

Newsletter

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It is my great pleasure to begin my term as the President of the IEEE Biometrics Council this month (January 2013). I feel truly privileged to have had the opportunity to serve the biometrics community and contribute to the operation of the Council. I am very proud of having a very strong Executive Committee (ExCo) to work with. Please join me in welcoming Ajay Kumar as VP Publications and Arun Ross as VP Education who have been re-elected and start their second term in the Council. They join current VPs Ioannis Kakadiaris (for Technical Activities), Sudeep Sarkar (for Conferences) and Stephanie Schuckers (for Finances) as members of the new ExCo.



2012 has been one of the most prosperous years for the Council with a number of new initiatives and collaborations to promote biometrics. Last year the Council initiated the Best Paper Awards, co-sponsored seven technical conferences, introduced the Distinguished Lecture Program (DLP), and expanded the outreach with new collaborations.

The success of the Council is clearly the result of the collective efforts and dedications of many individuals. In particular, I thankfully acknowledge my predecessor Dr. Nalini Ratha for his capable leadership of and significant contributions to the Council. He has tirelessly worked in promoting the Council across the various IEEE societies. It is very fortunate that Nalini will continue to serve on the ExCo as the immediate past president.

Looking back, biometrics has attracted much attention from all walks of life and significant progress has been made in both research and applications. Looking ahead, biometrics is increasingly seen as a key enabling technology in our fast changing world and the IEEE Biometrics Council is best positioned to play a leading role in promoting biometrics. There are new challenges that require our due attention and joint efforts to further enhance the visibility of the Council. Such challenges require the introduction of new educational programs, technical collaborations to bring synergy, and new efforts to help researchers to generate funding for research on advanced biometrics technologies. We need to establish wider and closer partnerships with relevant stakeholders to ensure a healthy and prosperous development of biometrics.

I look forward to working with you all towards such efforts and making the IEEE Biometrics Council a great success story in promoting biometrics technologies for the mankind.

Tieniu Tan, President, IEEE Biometrics Council

Spotlight



The [Federal Data Protection and Information Commissioner \(FDPIC\)](#) is an independent control entity in Switzerland which provides monitoring for data protection in public federal government positions and at corporations, and telecommunications and postal services. The federal commissioner in Switzerland is responsible not only for data protection but also for the freedom of information. As for freedom of information, he is also responsible for informing and advising private citizens on how to gain access to official documents, advising authorities and federal departments on the implementation of the Transparency Act and other functions, which are of vital importance in promoting principles of transparency in Switzerland and

abroad.

Mr. Hanspeter Thür has been Federal Data Protection Commissioner since September 2001 and has made great contributions to the business of data protection and freedom of information. He has been in the focus recently for pro active approach in safeguarding citizens privacy while handling biometrics data. We have interviewed him on some widely concerned questions and have got very useful answers and advice. These questions and answers are detailed in our spotlight section on the next two pages.

Spotlight: Biometrics Security and Privacy Protection



INTERVIEW QUESTION

Hanspeter Thür
Federal Data Protection and Information Commissioner, Switzerland

There have been some concerns in the biometrics industry about the attempts to classify biometric data as sensitive and private. The draft Regulation for new EU policy framework on privacy and data protection does not classify biometric data as a "special category of data" (falling into Article 9 of the draft Regulation) but poses additional requirements on data protection impact assessment (DPIA). Are there any guidelines from FDPIC to differentiate biometrics data against other well-established categories of personal data?

In Switzerland, there exists no specific regulation with regard to biometrics. Biometric data must be processed in accordance with the Federal Act of 19 June 1992 on Data Protection (FADP). The FDPIC has also published a guide concerning biometric recognition systems (unfortunately, this guide is only available in German, French and Italian).

The FDPIC considers biometric data as a "special category of personal data": It is permanently connected with a person and can't be easily changed in case of abuse. Some biometric data is even qualified as sensitive personal data. Therefore, the FDPIC makes high demands on data security, information/transparency and proportionality of the biometric data procession.

The Federal Supreme Court (Bundesgericht) has recently imposed several technical conditions on the Google Street View while choosing a proportionate, rather than excessive, approach to address privacy related challenges in the deployment of emerging technologies. Since this initial complaint was brought by FDPIC, can you explain the possible impact from such ruling which is seen as a reversal of the earlier ruling by Swiss Federal Administrative Court (FAC)?

The Federal Supreme Court has clarified a number of key legal points and so has strengthened data protection in Switzerland. It finds that Swiss law is also applicable to foreign companies if there is a close link to Switzerland and that Street View consequently falls under the jurisdiction of the FDPIC. The Supreme Court also finds that Google does indeed process personal data with regard to images in its online Street View service and that by publishing not or inadequately blurred images it violates a person's right to his or her own image and privacy. This judgement affects not only Google, but any other provider of similar services, and it confirms and specifies the obligation to respect the general data protection provisions.

It has been several months since the judgment mentioned above. Has there been any further discussion with the Google? Have they agreed on the new requirements with the Google Street View service?

There was a first discussion between Google and the FDPIC concerning the new requirements with the Google Street View service. Google is now analyzing the feasibility of the implementation of these new requirements.

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Spotlight: Biometrics Security and Privacy Protection



Increasing use of face recognition technologies in social networks, consumer engagement, video games and smartphones has generated privacy and security related concerns. Are there any efforts or guidelines from FDPIC to encourage such innovations for the benefit of consumers while respecting their privacy?

The FDPIC has no specific guidelines concerning the use of face recognition technologies in social networks. However, the use of such technologies has to be qualified as a processing of personal data, so that the general data protection provisions must be respected. Therefore, the demands specified in our guide concerning the personal data processing (only available in German, French and Italian) must also be respected while using such technologies. The FDPIC provides some information on its website on the correct operation and use of social media and is highly present in consulting the interested public. Moreover, the FDPIC is in repeated contact with different producers and suppliers of biometric systems to enforce the requirements of data protection already in the conception of such systems.

Evaluation and Certification of commercial biometric systems is currently lacking. Ongoing initiatives and working groups are supported in Europe to contribute to the development of a European Identification Certification System. Indeed, many EU countries and others worldwide are members on the Common Criteria (<http://www.commoncriteriaportal.org>) that aim at creating commonly agreed certification schemes. Unfortunately, Switzerland is not member of Common Criteria.

The FDPIC thinks that the collaboration between different countries in Europe or anywhere else is generally essential to ensure privacy in a globalized market. Therefore, the FDPIC keeps contact with various foreign data protection authorities to coordinate their activities, guidelines and regulations.

What are some of biggest challenges which FDPIC is facing from the widespread use/deployment of biometrics and data sharing technologies? Can you share some of the experiences gained?

Today, biometric systems are available at low costs. Therefore, in the private sector the technology is often used without the need for a serious reason, so that the FDPIC is often confronted with questions concerning the proportionality of the use of such systems; especially if a central database is part of the system. For example, biometric recognition systems are used for the access to public swimming bathes or gyms. In addition, the use of biometrics and data sharing technologies increases the risks by making it easy to link personal data from different sources, often without informing the data subject. Since the operators of data sharing and social media platforms are often situated abroad, they do not respect the provisions of the Swiss data protection law, and neither the data subject nor the FDPIC has an efficient remedy for privacy breaches due to such platforms.

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NIST Releases Report on Performance Evaluation of Lossless Compression for 1000 dpi Fingerprint Images



The criminal justice communities throughout the world exchange fingerprint images primarily with 8-bit gray-scale 500 ppi images. The JPEG 2000 compression standard (JP2K) has widely emerged as de fact standard for guidance for the compression of 1000 dpi fingerprint images. NIST has released a study on 1400 fingerprint images, using publicly available NIST SD-27 fingerprint database, which suggests that wavelet-based algorithms (JPEG 2000 and ICER) provides far superior compression rates than their non-wavelet-based counterparts (PNG and RLE) on mixed-image fingerprints. This study concludes that non-wavelet-based algorithms can generally provide an edge in achievable throughput while the wavelet-based-algorithms provides superior compression rate. This report can be accessible from the following weblink http://www.nist.gov/customcf/get_pdf.cfm?pub_id=911122

Sketch Based Face Recognition

Scott Klum¹, Brendan Klare², Hu Han¹, and Anil Jain¹

¹Department of Computer Science, Michigan State University, ²Noblis



When a crime occurs and a facial photograph of the suspect is not available (from a surveillance camera or a mobile phone), law enforcement agencies often use a facial sketch to help identify and capture the suspect. Typically, the facial sketch of a suspect is released to the public via newspapers and television so that citizens can identify the individual depicted in the sketch (Fig. 1). The drawbacks of this approach are twofold: it is very time consuming and it fails to leverage mugshot databases available to law enforcement agencies. By speeding up the identification process and eliminating the need for assistance from the general public, automatic sketch to mugshot matching systems can drastically improve the utility of facial sketches.

Preliminary work on sketch to photo matching involved the use of “viewed” sketches, in which the



Fig 1: Example of a facial sketch used to successfully apprehend a suspect.

sketch is drawn while viewing the photograph. This type of sketch, while useful for understanding the modality difference between sketch and photo, has no real world analogy: why perform identification using the sketch when we already have the photo? By contrast, our research on sketch recognition focuses on the use of facial sketches generated in real criminal investigations. Two types of facial sketches are used by law enforcement agencies in criminal investigations: forensic sketches (Fig. 2(a, c, e, g)) and computer generated composite sketches (Fig. 2(b, d, f, h)).

Our research group has developed a heterogeneous face recognition system which is designed to compute similarities between a facial sketch and a mugshot photograph. After normalizing and convolving face images with three complementary filters, we represent both the

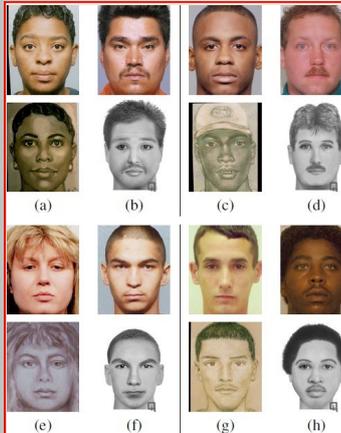


Fig 2: Examples of successful matches (a, b) and unsuccessful matches (c, d) using the heterogeneous matcher for forensic (a, c) and composite (b, d) sketches. Examples of successful matches (e, f) and unsuccessful matches (g, h) using the component-based matcher for forensic (e, g) and composite (f, h) sketches. The forensic sketches were drawn by Lois Gibson [1]. The composite sketches were drawn using the software FACES [2].

sketch and mugshot images in our system using the scale invariant feature transform (SIFT) descriptor and the multi-scale local binary pattern (MLBP) feature descriptor. The system is trained using random-sample linear discriminant analysis (RS-LDA) [3] to improve the matching accuracy between a sketch and photo. Our approach is able to achieve significantly higher matching accuracies on both forensic and composite sketches compared with Cognitec’s FaceVACS [4] (Fig. 3). A detailed description of this algorithm can be found in [5]-[6].

We have also developed a component-based face recognition system to match facial sketches to mugshots. Designed to reflect the synthesis of composite sketches in which individual facial components are selected, the component based matcher uses an active shape model to localize facial components and extracts block-based MLBP features from each component. The most salient components are then used to calculate similarities between a sketch and mugshot. Similar to the heterogeneous representation, the component-based method achieves improved recognition accuracies on both

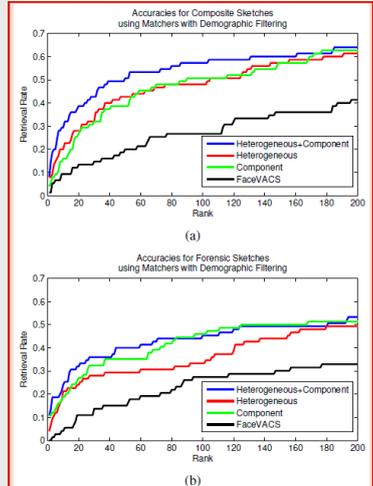


Fig 3: CMC plots for forensic sketch (a) and composite sketch (b) to mugshot matching. FaceVACS is included as a baseline. 75 forensic sketches and 75 composite sketches depicting the same individual were used as probes in this experiment. The gallery contained 10,000 mugshots from a police database.

sketch modalities relative to FaceVACS (Fig. 3). Further details for component-based method can be found in [7]. Fig. 2 shows examples of successful and unsuccessful matches by two matchers on both forensic and composite sketches.

We are continuing to evaluate the two matchers by gathering additional facial sketch data. A system based on our heterogeneous matcher is in the process of being deployed at multiple law enforcement agencies.

This research is supported by the National Institute of Justice.

References

- [1] L. Gibson, *Forensic Art Essentials*. Elsevier, 2008.
- [2] FACES 4.0, IQ Biometrics, <http://www.iqbiometrix.com>.
- [3] X. Wang and X. Tang, “Random sampling for subspace face recognition,” *IJCV*, pp. 91–104, 2006.
- [4] FaceVACS Software Developer Kit v. 8.2, Cognitec Systems GmbH, <http://www.cognitec-systems.de>.
- [5] B. Klare, Z. Li, A. Jain, “Matching forensic sketches to mug shot photos,” *IEEE T-PAMI*, Mar 2011.
- [6] B. Klare A. Jain, “Heterogeneous face recognition using kernel prototype similarities,” *IEEE T-PAMI*, 2013 (to appear).
- [7] H. Han, B. Klare, K. Bonnen, A. Jain, “Matching composite sketches to face photos: A component based approach,” *IEEE T-IFS*, 2013.

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Forthcoming Biometrics Conferences

**Biometrics: Theory, Applications and Systems
BTAS 2013, Washington DC, USA, Sept 29 - Oct 3, 2013**



<http://www.btas2013.org/>

The IEEE Sixth International Conference on Biometrics: Theory, Applications and Systems (BTAS 2013) will be held in the Washington, DC area from September 29 to October 3, 2013. BTAS 2013 is the premier research conference focusing on all aspects of biometrics. It is intended to have a broad scope, including advances in image processing, pattern recognition and statistical and mathematical techniques relevant to biometrics, new algorithms and/or technologies for biometrics, analysis of specific applications, and analysis of the social impact of biometrics technology. Submissions may be up to eight pages in IEEE conference format. Papers accepted and presented at BTAS 2013 will be available in the IEEE Xplore digital library. **Paper Submission Deadline: 25th April 2013.**

**International Conference of the Biometrics Special Interest Group
BIOSIG 2013, Darmstadt, Germany, 5-6 Sept 2013**



<http://www.biosig.org/biosig2013>

The BIOSIG 2013 conference is devoted to addressing problems relating to the deployment of biometrics systems, emerging modalities, acquisition techniques, efficient fusion techniques for multimodality systems, security of the biometric system, security analysis and certification of security properties. The conference will present innovations and best practices that can be transferred into future applications. Stakeholders and technical experts are invited to submit original research papers. Industrial contributions presenting lessons learned from practical usage, case study, recent results of prototypes, are also welcomed. Submissions should be full papers (max. 12 pages) in English. Each paper will be subjected to the *double blind peer review* process. **Paper Submission Deadline: 15th May 2013.**

**International Conference on Automatic Face and Gesture Recognition
FG 2013, Shanghai, China, 22-26 April 2013**



<http://fg2013.cse.sc.edu/>

The IEEE Conference on Automatic Face and Gesture Recognition (FG 2013) is the premier international forum for research in image and video based face, gesture, and body movement recognition. Paper submission deadline is September 15, 2012. This year the paper selection process was particularly competitive and resulted in an acceptance rate of about 35%. Only submissions with high novelty and convincing comparison to the state of the art were accepted. Please visit conference website for detailed schedule and the technical program. Early [conference registration](#) closes on 21st March, 2013.

**International Conference on Biometrics
ICB 2013, Madrid, Spain, 4-7 June 2013**



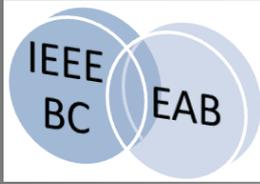
<http://atvs.ii.uam.es/icb2013>

The 6th IAPR International Conference on Biometrics (ICB-2013), technically co-sponsored by both IEEE (Biometrics Council) and IAPR (Technical Committee on Biometrics - TC4), ICB 2013 has attracted high quality submissions which are currently subjected to double blind review process. Authors can make rebuttals on review comments during February 11-13 using [CMT](#) and these will be carefully considered by area chairs. In addition to high quality technical program, ICB 2013 conference also includes tutorials, doctoral consortium, and summary on several biometrics evaluation competitions organized in conjunction with this conference. Please visit conference [website](#) for further details and early registration for the conference attendance.

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Biometrics Awards: Call For Nominations



EUROPEAN BIOMETRICS RESEARCH AND INDUSTRY AWARD 2013



European Association for Biometrics is launching the seventh European Biometrics Research and Industry Award 2013. This prestigious award is granted annually to individuals who have been judged by a panel of internationally respected experts for making a significant contribution to the field of biometrics research in Europe.

The award is stimulating innovation in academic research as well as in industry. Thus biometric experts with either of the following profiles should submit their work. Academic researchers enrolled in the last or penultimate year of a Ph.D. program or who have obtained a Ph.D., with major focus on biometrics, from a European academic institution no later than two years before the given deadline, might consider applying for the award. Further industrial researchers employed by European companies whose core business is biometrics might consider applying for the award. The industry award will be granted to the candidate that has created the strongest impact on the industry.

Applicants are requested to submit a research paper, which will be reviewed by a jury composed of internationally recognized experts in the field of biometrics who will judge the academic and scientific quality for the EAB academic research award and the novelty, impact, applicability and other business aspects for the EAB industry award.

Entrants should submit the self nomination form along with the biometric research paper of **no more than 6 pages** by **May 31, 2013**.

Research papers will be reviewed by an expert Jury. Following the review, three candidates will be shortlisted and asked to present their research at the Finals of the Award on September 4, 2013 during the EAB scientific symposium in Darmstadt, Germany.

The winner of the **European Biometric Research Award 2013** will receive a commemorative medal and a 2.000 € honorarium. The winner will be selected by all attending Jury members.

The winner of the **European Biometric Industry Award 2013** will receive a commemorative medal and a 2.000 € honorarium. The winner will be selected by all attending EAB industry members.

The Award committee (Jury) consists of Internationally renowned experts in the biometrics area who have been brought together to judge the European Biometric Research and Industry Award 2013. The award committee is chaired by Prof. Patrizio Campisi, University of Roma TRE, Roma, Italy, and includes following members;

- Prof. Christodette Busch, Gjøvik University College, Norway
- Prof. Bernadette Dorizzi, Telecom SudParis, France
- Prof. Mike Fairhurst, University of Kent, UK
- Prof. Patrick Flynn, University of Notre Dame, USA
- Jean Christophe Fondeur, Morpho, France
- Prof. Anil Jain, Michigan State University, USA
- Dr. Tom Kevenaar, GenKey, The Netherlands
- Prof. Josef Kittler, University of Surrey, UK
- Prof. Ajay Kumar, The Hong Kong Polytechnic University, Hong Kong
- Prof. Arun Ross, West Virginia University, USA
- Dr. Günter Schumacher, JRC, European Commission
- Prof. Massimo Tistarelli, University of Sassari, Italy
- Prof. Raymond Veldhuis, Twente University, The Netherlands

All the documents must be sent in electronic format to the following email address: award@eab.org.

For further information on the Award, please contact:

Prof. Patrizio Campisi
 Dept. of Applied Electronics, University of Roma TRE, Roma, Italy
 Email: campisi@eab.org (only for information regarding the award)

Please visit the official website for further details: <http://eab.org/award/cfp.html>

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**In Loving Memory of
Evangelia (“Litsa”) Micheli-Tzanakou**



Obituary

Evangelia Micheli-Tzanakou (“Litsa”), a long time IEEE volunteer and member of the IEEE Board of Directors, passed away on 24 September 2012 after a long illness. At the time of her death, Dr. Tzanakou was a Professor and Director of the Computational Intelligence Laboratories in the Department of Biomedical Engineering at Rutgers University, and had also served at the University of Medicine and Dentistry of New Jersey. Between 1990 and 2000, Dr. Tzanakou was Chair of the Department of Biomedical Engineering at Rutgers where she established one of the first and most renowned Biomedical Engineering undergraduate programs in the United States. A graduate of the University of Athens (BS, Physics 1969) and Syracuse University (MS, Physics 1974; Ph.D., 1977), she devoted her professional career to Image and Signal Processing applied to Biomedicine, Information Processing in the brain, Artificial Neural Networks, and Biometrics.



Among Dr. Tzanakou’s many IEEE volunteer activities were her service as IEEE Director (Division Director, 2005-2006; IEEE Vice President of Educational Activities, 2008); Chair of the Awards Board (2002-2003); and Chair of the Medal of Honor Committee (2004-2006). She was elected Fellow of the New Jersey Academy of Medicine in 1986; Fellow of IEEE in 1992 (“for contributions to the application of neural networks to the analysis of the operation of the visual system”); and Founding Fellow of AIMBE in 1993. She was the author of the book “Supervised and Unsupervised Pattern Recognition: Feature Extraction and Computational Intelligence” (CRC Press, 2000); and co-author of the highly popular “Neuroelectric Systems” (New York University Press, 1987; with Sid Deutsch). She also served as Book Editor for the Springer/Plenum Press Biomedical Engineering Series, and published over 280 scientific papers with co-

investigators and students.

Of special interest and significance to Dr. Tzanakou was the emerging field of Biometrics. She was one of the earliest academics to write on the subject, and one of the founders of the IEEE Biometrics Council. During her tenure as Vice President for Educational Activities, she initiated and led the effort to create the IEEE Certified Biometrics Professional (CBP) program. This was a large scale effort, viewed by some as too ambitious for IEEE at the time. The project involved more than 50 experts in the field, and required wide consensus among them on the establishment of new authoritative definitions, frameworks and vocabulary in an emerging and diverse field. In spite of the skepticism she had encountered in the early stages, Dr. Tzanakou was able to navigate this complicated endeavor to a successful conclusion – the Biometrics certification program she envisioned is now a standard and popular offering of IEEE.

IEEE volunteers and staff members who have worked with “Litsa” would remember her passion about IEEE awards and IEEE outreach activities; her optimism; her advocacy of Biomedical Engineering and the incorporation of Life Sciences in IEEE; and her persistent and unyielding pursuit of the Biometrics certification program. She was an ardent promoter of IEEE’s causes and programs, and her enthusiasm about them made her personal ambitions identical to her IEEE ambitions. Her many IEEE volunteer and staff friends will also remember her humanity, good humor, especially when plans seem to go awry, and her inclusiveness and interest in students and younger members – for many of whom she has served as a devoted mentor and a source of inspiration.



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ICB 2013 TABULA RASA Spoofing Challenge

Challenges



Tabula Rasa Spoofing Challenge invites researchers to develop ingenious attack plans and deceive various biometric authentications systems of different modalities.

The goal of this challenge is to stimulate novel ideas to spoof state-of-the-art biometric authentication systems with four different modalities: 2D face in visible spectra, 2D face in infra-red spectra, Speech and Fingerprint. Each system is reinforced with countermeasures for numerous attack types and the participants are invited to find ways to break through the system using their imagination and creativity. The most brilliant attempt, which will be decided on its spoofing success and originality, will be awarded with the **"Best Spoofing Attack Award"**, accompanied by an incentive prize.

For further information, please visit <http://www.tabularasa-euproject.org/evaluations/tabula-rasa-spoofing-challenge-2013>

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Please **sign-up today** at our **IEEE Biometrics Council website!**

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First ICB Competition on Face Recognition

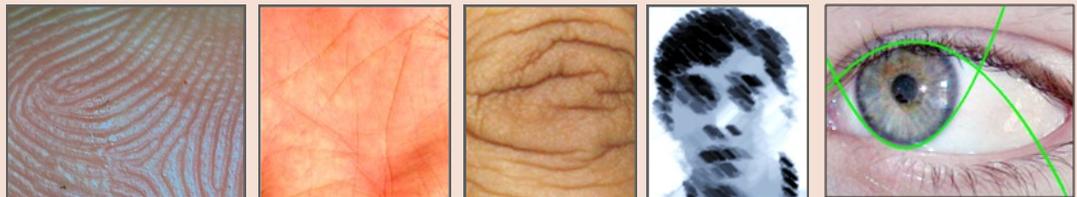
The first ICB *Competition on Face Recognition* is organized in conjunction with ICB 2013 and is open to participants from academia and industry. A training database of 2500 facial images from 500 subjects is made freely available to all participants. A test database of 4000 facial images from 1000 subjects, i.e., cropped images of only facial regions, is also developed for the evaluation during the competition. Each participant can submit maximum of three algorithms. The competition results and the detailed summary will be presented during ICB 2013. Please visit <http://face.idealtest.org/2013/ICFR2013.jsp> for further details. The deadline for algorithm submission is **March 20, 2013**.

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IEEE Biometrics Compendium

IEEE introduces its first virtual journal, The IEEE Biometrics Compendium



- A collection of recently published IEEE Transactions and Conference papers
- Includes biometrics papers from *T-IFS*, *T-PAMI*, *T-IP*, *T-SMC A/B/C*, and more...
- Papers organized into face, fingerprint, iris, fusion, hand, spoofing and more...
- Value-added commentary from technology/area experts
- Produced by IEEE Biometrics Council, published quarterly
- Subscribers receive full-text access to all articles published in the current year as well as past years

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<http://ieeexplore.ieee.org/xpls/virtual-journal/biometrics/home>

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New Biometrics Databases in Public Domain

**New
Databases**



Several new biometrics databases have been made publicly available recently to promote research and evaluation efforts. The databases detailed below are all freely and publicly accessible from their respective web links.

1. Replay-Attack: A Public Face Spoofing Database

The *Replay-Attack* database has been developed to evaluate the strength of face recognition algorithms against detecting sensor level spoofing attacks. It consists of short video recordings of both real-access and three types of spoofing attacks to a face recognition system: print attacks (attacks printed on a paper), digital photo attacks (digital photographs displayed on a screen of an electronic device) and video attacks (video clips replayed on a screen of an electronic device). These samples were recorded from 50 different identities. This database is open to the public for free and is available after a simple registration. The detailed information, license agreement and the instruction for the download/use of this database, can be accessed from <https://www.idiap.ch/dataset/replayattack>

2. Long Distance Heterogeneous Face Database (LDHF-DB)

LDHF database contains both visible (VIS) and near-infrared (NIR) face images at distances of 60m, 100m, and 150m outdoors and at a 1m distance indoors. Face images of 100 subjects (70 males and 30 females) were captured; for each subject one image was captured at each distance in daytime and night time. All the images of individual subjects are of frontal faces without glasses, and were collected in a single sitting. In order to gain access to the database, a formal request to the authors via email is required. Please visit <http://biolab.korea.ac.kr/database/index.html> for further details.

3. YouTube Face Database

The YouTube face database consists of 3425 videos of 1595 different subjects which are downloaded from YouTube website. This database consists of an average of 2.15 videos for every subject and provides all the important details (e.g. face labels, location of face in frame, pose, metadata) to benchmark the test results for reproducible research. A tar file ([YouTubeFaces.tar.gz](#)) with entire database of about 25 GB size, in addition to the videos, includes the face images broken into image frames, respective aligned face images, popular descriptors for respective faces, and headpose illustrating rotation angle for face images in the database. The entire database can be accessed from a ftp site. Please visit <http://www.cs.tau.ac.il/~wolf/ytfaces/index.html> for further details and password access.

4. CASIA Face Anti-Spoofing Database

This database consists of high quality *fake face images* of genuine subjects which can be enrolled in a face recognition system. The *CASIA Face Anti-Spoofing Database* implements three kinds of attacks for the face recognition systems, i.e., warped photo attack, cut-photo attack and played video attack. This database also provides a baseline algorithm to thwart such fake face photo attacks using liveness detection. The entire database, including 600 video clips, can be accessed by signing a license agreement downloadable from website <http://www.cbsr.ia.ac.cn/english/FaceAntiSpoofDatabases.asp>.

5. Swansea Footstep Biometric Database

Swansea Footstep Biometric Database consists of 9,980 footstep signals (9,990 stride signals) from 127 users. This database has been associated with the research efforts to identify humans using their footstep as a biometric characteristic. The footstep signals corresponding to the right and left foot are stored respectively in two matrices saved as MATLAB files, each with dimension 2200 by 88, i.e., 2200 time samples generated from each of the 88 piezoelectric pressure sensors on the foot. The database can be accessed online by downloading license agreement and uploading required agreement file. Please visit <http://atvs.ii.uam.es/sfootbd.html> for details to access this database.

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