

Mohammad Nauman

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➤ Experience

Assistant Professor <i>Oct 2022 — now</i>	Effat University, Jeddah, KSA Taught several courses to undergraduate students. Job responsibilities included teaching in areas of Software Engineering, Secure Systems, Applied Algorithms, Advanced Programming and Computer Networks. Supervised Senior Projects.
Associate Professor <i>Jul 2020 — Sep 2022</i>	FAST National University of Computer and Emerging Sciences, Peshawar Taught several courses to BS, MS and PhD students. Job responsibilities included teaching in areas of Software Engineering, Secure Systems, Applied Algorithms, Advanced Programming and Computer Networks. Supervised BS final year projects and MS research students. Also remained a Final Year Project coordinator and served on the Campus Graduate Studies Committee. Acting as the Principle Investigator in COLAB Research Lab.
Assistant Professor <i>Jan 2015 — Jun 2020</i>	FAST National University of Computer and Emerging Sciences, Peshawar - same as above -
Research Associate <i>Dec 2007 — Dec 2009</i>	Institute of Management Sciences, Peshawar Research Associate in the research project, “Towards Trusted Web Services for Mobile Devices” and “Dynamic Behavioral Attestation for Mobile Platforms”.

➤ Education

Postdoctorate <i>2015-2017, Max Planck Institute for Software Systems, Germany</i>	Research Domain: Android Security Research Advisor: Prof. Dr. Michael Backes. Research Group: CISPA Funded by the Max Planck Institute for Software Systems through a Foreign Researcher Grant
PhD (IT) – System Security <i>2014, Universiti Kuala Lumpur, Malaysia</i>	Research Track Domain of Research: Security and Privacy Thesis Title: Extending User Privacy on Virtual Machine based Smartphones through Resource Usage Control
MS Software Engineering <i>2008, City University, Peshawar</i>	CGPA: 3.33 Research Topic: Common Sense and Folksonomy: Engineering a Model for an Intelligent Search System
BSc (Hons) <i>2004, University of Peshawar (Institute of Management Sciences)</i>	Specialization: IT. CGPA: 3.9 Was awarded merit scholarship for first semester. Courses included both Computer Science (programming, databases, artificial intelligence, and hardware) and Business (accounting, management and logic) subjects.
B.Sc. (Pre Medical) <i>2001, Edwardes College</i>	Obtained 798 marks out of 1100 - 72.5% Was awarded merit scholarship by Joseph Chamberlain College, UK.
IGCSE/O Levels <i>1999, UCLES Cambridge University</i>	Obtained 3A*s, 1A, 2Bs and 2Cs Obtained A* in Physics, Chemistry and Mathematics in IGCSE. Took English as a first language in IGCSE. Was awarded a B in the subject of Arts (Water Colours) taken as an optional course.

➤ Editorial Services

Editorial Board	Currently serving on the Editorial Board of The International Arab Journal of Information Technology - Indexed ISI - Impact Factor 0.724 (JCR 2016)
Program Committee	Served on the Program Committee of 6 th International Conference on Trust & Trustworthy Computing, London, UK – the leading conference on Trusted Computing technologies
Journal and Conference Reviews	Reviewed papers for several journals including IEEE Computer, Springer TeleSys, Wiley Security and Communication Networks, and Elsevier EIS as well as several high-ranking conferences including Trust’11, Trust’12, SACMAT’12 among others.

➤ Refereed Journals Papers and Book Chapters (21)

Security and Communications Networks (Hindawi), 2022 <i>Indexed: ISI, IF: 1.791</i>	Khan, K., Ullah, N., Ali, S., Khan, M., Nauman, M., Ghani, A. Op2Vec: An Opcode Embedding Technique and Dataset Design for End-to-End Detection of Android Malware Security and Communications Networks (22/05). Indexed ISI. Impact factor: 1.791. 2022
Computers and Electrical Engineering (Elsevier), 2022 <i>Indexed: ISI, IF: 4.152</i>	W Ali, M Nauman, N Azam A privacy enhancing model for Internet of Things using three-way decisions and differential privacy Computers and Electrical Engineering (100), 107894. Indexed ISI. Impact factor: 4.152. 2022

Soft Computing (Springer), 2022 <i>Indexed: ISI, IF: 3.643</i>	Mansoor, M., Nauman, M., Rehman, H.U, Benso, A. Using Capsule Networks for Android Malware Detection Through Orientation-Based Features Soft Computing (22/01), 1-15. Indexed ISI. Impact factor: 3.643. 2022
CMC (Tech Science), 2022 <i>Indexed: ISI, IF: 3.772</i>	Khan, S., Nauman, M., Alsaif, S.A., Syed, T.A., Eleraky, H.A. Using Capsule Networks for Android Malware Detection Through Orientation-Based Features Computers Materials and Continua 70 (3), 5345-5362. Indexed ISI. Impact factor: 3.772. 2022
Expert Systems (Wiley), 2021 <i>Indexed: ISI, IF: 1.546</i>	Jan, S., Musa, S., Ali, T., Nauman, M., Anwar, S., Ali, T., Shah, B. Integrity verification and behavioral classification of a large dataset applications pertaining smart OS via blockchain and generative models Expert Systems 38 (4), e12611. Indexed ISI. Impact factor: 1.546. 2021
PeerJ Computer Science (PeerJ), 2019 <i>Indexed: ISI, IF: 1.39</i>	Ali, T., Jan, S., Alkhodre, A., Nauman, M., Amin, M., Siddiqui, MS. DeepMoney: counterfeit money detection using generative adversarial networks PeerJ Computer Science 5, e216. Indexed ISI. Impact factor: 1.39. 2019
Grid Computing (Springer), 2019 <i>Indexed: ISI, IF: 1.556</i>	Nauman, M., Rehman, H., Politano, G., Benso, A. Beyond homology transfer: Deep learning for automated annotation of proteins Grid Computing. 17 (2), 225-237. Indexed ISI. Impact factor: 1.556. 2019
Cluster Computing (Springer), 2017 <i>Indexed: ISI, IF: 1.514</i>	Nauman, M., Ali, T., Khan, S., Syed, T. A. Deep Neural Architectures for Large Scale Android Malware Analysis. Cluster Computing. Indexed ISI. Impact factor: 1.514. Early access. Springer. May, 2017.
Cluster Computing (Springer), 2017 <i>Indexed: ISI, IF: 1.514</i>	Ali, T., Nauman, M., Jan, S. Trust in IoT: dynamic remote attestation through efficient behavior capture. Cluster Computing. Indexed ISI. Impact factor: 1.514. Early access. Springer. May, 2017.
Journal of Supercomputing (Springer), 2016 <i>Indexed: ISI, IF: 1.088</i>	Ali, T., Ismail, R., Musa, S., Nauman, M., Khan, S. Design and implementation of an attestation protocol for measured dynamic behavior. Journal of Supercomputing. Indexed ISI. Impact factor: 1.088. Vol. 73. No. 4. pp 1–28. Springer. April, 2017.
Information Sciences (Elsevier), 2016 <i>Indexed: ISI, IF: 3.364</i>	Nauman, M., Azam, N., Yao, J.T. A three-way decision making approach to malware analysis using probabilistic rough sets Information Sciences. Indexed ISI. Impact factor: 3.364. Elsevier. Vol. 374 pp 193–209. December, 2016.
SCN (Wiley), 2016 <i>Indexed: ISI, IF: 0.806</i>	Khan, S., Nauman, M., Othman, A.T., Musa, S., Ali, T. TSSDroid: realization of an efficient and usable TSS API for the Android software stack. Security and Communication Networks. Indexed ISI. Impact factor: 0.806. Wiley. July 2016.
SCN (Wiley), 2015 <i>Indexed: ISI, IF: 0.806</i>	Nauman, M., Khan, S., Othman, A.T., Musa, S. Realization of a User-Centric, Privacy Preserving Permission Framework for Android Security and Communication Networks. Indexed ISI. Impact factor: 0.433. Wiley. February, 2015.
SCN (Wiley), 2012 <i>Indexed: ISI, IF: 0.433</i>	Alam, M., Ali, T., Khan, S., Khan, S., Ali, M., Nauman, M., Hayat, A., Khan, M.K., Alghathbar, K. Analysis of Existing Remote Attestation Techniques Security and Communication Networks. Indexed ISI. Impact factor: 0.433. Wiley. Vol 5. No. 9. May, 2012. (Co-author)
IAJIT, 2011 <i>Indexed: ISI, IF: 0.39</i>	Nauman, M, Khan, S. Design and Implementation of a Fine-grained Resource Usage Control Model for the Android Platform International Arab Journal of Information Technology. Indexed ISI/SCI-E. Impact Factor: 0.39. Vol. 8. No. 4. October 2011.
TeleSys (Springer), 2011 <i>Indexed: ISI, IF: 1.163</i>	Nauman, M., Khan, S., Rauf, A. Using Trusted Computing for Privacy Preserving Keystroke-based Authentication in Smartphones Telecommunications Systems Journal. Indexed ISI. Impact factor: 1.163. Springer. July, 2011.
SP&E (Wiley), 2011 <i>Indexed: ISI, IF: 1.148</i>	Toegl, R., Winkler, T., Nauman, M. Hong, T. Specification and Standardization of a Java Trusted Computing API Software: Practice and Experience. Indexed ISI. Impact factor: 1.148. Wiley. July, 2011. (Co-author)
MTA (Springer), 2011 <i>Indexed: ISI, IF: 1.058</i>	Alam, M., Zhang X., Nauman, M. Ali, T., Ali, M., Anwar, S., and Alam, Q. Behavioral Attestation for Web Services Using Access Policies Multimedia Tools and Applications. Indexed ISI. Impact factor: 1.058. Volume 53. No. 1. Springer. May, 2011. (Co-author)
Information, 2010 <i>Indexed: ISI, IF: 0.099</i>	Ali, T., Alam, M., Nauman, M, Ali, T., Ali, M., Anwar, S. A Scalable and Privacy Preserving Remote Attestation Journal of Information. Indexed ISI/SCI-E. Impact Factor: 0.099. October 2010. (Co-author)
IJPS, 2010 <i>Indexed: ISI, IF: 0.554</i>	Nauman, M, Ali, T., Khan, K., Alghathbar, K. Information Flow Analysis of UCON International Journal of Physical Sciences. Indexed ISI/SCI-E. Impact Factor: 0.554. Vol. 5, Num. 6. pp 865-875. May 2010.

JWSR, 2010
Indexed: ISI, IF: 1.200

Alam, M., Zhang, X., Nauman, M, Ali, T. Hung, P.C.K. **Behavioral Attestation for Business Processes**
Journal of Web Services Research. Indexed ISI/SCI-E, Impact factor: 1.200. Vol. 7. Num 3. pp 52-72. April 2010.
(Co-author)

▷ **Selected Conference Publications (30)**

International (IEEE), 2019
Candar'19 – Nagasaki, Japan

Sharif, A., Nauman, M. **Function Identification in Android Binaries with Deep Learning**
Seventh International Symposium on Computing and Networking (Candar'19) Nagasaki, Japan. November, 2019

International (IEEE), 2017
EuroS&P'17 – Paris, France

Backes, M., Nauman, M. **LUNA: Quantifying and Leveraging Uncertainty in Android Malware Analysis through Bayesian Machine Learning**
2nd IEEE European Symposium on Security and Privacy (Euro S&P '17) Paris, France. April, 2017

International (Springer), 2015
RSKT'15 – Tainjin, China
⇒ **Citations: 70+**

Nauman, M., Azam, N., Yao, J.T. **A Three-way Decision Making Approach to Malware Analysis**
10th International Conference on Rough Sets and Knowledge Technology (RSKT'15) LNCS 9436, Tainjin, China. November, 2015

International (Springer), 2010
Trust'10 – Berlin, Germany
⇒ **Citations: 100+**

Nauman, M., Khan, S., Zhang, X., Seifert, J-P. **Beyond Kernel-level Integrity Measurement: Enabling Remote Attestation for the Android Platform**
3rd International Conference on Trust and Trustworthy Computing (Trust 2010). Berlin, Germany. June, 2010.

International (ACM), 2010
ASIACCS'10 – Beijing, China
⇒ **Citations: 840+**

Nauman, M., Khan, S., Zhang, X. **Apex: Extending Android Permission Model and Enforcement with User-defined Runtime Constraints**
ACM Symposium on Information, Computer and Communication Security (ASIACCS'10). April, 2010.

International (ACM), 2009
STC'09 – Chicago, USA

Toegl, R., Winkler, T., Nauman, M. and Hong, T. **Towards Platform Independent Trusted Computing**
Annual Workshop on Scalable Trusted Computing (STC 2009) in conjunction with 16th ACM Conference on Computers and Communications Security (CCS'09). November, 2009.

International (Springer), 2009
Trust'09 – Oxford, UK
⇒ **Citations: 30+**

Nauman, M., Alam, M., Zhang, X., Ali, T. **Remote Attestation of Attribute Updates and Information Flows in a UCON System**
International Conference on Technical and Socio-economic Aspects of Trusted Computing (Trust 2009) Oxford, UK. April, 2009. Talk sponsored by ICT R&D Fund, Pakistan.

International (CEUR), 2008
SemSearch'08 – Tenerife, Spain

Nauman, M., Khan, S., Amin, M., Hussain, F. **Resolving Lexical Ambiguities in Folksonomy Based Search Systems through Common Sense and Personalization**
Semantic Search 2008 Workshop, Tenerife, Spain. June, 2008.

International (ACM), 2008
SACMAT'08 – Colorado, USA
⇒ **Citations: 80+**

Alam, M., Zhang, X., Nauman, M., Ali, T., Seifert, J-P. **Model-based Behavioral Attestation**
ACM Symposium on Access Control Models and Technologies, Colorado, USA. June, 2008.

International (IEEE/ACM/WIC), 2007
WT'07 – Silicon Valley, USA
⇒ **Citations: 25+**

Nauman, M. and Khan, S. **Using Personalized Web Search for Enhancing Common Sense and Folksonomy Based Intelligent Search Systems**
International Conference on Web Intelligence, Silicon Valley, USA. Published by the IEEE Computer Society Press.

International (IEEE), 2007
CSEE&T'07 – Dublin, Ireland
⇒ **Citations: 10+**

Nauman, M. and Uzair, M. **SE and CS Collaboration: Training Students for Engineering Large, Complex Systems**
20th International Conference on Software Engineering Education and Training, Dublin, Ireland. Published by the IEEE Computer Society Press. Talk sponsored by the CSEE&T and Dublin City University, Ireland.

Others: h-index: 16; i10-index: 26

A complete list of all 30 conference publications to date is available at <http://recluze.net/publications>

▷ **Countries Visited**

Ireland
2007

For presentation of a paper at 20th International Conference on Software Engineering Education and Training (CSEE&T)
Sponsored by CSEE&T and Dublin City University, Ireland

USA
2009

For presentation of a paper at the 4th International Workshop on Scalable Trusted Computing
Held in conjunction with 16th ACM Conference on Computers and Communication Security (CCS'09). Sponsored by Higher Education Commission of Pakistan

United Kingdom
2009

For presentation of a paper at International Conference on Technical and Socio-Economic Aspects of Trusted Computing (Trust 2009)
Sponsored by ICT R&D Fund, Pakistan under the project “Dynamic Behavioral Attestation for Mobile Platforms”

Germany
2015

For an invited talk at Universität des Saarlandes, Saarbrücken, Germany
Funded by Center for IT-Security, Privacy and Accountability (CISPA) at Universität des Saarlandes

Spain
2016

As a visiting scholar to Machine Learning Summer School (MLSS2016) at Cádiz, Spain
Funded by the Max-Planck Institute for Software Systems Germany

France
2016

For a talk at the 2nd IEEE European Symposium on Security and Privacy (Euro S&P '17), Paris, France.
Funded by the Max-Planck Institute for Software Systems Germany

Malaysia
2011-2013

As a PhD Candidate and for presenting papers in several conferences

Japan
2019

For a talk at the 7th International Symposium on Computing and Networking
Nagasaki, Japan. Best paper award.

▷ **Funded Research Projects (5)**

“Expert”
2008 – 2011

JSR 321: Trusted Computing API for the Java Platform
Worked as an “Expert” in the Expert Group of JSR321 brought together to create an Trusted Computing API for Java Platform. The group includes several industry leaders such as IAIK Graz University, Samsung, Intel and Sun Microsystems/Oracle. Details available at: <http://www.jcp.org/en/jsr/detail?id=321>

Consultant
2009

Constrained Intents: Extending Android Security for Intent Policies
Funded by the ICTR&D Fund, Islamabad, Pakistan. 24 months.
Participated in idea generation and defense, team structuring.

Research Scholar
2008 – 2010

Dynamic Behavioral Attestation for Mobile Platforms
Funded by the ICTR&D Fund, Islamabad, Pakistan. 24 months.
Participated in idea generation and defense, paper writing and prototype development.

Research Associate
2007 – 2009

Towards Trusted Web Services for Mobile Devices
Funded by the Institute of Management Sciences, Peshawar, Pakistan. 24 months.
Participated in idea generation and defense, prototype development and project execution.

▷ **Skills**

Security

Expertise in state of the art technologies such as Trusted Platform Module (TPM) and Trusted Computing, Identity Management Frameworks (Shibboleth), Android smartphone source code, the Linux kernel, Security Enhanced Linux and several other security architectures, protocols and algorithms.

Programming Languages

Skilled and experienced in high and low level languages including Full stack Javascript, Java, PHP, Ruby, Python, C/C++, Visual Basic, .Net languages, Prolog and Lisp. Also very well versed with version control systems such as SVN, Git and mercurial.

System Analysis and Design

Proficiency in system analysis and design of fairly complex system including Linux Kernel, ERPs for SMEs, e-commerce, MISs and CMSs. Experienced with large-scale production-level systems.

Formal Specification and Verification

Working knowledge of formal specification of security systems using Z Notation and Isabelle.

Artificial Intelligence

Development of basic artificially intelligent systems using Lisp and Prolog. Also, a field of research in MS alongside Software Engineering.

▷ **References (3)**

Dr. Sohail Khan
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Abdulrahman bin Faisal
University, Dammam, KSA

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Dr. Nouman Azam
Associate Professor, FAST
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and Emerging Sciences, Pakistan

Email: nouman.azam@nu.edu.pk
Phone: +92 332 5684 958
Relationship: Graduate Studies Coordinator

Dr. Tamleek Ali Tanweer
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Pakistan

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Relationship: Colleague/Collaborator