## Retinal biometric recognition in the context of preliminary development to actual applied systems

(Simulation model with Matlab)

## Virtyt Lesha

Polytechnic University of Tirana
Faculty of Information Technology
Leke Dukagjini, 123, 4001, Shkoder, Albania
{virtytl}@hotmail.com

**Abstract**. In image processing, retinal identification is an innovative topic. It consists on model of biometric recognition but not the most developed in the sense of widely applications.

In this study, we present a simulation model on Matlab, that lets space for future developments.

The methodology of developing the model consists on developing an improved version of neural network approaches. The model receives open source retina images, compares the specified input with all the images recorded in the database and presents the corresponding retina image to the input one.

Recommendations and limitations consider the time needed to perform the retinal recognition.

**Keywords.** processing, database, neural, network

## References

Bhanu, B., & Kumar, A. (2017). *Deep learning for biometrics*. Cham, Switzerland: Springer., 12

Biometric Recognition 10th Chinese Conference, Ccbr 2015, Tianjin, China, November 13-15, 2015, Proceedings. (2015). Springer-Verlag New York., 45

BIOMETRIC RECOGNITION: 12th chinese conference, ccbr 2017, shenzhen, china. (2017). S.l.: SPRINGER INTERNATIONAL PU., 71

Marcel, S., Nixon, M. S., & Li, S. Z. (2014). *Handbook of Biometric Anti-Spoofing Trusted Biometrics under Spoofing Attacks*. London: Springer London., 31

Pato, J. N., & Millett, L. I. (2010). *Biometric recognition challenges and opportunities*.
Washington, D.C.: National Academies Press., 18

Ross, A. A., Nandakumar, K., & Jain, A. K. (2006). *Handbook of Multibiometrics: Human Recognition Systems*. Boston, MA: Springer US., 89

You, Z., Zhou, J., Wang, Y., Sun, Z., Shan, S., Zheng, W., . . . Zhao, Q. (2016). *Biometric Recognition 11th Chinese Conference, CCBR 2016, Chengdu, China, October 14-16, 2016, Proceedings*. Cham: Springer International Publishing., 19