



THE PAKISTAN ACADEMY OF ENGINEERING

Free Training Workshop on

“Cybersecurity Fundamentals: Penetration Testing 101”

20th May, 2023, FAST - National University of Computer & Emerging Sciences, Shahrah-e- Faisal, Karachi.

Introduction and Background:

The Pakistan Academy of Engineering since inception is committed to add value in engineering community leading to the growth in the economy of Pakistan. PAE has arranged various workshops on critically important topics which are being neglected in Pakistan due to lack of commitment or resources or both. Knowledge management is one of the key areas which has been repetitively emphasized by our President Dr. – Ing. Jameel Ahmad Khan in symposia being held on regular basis by PAE. Knowledge has been a basis of competitive advantage of nations since known history but in this era of Big Data, 5G and Cloud Computing, knowledge management and creation has undoubtedly become a decisive factor. Even countries with small populations or inherent natural resources disadvantage are sustaining their competitive edge because of their knowledge base. Endowment of natural resources combined with knowledge base is of course a lethal combination to move forward in this era of enormous commercialization potential of knowledge base.

It is unfortunate that in terms of number of patents, Pakistan as a country stands nowhere mainly because of non-existence of policy initiative from government and lethargic attitude from academia baring few exceptions with marginal significance on national level. Whatever knowledge base we accumulate, we do not utilize it efficiently for better future planning. Availability of data and that too accurate in any area has become a major hurdle in our strategic planning and national development. Pakistan Academy of Engineering has therefore decided to arrange a workshop on “Knowledge Creation and Management for Sustainable Competitive Advantage” for the engineering organizations and community. Our emphasis on focus on the engineering segment for economic growth is for a reason. In developed countries, 35 – 40 % of the GDP growth is because of growth and expansion in engineering area.

About Training:

Workshop Objectives

Major objective of this workshop is to impart fundamental knowledge about Penetration Testing – a fundamental component in Cyber Security. The workshop will be focused on delivering training related to fundamental understanding, theoretical knowledge, and hands-on experience. The attendees will have an opportunity to understand the important details related to network monitoring, network analysis, and password cracking. Kali Linux based hands-on activities will also be performed.

About the Trainer

Dr. Jawwad Ahmed Shamsi is a Professor of Computer Science and Dean Computing at FAST NUCES. He also leads a tech startup, iParhai. <http://iParhai.com>. Dr. Shamsi believes in developing and transforming innovative solutions to promote masses. He earned his PhD. in Computer Science from Wayne State University, MI, USA. He has over 20 years of experience in teaching, research, and development. He has secured competitive research grants from HEC, NCAI, and NVIDIA. He also authored a book on Big Data Systems, which has been published by Taylor and Francis. His research area includes Network Security, Deep Learning, Big Data Systems, High Performance Computing, Software Defined Networks, and Technological Development. He can be reached at jawwad.shamsi@nu.edu.pk.

The Pakistan Academy of Engineering

Pakistan Academy of Engineering

The Pakistan Academy of Engineering – PAE was registered on December 20, 2013 at Karachi. PAE was established with the purpose to provide national forum for the discussion of engineering and technological issues currently being faced by the industries of Pakistan. PAE is endeavoring to promote the application of emerging technologies for the benefit of Pakistani nation. PAE provides independent advice on the issues of engineering and technology that addresses many questions of national and strategic importance. We are engaged more efficiently with the public and public policy process to promote strengthening and integration of academia, industry, government and society in the country. We firmly believe that creation of engineering culture in the country is the key source of developing sustainable competitive advantage. To pursue our strategy we regularly conduct studies, symposia and workshops in Pakistan and have got recognition from eminent professionals all over the world.

The Pakistan Academy of Engineering is a member The International Council of Academies of Engineering and Technological Sciences, Inc. – CAETS, USA.

Major Topics of the Workshop

- Network Monitoring
- Network Analysis
- Web Security
- Password Cracking

Who Should Attend?

- Students who would like to explore this emerging area.
- Professionals who are keen to initiate work in this domain
- Knowledge Seekers who would like to gain knowledge on this subject.

Registration

For further information and registration, please contact:

Mr. Aarsal Sohail - 0300-3667924

Mr. Mustafa Ahmed Sharief - 0345-3151932

Key Takeaways

- Fundamental Understanding
- Hands-on Activity
- Certificate

Free Workshop

- **This is a free workshop and only first 40 registrations will be accommodated.**

Evening Program

- 14:30 – 15:00: Attendance and Registration
- 15:00 – 15:05: Recitation from Holy Quran
- 15:05 – 16:15: Training Session
- 16:15 – 16:45: Refreshment
- 16:45 – 17:40: Training Session
- 17:40 – 18:00: Feedback and Certificate Distribution

Important Note: The workshop is free for selected participants. It is requested that organization should nominate by first conducting appropriate training need assessment of the prospective candidate.

Refreshment: Complementary



This particular workshop is being conducted under PAE's constituent entity Institute for Technology Assessment and Transfer (ITAT).

The Basic objective of the ITAT is to conduct independent and objective analysis, and make an assessment of the potential of future technologies. It will also assess the consequences of introduction of new technologies. Timely attention and relevance to the country will be the over-riding considerations for the conduct of its business.

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For Registration: Please contact Mr. Aarsal Sohail
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