University, United States*; Fabian Monrose, *Johns Hopkins University, United States*
- [1160] - WRITER-INDEPENDENT OFFLINE RECOGNITION OF HANDWRITTEN ETHIOPIAN CHARACTER  
Yaregal Assabie, Josef Bigun, *Halmstad University, Sweden*
- [1162] - 2D MARKOVIAN MODELS FOR DOCUMENT STRUCTURE ANALYSIS  
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