

Bibliography

- [1] K. Cao and A. K. Jain, "Hacking Mobile Phones Using 2D Printed Fingerprints," *MSU Tech. Rep. MSU-CSE-16-2*, February 2016.
- [2] M. Tsutomu and M. Hiroyuki, "Impact of Artificial "Gummy" Fingerprint on Fingerprint System," *Optical Security and Counterfeit Deterrence Techniques IV*, vol. 4677, no. 4, pp. 275–289, 2018.
- [3] T. Chugh, K. Cao, and A. K. Jain, "Fingerprint Spoof Buster," *International Joint Conference on Biometrics (IJCB)*, pp. 1–13, December 2017.
- [4] J. Galbally, S. Marcel, and J. Fierrez, "Biometric antispooofing methods: A survey in face recognition," *IEEE Access*, vol. 2, pp. 1530–1552, November 2014.
- [5] P. Gupta, S. Behera, M. Vatsa, and R. Singh, "On iris spoofing using print attack," *Proc. - Int. Conf. Pattern Recognit.*, pp. 1681–1686, 2014.
- [6] Synaptics Incorporated, "Protecting Against Fingerprint Spoofing in Mobile Devices," pp. 1–7, 2016.
- [7] B. Ducray, S. Cobourne, K. Mayes, and K. Markantonakis, "Comparison of Dynamic Biometric Security Characteristics against other Biometrics," 2013.
- [8] C. J. Chen, "The Physic of Voice Production," *Element of Human Voice*. Denver, 2016, 79-89.
- [9] B. Ducray, S. Cobourne, K. Mayes, and K. Markantonakis, "Comparison of dynamic biometrie security characteristics against other biometrics," *IEEE Int. Conf. Commun.*, 2017.
- [10] D. A. Ramli, S. A. Samad, and A. Hussain, "Preprocessing techniques for voice-print analysis for speaker recognition," *2007 5th Student Conf. Res. Dev. SCORED*, no. December, 2007.
- [11] A. K. Jain, L. Hong, S. Pankanti, and R. Bolle, "An identity-authentication system using fingerprints," *Proc. IEEE*, vol. 85, no. 9, pp. 1365–1388, 1997.
- [12] A. Chandrasekaran and B. Thuraisingham, "Fingerprint Matching Algorithm

- Based on Tree Comparison using Ratios of Relational Distances,” in *Proc. Reliability and Security*, 2007.
- [13] W. Liu, C. Zhou, and Z. Ye, “Fingerprint based identity authentication for online examination system,” *2nd Int. Work. Educ. Technol. Comput. Sci. ETCS 2010*, vol. 3, pp. 307–310, 2010.
 - [14] F. Feng, X. Li, and L. Wang, “Design and Implementation of Identity Authentication System Based on Fingerprint Recognition and Cryptography,” *IEEE International Conference on Computer and Communications*, pp. 254–257, 2016.
 - [15] R. Kurdi *et al.*, “A Mobile Fingerprint Authentication in Saudi Arabian Call Centers,” *International Conference on Electrical and Computing Technologies and Applications (ICECTA)*, pp. 1–4, 2017.
 - [16] J. Kumar, T. Wangdus, and R. Srivastava, “Fingerprint Verification System,” *National Conference on Emerging Technologies*, pp. 141–146, 2017.
 - [17] W. Lukas, “A minutiae-based matching algorithms in fingerprint recognition systems,” *Journal of Medical Informatics*, vol. 13, no. 1642–6037, pp. 66–70, 2014.
 - [18] K. Manesha and H. K. Kalluri, “Fingerprint Identification Using Binary Images By Ridge Thinning Method,” *International Journal of Technical Innovation in Modern Engineering & Science* no. May, 2018.
 - [19] J. Chuang, “One-Step Two-Factor Authentication with Wearable Bio-Sensors,” *Soups*, vol. 0424422, vol. 4, no. 2455–2585, pp. 1285–1291, May 2014.
 - [20] H. Frantisek, “Possibilities Of Dynamic Biometrics For Authentication And The Circumstances For Using Dynamic Biometric Signature,” *Ekonomika Management Inovace*, vol. 9, no. 2, pp. 72–89, 2017.
 - [21] Y. Xue, L. Wang, L. Li, Z. Liu, and J. Liu, “Matlab-based intelligent voiceprint recognition system,” *Proc. - 2016 6th Int. Conf. Instrum. Meas. Comput. Commun. Control. IMCCC 2016*, pp. 303–306, 2016.
 - [22] Z. Huang, X. Zhang, L. Wang, and Z. Li, “Study and Implementation of Voiceprint Identity Authentication for Android Mobile Terminal,” pp. 2–6, 2017.

-
- [23] A. Mahmood, M. Alsulaiman, and G. Muhammad, "Multidirectional local feature for speaker recognition," *Proc. - 3rd Int. Conf. Intell. Syst. Model. Simulation, ISMS 2012*, pp. 308–311, 2012.
 - [24] A. Drygajlo, "Forensic Automatic Speaker Recognition [Exploratory DSP]," *IEEE Signal Process. Mag.*, vol. 24, no. 2, pp. 132–135, 2007.
 - [25] H. Alwi, *Tata bahasa baku bahasa Indonesia*, 2nd ed. Jakarta: Departemen Pendidikan dan Kebudayaan, 1993.
 - [26] A. V. Oppenheim and R. W. Schaffer, *Discrete-Time Signal Processing*, 3rd ed. USA, 1996.
 - [27] H. Tanudjaja, *Pengolahan Sinyal Digital & Sistem Pemrosesan Sinyal*. 2007.
 - [28] Y. Yang, "A Signal Theoretic Approach for Envelope Analysis of Real-Valued Signals," *IEEE Access*, vol. 5, no. 2, pp. 5623–5630, 2017.
 - [29] C. Jarne, "Simple empirical algorithm to obtain signal envelope in three steps," pp. 1–9, 2017.
 - [30] U. Uludag, A. Ross, and A. Jain, "Biometric template selection and update: a case study in fingerprints," vol. 37, pp. 1533–1542, 2004.
 - [31] P. Parra, "Fingerprint minutiae extraction and matching for identification procedure."
 - [32] R. Casper, "Applications of Convolution in Image Processing with MATLAB," 2013.
 - [33] W. Michael Kalley, "Introduction of Probability" *The Humorous Book of Statistics Problem*, USA, 2009, 106-120.
 - [34] J. G. Leu, L. T. Geeng, C. E. Pu, and J. Bin Shiau, "Speaker verification based on comparing normalized spectrograms," *Proc. - Int. Carnahan Conf. Secur. Technol.*, pp. 1–5, 2011.
 - [35] S. K. Erg, E. Khoury, and A. Lazaridis, "On the Vulnerability of Speaker Verification to Realistic Voice Spoofing," *IEE 7th international Conference on Biometric Theory*, no. 15668123, 8-11 September 2015
 - [36] D. Mukhopadhyay, M. Shirvanian, and N. Saxena, "All your voices are belong to us: Stealing voices to fool humans and machines," *Lect. Notes Comput. Sci. (including Subser. Lect. Notes Artif. Intell. Lect. Notes Bioinformatics)*, vol.
-

9327, pp. 599–621, 2015.

- [37] A. Tharwat, “Classification assessment methods,” *Applied Computing and Informatics*, no.2210-8327, August 2018.
- [38] S. B. Sadkhan, “Human Voice Extracted Biometric Features : What Can be Used for,” *International Conference on Current Research in Computer Science and Information Technology*, pp. 7–12, 2017.