[25] Lucks, Stefan. "The saturation attack—a bait for Twofish." International Workshop on Fast Software Encryption. Springer, Berlin, Heidelberg, 2001.
[26] Shabbir Hassan and Mohammad Ubaidullah Bokhari. "Computing in Cryptography." 2016 3rd International Conference on Computing for Sustainable Global Development (INDIACom). IEEE, 2016. ISSN 0973-7529; ISBN 978-93-80544-20-5.
[27] Nahar, Akhikun, et al. "Application of thin-layer chromatography-flame ionization detection (TLC-FID) to total lipid quantitation in mycolic-acid synthesizing Rhodococcus and Williamsia species." International journal of molecular sciences 21.5 (2020): 1670.
[28] Schneier, Bruce, et al. "The Twofish team's final comments on AES Selection." AES round 2.1 (2000): 1-13.
[29] Yılmaz, Fevzi, et al. "Heavy metal levels in two fish species Leuciscus cephalus and Lepomis gibbosus." Food Chemistry 100.2 (2007): 830-835.
[30] Osvik, Dag Arne, et al. "Fast software AES encryption." International Workshop on Fast Software Encryption. Springer, Berlin, Heidelberg, 2010.
[31] Shabbir Hassan, "Dual Secure Cryptographic Measures by Two-Phase Locking Protocol," International Journal of Computer Sciences and Engineering, Vol.8, Issue.6, pp.79-85, 2020.
[32] Li, Qinjian, et al. "Implementation and analysis of AES encryption on GPU." 2012 IEEE 14th International Conference on High Performance Computing and Communication & 2012 IEEE 9th International Conference on Embedded Software and Systems. IEEE, 2012.
[33] Provos, Niels, and David Mazieres. "Bcrypt algorithm." USENIX. 1999.
[34] Shabbir Hassan, Prof. Mohammad Ubaidullah Bokhari, "Key Exchange Algorithm for Lightweight Cryptographic Primitive" Journal of Seybold Report, Volume 15 Issue 7 2020, pp. 440-455, 2020, ISSN NO: 1533-9211.
[35] Aggarwal, Atishay, Pranav Chaphekar, and Rohit Mandrekar. "Cryptanalysis of Bcrypt and SHA-512 using distributed processing over the cloud." International Journal of Computer Applications 128.16 (2015).

## Authors Profile

**Dr. Shabbir Hassan** is a "*Sun Certified Java Programmer (SCJP)*" currently working as Assistant Professor at Centre for Distance and Online Education, Aligarh Muslim University, Aligarh. He holds Master in Computer Science and Applications (MCA) and Ph.D. at Department of Computer Science, Aligarh Muslim University. His thrust area is "*Analysis and Design of Lightweight Stream Cipher*" and area of interest includes *Applied Mathematics, Analysis and Design of Algorithms, Dynamic Programming, Network Security and Cryptography*. He has qualified UGC-National Eligibility Test (NET) and has availed Junior Research Fellowship (JRF) during the Research Work. Throughout his career, he has been involved in innovative Software Development and Academic Teaching of Computer Science subjects like C, JAVA, Python, Data Structure, Operating System, Automata Theory and Computer Networks. He has presented his research work in several National and International IEEE Conferences and marked his active participation in many Conferences, Workshop and Symposia. His research papers have published in many reputed peer-reviewed Journals of International repute like Springer, Elsevier, JASRAE, InderScience and Scopus Indexed Database. Apart from the Academic Research and Software Development, he is enriched with the passion of poetry and philosophy and engages himself in social works.

**Dr. Arshad Iqbal** has been awarded "*Best Research Award" (NESIN-2020 Awards)* for his contribution and achievement in innovative research. He has been working in the area of machine learning and image processing. He received his Ph.D. and Master of Computer Science and Applications (MCA) degree from Aligarh Muslim University, Aligarh. Dr. Iqbal started his career as software professional and worked in IT industry for four years. Later he joined as *Information Scientist at Aligarh Muslim University, Aligarh. He is currently working as Assistant Professor in Computer Science at K. A. Nizami Centre for Quranic Studies, AMU, Aligarh* since July 2011 and is actively involved in teaching and research activities. Dr. Iqbal has his active participation on managing and running Language Lab and website of their Center.

**Mr. Rehan Raza** received his degree in Bachelor of Computer Application (BCA) from Vinoba Bhave University, Hazaribag and currently pursuing Master of Computer Application (MCA) from National Institute of Technology (NIT), Calicut, Kerala, India. Beside Academic performance and Software Development, he is enriched by his passion for computer programming and creates abstract model for a concrete problem. His areas of Interests include Problem Solving, Design and Analysis of Algorithm, Computer Network, Database Management System and Automata Theory. His current research interests include Cryptography and machine learning (face and pattern recognition). *Beside from Automatic Attendance System using Face Recognition techniques, Mr. Raza has developed a secure round-based credential encryption system, license key generator and validator (by using C) which can protect applications from unauthentic user and software counterfeit at the age of 18.* Other web-based applications for user blog interaction and text response have also been developed hosted freely. Beside it, Raza has also developed android based application like DC Slot/ Project Evaluation, Slot Booking System and other console-based applications.