

## List of Publications (June 2016)

### Journal Articles

- [1] **M. Gomez-Barrero**, C. Rathgeb, J. Galbally, C. Busch, and J. Fierrez, "Unlinkable and irreversible biometric template protection based on Bloom filters," *Information Sciences*, 2016.
- [2] J. Galbally, M. Diaz-Cabrera, M. A. Ferrer, **M. Gomez-Barrero**, A. Morales, and J. Fierrez, "On-line signature recognition through the combination of real dynamic data and synthetically generated static data," *Pattern Recognition*, vol. 48, pp. 2921–2934, 2015.
- [3] **M. Gomez-Barrero**, J. Galbally, and J. Fierrez, "Efficient software attack to multimodal biometric systems and its application to face and iris fusion," *Pattern Recognition Letters*, vol. 36, pp. 243–253, 2014.
- [4] **M. Gomez-Barrero**, J. Galbally, A. Morales, M. A. Ferrer, J. Fierrez, and J. Ortega-Garcia, "A novel hand reconstruction approach and its application to vulnerability assessment," *Information Sciences*, vol. 268, pp. 103–121, 2014.
- [5] J. Galbally, A. Ross, **M. Gomez-Barrero**, J. Fierrez, and J. Ortega-Garcia, "Iris image reconstruction from binary templates: An efficient probabilistic approach based on genetic algorithms," *Computer Vision and Image Understanding*, vol. 117, no. 10, pp. 1512–1525, 2013, Selected for Elsevier Virtual Issue: Celebrating the Breadth of Biometrics Research.

### Peer-Reviewed Conference Papers

- [1] J. Galbally and **M. Gomez-Barrero**, "A review of iris anti-spoofing," in *Int. Workshop on Biometrics and Forensics (IWBF)*, 2016.
- [2] A. Morales, J. Fierrez, **M. Gomez-Barrero**, and J. Ortega-Garcia, "Kboc: keystroke biometrics ongoing competition," in *Proc. Int. Conf. on Biometrics: Theory, Applications, and Systems (BTAS)*, 2016.
- [3] **M. Gomez-Barrero**, J. Galbally, and J. Fierrez, "Variable-length template protection based on Homomorphic Encryption with application to signature biometrics," in *Proc. Int. Workshop on Biometrics and Forensics (IWBF)*, 2016.
- [4] **M. Gomez-Barrero**, J. Galbally, E. Maiorana, P. Campisi, and J. Fierrez, "Implementation of fixed-length template protection based on Homomorphic Encryption with application to signature biometrics," in *Proc. IEEE Conf. on Computer Vision and Pattern Recognition Workshops (CVPRW)*, 2016.
- [5] C. Rathgeb, **M. Gomez-Barrero**, C. Busch, J. Galbally, and J. Fierrez, "Towards cancelable multi-biometrics based on adaptive Bloom filters: A case study on feature level fusion of face and iris," in *Proc. Int. Workshop on Biometrics and Forensics (IWBF)*, 2015.
- [6] **M. Gomez-Barrero**, J. Galbally, J. Fierrez, J. Ortega-Garcia, and R. Plamondon, "Enhanced on-line signature verification based on skilled forgery detection using sigma-lognormal features," in *Proc. Int. Conf. on Biometrics (ICB)*, 2015.

- [7] M. Diaz-Cabrera, **M. Gomez-Barrero**, A. Morales, M. A. Ferrer, and J. Galbally, "Generation of enhanced synthetic off-line signatures based on real on-line data," in *Proc. International Conference on Frontiers in Handwriting Recognition (ICFHR)*, 2014, pp. 482–487.
- [8] **M. Gomez-Barrero**, C. Rathgeb, J. Galbally, J. Fierrez, and C. Busch, "Protected facial biometric templates based on local gabor patterns and adaptive Bloom filters," in *Proc. Int. Conf. on Pattern Recognition (ICPR)*, 2014, pp. 4483–4488.
- [9] M. A. Ferrer, M. Diaz-Cabrera, A. Morales, J. Galbally, and **M. Gomez-Barrero**, "Realistic synthetic off-line signature generation based on synthetic on-line data," in *Proc. International Carnahan Conference on Security Technology (ICCST)*, 2013, pp. 116–121.
- [10] J. Galbally, **M. Gomez-Barrero**, A. Ross, J. Fierrez, and J. Ortega-Garcia, "Securing iris recognition systems against masquerade attacks," in *Proc. SPIE Biometric and Surveillance Technology for Human and Activity Identification X, BSTHAI*, vol. 8712, 2013.
- [11] **M. Gomez-Barrero**, J. Galbally, R. Plamondon, J. Fierrez, and J. Ortega-Garcia, "Variations of handwritten signatures with time: A sigma-lognormal analysis," in *Proc. Int. Conf. on Biometrics (ICB)*, 2013.
- [12] **M. Gomez-Barrero**, J. Galbally, J. Fierrez, and J. Ortega-Garcia, "Multimodal biometric fusion: A study on vulnerabilities to indirect attacks," in *Proc. Iberoamerican Conf. on Pattern Recognition (CIARP)*, 2013, pp. 358–365.
- [13] **M. Gomez-Barrero**, J. Gonzalez-Dominguez, J. Galbally, and J. Gonzalez-Rodriguez, "Security evaluation of i-vector based speaker verification systems against hill-climbing attacks," in *Proc. Interspeech*, 2013.
- [14] **M. Gomez-Barrero**, J. Galbally, J. Fierrez, and J. Ortega-Garcia, "Face verification put to test: A hill-climbing attack based on the uphill-simplex algorithm," in *Proc. International Conference on Biometrics (ICB)*, 2012, pp. 40–45.
- [15] **M. Gomez-Barrero**, J. Galbally, A. Morales, M. A. Ferrer, J. Fierrez, and J. Ortega-Garcia, "Inverse biometrics: A case study in hand geometry authentication," in *Proc. Int. Conf. on Pattern Recognition (ICPR)*, 2012, pp. 1281–1284.
- [16] **M. Gomez-Barrero**, J. Galbally, P. Tome-Gonzalez, and J. Fierrez, "On the vulnerability of iris-based systems to software attacks based on genetic algorithms," in *Proc. International Conference on Biometrics (ICB)*, Springer LNCS-7441, 2012, pp. 114–121.
- [17] **M. Gomez-Barrero**, J. Galbally, J. Fierrez, and J. Ortega-Garcia, "Hill-climbing attack based on the uphill simplex algorithm and its application to signature verification," in *Proc. European Workshop on Biometrics and Identity Management (BioID)*, LNCS-6583, 2011, pp. 83–94.

### Theses

- [1] **M. Gomez-Barrero**, "Improving security and privacy in biometric systems," PhD thesis, Universidad Autonoma de Madrid (UAM), 2016.
- [2] —, "Biometric security: A new multimodal hill-climbing attacks," Master's thesis, Universidad Autonoma de Madrid (UAM), 2013.