Dr. ALKA AGRAWAL

M.C.A., Ph. D.

Assistant Professor

Department of Information Technology
Babasaheb Bhimrao Ambedkar University
(A Central University)
Lucknow

TEACHING EXPERIENCE: 8 Years

- Working as assistant professor at **Department of Information Technology, Babasaheb Bhimrao Ambedkar University (A Central University),** Lucknow since November 2015.

- Worked as assistant professor at **Department of Computer Science, Khwaja Moinuddin Chishti Urdu, Arabi- Farsi University, Lucknow from** May 2013 to October 2015.

- Worked as lecturer at **University Institute of Engineering and Technology (UIET), C.S.J.M. University, Kanpur (U.P.)** from Jan 2004 to Feb 2008.

RESEARCH EXPERIENCE: 3.4 years

- Worked as **UGC- Dr. Kothari Post Doctoral Fellow at Department of Computer Engineering, Aligarh Muslim University, Aligarh** from **Dec 2012-April 2013**.

- Worked as a **full time research scholar** at **Babasaheb Bhimrao Ambedkar University (A Central Govt. University)** Lucknow, UP, India, in the Department of Information Technology, School for Information Science & Technology **from Feb 2008 till Jan 2011.**

NATIONAL LEVEL TEST QUALIFIED

- Qualified UGC- NET (June 2012)

- Qualified GATE (2011)

ACHIEVEMENTS/ RECOGONITION

- Received **UGC- Dr. Kothari Post Doctoral Fellowship** in the year 2012**.**
- Received **National Scholarship** from July 1992- June1994.

TITLE OF Ph.D. THESIS

- Minimizing Software Vulnerabilities in Object Oriented Design

RESEARCH PROJECTS

- During **Post Doctorate**, worked on a research project entitled **"Security Enhancement of Software without Affecting Usability: An Object Oriented Design Perspective".**

- During Ph. D., worked on a project entitled "**Quantifying Security at early Stage of Software Development Life Cycle"**. The project was sponsored by **University Grant Commission (UGC),** New Delhi, India, under **F. No. 34-107\ 2008(SR).**

EXTRA CURRICULAR ACTIVITIES

- Imparting the responsibilities of **Warden (Maintenance),** Chitralekha Girls Hostel, Babasaheb Bhimrao Ambedkar University, Lucknow since June 2016.

- Participated as judge in Essay Competition during Digital India Week-2015 organized by Department of IT, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow during 6th – 12th August 2015.

- Worked as a member of **Examination committee at U.I.E.T., C.S.J.M. University** Kanpur.

EDUCATIONAL / PROFESSIONAL QUALIFICATION

Educational/ Professional	Board/ University	Passing Year	Percentage	Division
X	U.P.	1992	**70%**	I
XII	U.P.	1994	**57%**	II
B.Sc.(Maths)	C.S.J.M.U, Kanpur	1998	**60%**	I
M.C.A	U.P.T.U., Lucknow	2003	**73%**	I
Ph. D.(Full time)	Babasaheb Bhimrao Ambedkar University(A Central University) Lucknow	2013		

PUBLICATIONS AND CITATIONS

Book

- **Software Vulnerability: Identification and Minimization**, **A. Agrawal** & R A Khan, Verlag/Publisher, Scholar Press Deutschland, GERMANY(ISBN: 978-3-639-66143-9)

- **Software Engineering: A Practitioners Approach**, R.A. Khan, **A. Agrawal**, Narosa Publication, ISBN: 978-81-8487-381-8, http://www.narosa.com/computer_science.asp (Also published by its Int. Associate, Alpha Science, **Oxford UK**: http://www.alphasci.com/books_display.asp?title=1-84265-909-0)

BOOK CHAPTER

1. S. Singh, R. A. Khan and **A. Agrawal**, "Applicability of Software Defined Networking in Campus Network", In proceeding of the Third International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA) 2014, Advances in Intelligent Systems and Computing, Volume 328,2015, pp. 619-627.

2. **A. Agrawal** & R.A.Khan, "Assessing and Improving Encapsulation for Minimizing Vulnerability of an Object Oriented Design", Communication in Computer and Information Science, **Springer-Verlag**, vol. 250, no. 2, 2011, pp. 531-533.

3. **A. Agrawal** & R. A. Khan, "A Vulnerability Metric for the Design Phase of Object Oriented Software", Communication in Computer and Information Science, CCIS 94, **Springer-Verlag Berlin Heidelberg,** August 2010, pp.328-339.

4. S. Chandra, R.A. Khan and **A. Agrawal** "Software Security Factors in Design Phase", Information Systems and Technology Management, CCIS 31, **Springer**, March 2009, pp. 339-340.

INTERNATIONAL JOURNAL

5. N. Kumar, **A. Agrawal** and R.A.Khan, "Parameters and Alert Algorithm for Risk Reduction in Rainfall Induced Disaster", Indian Journal of Science and Technology (Accepted).

6. S. Singh, R.A. Khan and **A. Agrawal**, "An Investigation of Security Mechanisms in Software Defined Networks", International Journal of Emerging Technology and Research, vol. 2, no. 1, Jan-Feb 2015, pp. 76-84.

7. **A. Agrawal** & R. A. Khan, "Usability Vulnerability: The Result of Disagreement between Psychology and Technology", Journal of Computer Science and Applications, vol. 1, no.2, September 2014, pp. 195-198.

8. **A. Agrawal** & R. A. Khan, "Assessing Impact of Cohesion on Security- An Object Oriented Design Perspective", Pensee Journal, vol. 68, no.2, February 2014, pp. 114-155. **(SCI Impact Factor: 0.064)**

9. **A. Agrawal** & R. A. Khan, "Impact of Inheritance on Vulnerability Propagation at Design Phase", **ACM SIGESOFT** Software Engineering Notes, vol-34, no. 4, July 2009, pp. 1-5.

10. **A. Agrawal** & R.A.Khan, "Measuring the Vulnerability of an Object Oriented Design", Network Security, **Elsevier**, vol. 2009, no.10, October 2009, pp. 13-17.

11. **A. Agrawal** & R.A.Khan, "A Framework to Detect and Analyze Software Vulnerabilities -Development Phase Perspective" **International Journal of Recent Trends in Engineering**, vol. 2, no. 2, November 2009, pp. 82-84.

12. **A. Agrawal** & R.A.Khan, "An Algorithm to Measure Attribute Vulnerability Ratio of an Object Oriented Design" **International Journal of Recent Trends in Engineering**, vol.2, no.3, November 2009, pp. 61-63.

13. **A. Agrawal** & R. A. Khan, "Securing Vulnerable Software: A Checklist Approach", **The Journal of Computing (TJC)**, vol.1, no. 2, June 2010, pp. 33-45.

14. **A. Agrawal** & R. A. Khan, "Role of Coupling in Vulnerability Propagation-Object Oriented Design Perspective", **Software Engineering: An International Journal (SEIJ),** vol. 2, no.1 March 2012, pp. 60-68.

15. **A. Agrawal** & R. A. Khan, "Software Security Metric Development Framework- an Early Stage Approach", **American Journal of Software Engineering and Applications**, vol.2, no.6, December 2013, pp. 150-155.

16. **A. Agrawal** & R. A. Khan, "Securo-Phobia: A New Challenge to Usage of Security Technologies", **Journal of Software Engineering and Simulation,** vol. 2, no.1, January 2014, pp. 1-3.

17. N. Singh, **A. Agrawal**, R. A. Khan, "A Critical Review on Automatic Speaker Recognition", Science Journal of Circuits, Systems and Signal Processing. Vol. 4, No. 2, July 2015, pp. 14-17. doi: 10.11648/j.cssp.20150402.12

NATIONAL JOURNAL

18. **A. Agrawal**, R. A. Khan & S. Chandra, "Software Security Process-Development Life Cycle Perspective", **CSI communications**, India, vol. 32, no.5, August 2008, pp. 39-42.

INTERNATIONAL CONFERENCE

19. **A. Agrawal** & R.A. Khan, "A Framework for Vulnerability Minimization- Object Oriented Design Perspective", 2nd International Conference on Computer and Communication Technology, ICCCT, 15-17 Sep 2011, **IEEE Computer Society,** pp. 499-504.

20. **A. Agrawal**, S. Chandra & R. A. Khan, "An Efficient Measurement of Object Oriented Design Vulnerability", The International Dependability Conference, ARES, 16-19 March 2009, **IEEE Computer Society,** pp. 618- 623.

21. S. Chandra, R. A. Khan & **A. Agrawal**, "Security Estimation Framework: Design Phase Perspective", Sixth International Conference on Information Technology, New Generations, ITNG 2009, 27-29 April 2009, **IEEE Computer Society,** pp. 254-259.

22. R.K Choudhary, S. Chandra**, A. Agarwal** & A.Yadav, "Software Fault Tolerance Techniques", Proceedings of Advanced Computing and Communication Technologies, (ICACCT-08), 08-09 Nov 2008**,** pp. 34-43.

23. N. Singh, **A. Agrawal** and R. A. Khan. "Gaussian Mixture Model: a Modeling Technique for Speaker Recognition and its Component." Fourth International Conference on 'ADVANCED COMPUTING AND COMMUNICATION TECHNOLOGIES FOR HIGH PERFORMANCE APPLICATIONS' at FISAT, June 19-21, 2014, pp. 27

24. Kanika, **A. Agrawal**, R. A. Khan, "An Improved Security Threat Model for Big Data Life Cycle", in Recent Developments in Science, Engineering and Technology (REDSET), October 2016.

25. Kanika, **A. Agrawal**, R.A. Khan, "Big Data: Security Issues and Techniques to Overcome from these Issues" in International Conference on Advanced Computing and Software Engineering (ICACSE), October 2016.

26. Kanika, **A. Agrawal**, R. A. Khan, "Security Integration in Big Data Life Cycle", in International Conference on Advanced Computing and Data Sciences, November 2016.

27. N. Kumar, **A. Agrawal** and R. A. Khan, "An Approach of a Solar Powered Alert System for Rainfall Triggered Disaster: Flood perspective", International Conference on Advanced Computing and Software Engineering (ICACSE-2016) held at KNIT, Sultanpur (UP), India, 14-15 October, 2016, ISBN: 9789386256058.

28. N. Kumar, **A. Agrawal** and R. A. Khan, "A Review of Geo-Informatics Technologies for landslide Disaster Management", International Conference on Advanced Computing and Software Engineering (ICACSE-2016) held in KNIT , Sultanpur (UP), India, 14-15 October, 2016, ISBN: 9789386256058.

29. G. Kapil, **A. Agrawal**, R. A. Khan**,** Presented a paper on "Specific Challenges in Big Data Security" in National Seminar on Emerging Trends & Advancements in Cyber Security–April-2016, at Integral University, Lucknow.

30. S. A. Ansar, **A. Agrawal** and R. A. Khan, "A Phase Wise Review of Software Security Metrics", Lecture Notes on Data Engineering and Communications Technologies (LNDECT), Springer (Proceeding of the International Conference on Recent Advancement in Computer, Communication and Computational Sciences), November 2016.

INVITED TALK/ LECTURE DELIVERED

+ Delivered an invited talk on "Online Security and We" at Khwaja Moinuddin Chishti Urdu, Arabi- Farsi University, Lucknow in the year April 2016.

+ Delivered an Invited Talk on "Compulsion to Accept the Unacceptable: Securo-Phobia", National Conference on Information Security Challenges, Organized by Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow, U.P. 28 March 2014.

+ Chaired a Technical Session in National Conference on Information Security Challenges, Organized by Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow, U.P. 28 March 2014.

+ Delivered an Invited Talk on "Software Security" in the workshop organized by Asia Pacific Institute of Information Technology, 18-19 February 2014.

+ **Invitee** lecturer at **Sachivalaya Prashikshan and Prabhandh Sansthan, Uttar Pradesh, Bhapu Bhavan, Lucknow** during the year 2005- 2006.

PAPER PRESENTED/ CONFERENCE ATTENDED/ ORGANIZED

+ Contributed as Co- Convener for **"National Conference on Information Security Challenges"** organized by Department of IT, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow, 24th February 2016.

+ Contributed as **convener** for **"National seminar on Inclusive Growth of Minority Women through ICT"** at Khwaja Moinuddin Chishti Urdu, Arabi-Farsi University, Lucknow during 13-14 Feb 2015.

+ Presented Paper Entitled "A Vulnerability Metric for the Design Phase of Object Oriented Software", **International Conference on Contemporary Computing (IC3 2010)** Sponsored by **Springer-Verlag Berlin Heidelberg,** Ghaziabad**,** U.P., **2010.**

+ Presented Paper Entitled "Gaussian Mixture Model: A Modeling Technique for Speaker Recognition and its Component", **4th International Conference on**

Advanced Computing and Communication Technologies for High Performance Applications, FISAT, Angamaly, Kerla, 19-21 June 2014

- Presented Paper Entitled "Role of Internet in Education: Benefits and Drawbacks Perspective", National Conference on Role of Media in Promoting Right to Education, Lucknow, U.P., 11-12 March 2014.

- Presented Paper Entitled "Information Technology and Women Empowerment", National Conference on Women Empowerment Towards Gender Equality, Lucknow, U.P., 5-7 March 2014.

- Presented Paper Entitled "Specific Challenges in Big Data Security" in National Seminar on Emerging Trends and Advancements in Cyber Security organized by Department of Computer Application, Integral University, Lucknow, 4th April 2016.

- Attended two days workshop on Choice Based Credit System & Outcome Based Learning during 30th -31st March 2016.

- Attended one week workshop on "Ethical Hacking and Information Security" organized by Department of IT, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow during 6th -12th August 2015.

- Attended Seminar on **Cyber Law: Policy Issues and Emerging Trends (2010)**, organized by Dr. Ram Manohar Lohiya National Law University, Lucknow.

- Organized national workshop on "**Current Trends in Computing and Bioinformatics**" sponsored by **IEEE** in the year 2007.

SUBJECTS TAUGHT:

- Operating System
- Software Engineering
- Data Structure
- Theory of Computation
- Computer Organization

PERSONAL INFORMATION:

Husband's Name	Mr. Ritul Agrawal
Date of Birth	3rd January 1977
Nationality	Indian
Languages Known	English, Hindi
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(Dr. Alka)