

Request for membership of review team for WHOIS policy, as a member of SSAC

Internationalized Domain Names (IDNs) are sure to change the way internet will be used in the future. Though it will not change the underlying DNS, it will still have significant technical and policy implications. For example, language table development, variant domain name management, synchronized TLD delegations, and internationalized WHOIS are some emerging areas.

I am a professor of Computer Science, specializing in local language computing and working in the Internationalized Domain Names (IDNs) as one of the focus areas of my research. As part of the work on IDNs, I have led an effort for developing language tables (including variant analysis) for 10+ languages and an equal variety of scripts from developing Asia. This work has been conducted through the PAN Localization project ([www.PANL10n.net](http://www.PANL10n.net)) in collaboration with country partners. I have also been actively involved in the IDNabis email discussion list, over past two+ years, where I have contributed to the IDN protocol development. The work through PAN Localization project was converted into a detailed report, **Feedback of PAN L10n project on IDNabis for Languages of Developing Asia**, which was also formally submitted to the IDNabis process. This work also included developing an Urdu test IDN TLD for Urdu with ICANN (see Urdu page link at <http://idn.icann.org/>). Since 2008, I have also been involved, as the founding member, with Arabic Script IDN Working Group (ASIWG). ASIWG is a self-organizing group which has been working on developing IDN specifications for languages using Arabic script, and have also authored a book titled **From Protocol to Production: Implementing the IDNs**, which was published in 2009. I have led the IDN ccTLD program in Pakistan and have been the member of the IDN ccTLD committee formed by Ministry of IT, Govt. of Pakistan. Over past two years, I have worked with the ministry to develop a national consensus on IDN implementation in Pakistan, the most recent achievement being consensus on and finalization of a single language table encompassing the 66+ languages spoken in the country, based on feedback from community and experts. The work has also included, and continues to evolve around, development of IDN registry test-bed, user-end application plug-ins for IDNs, IDN registration and resolution process, and policy formulation for the IDN ccTLD registry (some details at [www.crupt.org/idn](http://www.crupt.org/idn)).

I have also been a member of DNS Stability Panel, which advises on the security and stability issues around IDN ccTLD strings applied for during the ICANN Fast Track Process, have been part of the IDN Implementation Committee of ICANN. I am an observer member of Joint ccNSO-gNSO IDN Working Group (JIG) and a member of Security and Stability Advisory Committee (SSAC) at ICANN as well.

I am interested to be a member of the review team for **WHOIS policy**, as a member of SSAC, with a special focus from the perspective of IDNs.

Regards,

Sarmad Hussain

## Sarmad Hussain

133 C MODEL TOWN, LAHORE, PAKISTAN

EMAIL: [sarmad.hussain@kics.edu.pk](mailto:sarmad.hussain@kics.edu.pk)

PHONES: +92-300- 8414909

### WORK EXPERIENCE

**Professor and Head, Center for Language Engineering (CLE)**  
**Al-Khwarizmi Institute of Computer Science ([www.kics.edu.pk](http://www.kics.edu.pk))**  
**University of Engineering and Technology ([www.uet.edu.pk](http://www.uet.edu.pk)), Lahore, Pakistan.**  
**June 2010- to date.**

Responsibilities include developing project proposals, planning and executing research projects at CLE, teaching and supervising graduate students, managing research staff associated with CLE (a center with 20+ full time researchers). Research focused on Localization, Script, Speech and Language Processing, especially for Urdu and other Pakistani languages, and deployment of local language technology for use by rural populations based on mobile and computing platforms.

**Professor, Department of Computer Science**  
**Head, Department of Computer Science, Jan. 2008- Dec. 2009**  
**Founding Head, Center for Research in Urdu Language Processing (CRULP) ([www.crup.org](http://www.crup.org)),**  
**2001 – May 2010**  
**National University of Computer and Emerging Sciences (NUCES) ([www.nu.edu.pk](http://www.nu.edu.pk)), Lahore,**  
**Pakistan. 2001-2010.**

Responsibilities included proposal development, planning and executing research projects at CRULP, teaching and supervising doctoral, graduate and undergraduate students, managing research staff associated with CRULP (a center with 30+ full time researchers). Research focused on Localization, Script, Speech and Language Processing, especially for Urdu and other Pakistani languages.

Courses Taught: Computer Programming, Data Structures, Discrete Mathematics, Theory of Automata, Phonetics and Phonology, Computational Linguistics, Computer Speech Processing, Statistical Language Processing, Computer Script Processing, Urdu Computational Grammar, Professional Issues in IT.

**System Architect, Crescent Software Products, Lahore, Pakistan. Feb. 2000 to July 2001.**  
CresSoft was a 200+ person organization with offices in Lahore, Karachi, Islamabad and Denver, developing software for clients in US in the area of business-to-business e-commerce. CresSoft's software development process is ISO9000 certified under 'TickIT' scheme.

System architect in CresSoft was primarily involved in project estimation, risk identification, tool identification, requirement analysis and specification, design and test case planning for the projects. System architect also got involved if any issues were escalated in the implementation or testing phases. Involved in design and development of multiple commercial software projects for foreign clients. Also placed at client in Michigan, USA, for proposal development and project estimation.

**Assistant Professor, FAST Institute of Computer Science, Lahore, Pakistan. 1997- 2000.**

### SALIENT RESEARCH PROJECTS

- Regional Project Director of PAN Localization Project Phase II Extension ([www.PANL10n.net](http://www.PANL10n.net)), in collaboration with IDRC Canada ([www.idrc.ca](http://www.idrc.ca)). Duration: May 2010 – June 2011.
- Regional Project Leader of PAN Localization Project Phase II ([www.PANL10n.net](http://www.PANL10n.net)), in collaboration with IDRC Canada ([www.idrc.ca](http://www.idrc.ca)). Duration: May 2007 – April 2010.
- Project Leader, Urdu Speech Recognition and Its Application to Health Workers, in collaboration with Carnegie Mellon University through HEC USAID Grant Program. Sept. 2008- Sept. 2010.

- Project Leader, Sindhi Digital Dictionary, in collaboration with University of Illinois Urbana Champaign and South Asian Languages Resource Center at University of Chicago. Duration: August 2008-August 2009
- Co-Principle Investigator, Microsoft’s Urdu Language Interface Pack for Windows Vista and Office, in collaboration with Microsoft. Duration 2007 – 2009.
- Project Leader, EGD Urdu Localization Project in collaboration with E-Government Directorate, Ministry of IT ([www.e-government.gov.pk](http://www.e-government.gov.pk)). Duration Sept. 2003 – June 2006.
- Regional Project Leader of PAN Localization Project, in collaboration with IDRC, Govt. of Canada ([www.PANL10n.net](http://www.PANL10n.net)). Duration: Jan 2003 – April 2006.
- Project Leader, Nokia Urdu Pronunciation Lexicon, in collaboration Nokia Research, Beijing. Duration: Oct. 2005 –Dec. 2006.

## TECHNICAL COMMITTEES

- Member, DNS Stability Panel, Fast Track Process, ICANN, 2009-2010
- Member, Security and Stability Advisory Committee (SSAC), ICANN, 2010-2013
- Observer Member, Joint ccNSO-gNSO IDN Working Group (JIG), 2010
- Member, IDN Implementation Committee, ICANN, 2009
- Member of Technical Committee, پاکستان IDN ccTLD registry, Ministry of IT, Govt. of Pakistan, 2009- to date. Convener for the Language-Table sub-committee.
- Member, Urdu Standards Committee, National Language Authority, Islamabad, since 1998.
- Member Technical Committee, Land Records Management Information System, Board of Revenue, Govt. of Punjab, Pakistan 2009 – to date
- Chairperson, Board of Governors, Society for Natural Language Processing, Pakistan 2009-to date
- Member, ICT Task Force, Planning Commission, Govt. of Pakistan, 2009-2009
- Founding Member, Arabic Script IDN Working Group, 2008 to date
- Member, Editorial Board, Localisation Focus: The International Journal for Localisation, published by Localisation Research Center, Univ. of Limerick, Ireland, since 2004.
- Member, Editorial Board, Pedagogical Perspectives on South Asian Languages, published by South Asian Language Research Center (SALRC), Univ. of Chicago, USA, since 2006.
- Moderator of Local Content Development Advisor Group, National IT Development and Promotion Unit, Ministry of IT Govt. of Pakistan ([www.nidu.gov.pk](http://www.nidu.gov.pk)).
- Member, PTCL R&D Fund Board, chaired by Minister of IT, Govt. of Pakistan, responsible for approval of projects for PTCL R&D Fund, 2003-2006. The fund was responsible for research grants and had a budget of Rs. 2 billion.

## EDUCATION

**PhD in Speech Science**, Department of Communication Sciences, Northwestern University, Evanston, IL., USA. 1993-1997. Thesis in Experimental Phonology and Phonetics: “Phonetic Correlates of Lexical Stress in Urdu.” Advisor: Janet Pierrehumbert.

**Visiting Scholar**, Phonetics Laboratory, Oxford University, Oxford, UK. Summer 1995. Advisor: John Coleman.

**MPhil in Computer Speech and Language Processing**, Department of Engineering, Cambridge University, Cambridge, UK. 1992-1993. Thesis: “Synthesis of Urdu Consonants Using Infovox Text-to-Speech System.” Advisor: Sarah Hawkins.

**BSEE (with Honors) in Electrical Engineering** (specialization in **Computer Eng.**), Department of Electrical and Computer Engineering, University of Texas at Austin, TX., USA. 1988-1992.

## RELEVANT BOOKS, REPORTS, AND PAPERS

**From Protocol to Production: Implementing the IDNs** (co-authors: Rabia Sirhindi, Nayyara Karamat), published by PAN Localization Project, International Development Research Center, Canada. Also available at [www.PANL10n.net](http://www.PANL10n.net) (Outputs link). 2009.

**Feedback of PAN L10n project on IDNAbis for Languages of Developing Asia** (co-author: Nayyara Karamat), by PAN Localization Project, International Development Research Center, Canada. Available at <http://panl10n.net/wiki/InternationalizedDomainNames>. 2008.

**Localization in Asia Pacific** (co-author: Ram Mohan). In *Digital Review of Asia Pacific 2007/2008* (<http://www.digital-review.org>). Sage Publishers, India, 2008.

**PAN Localization Survey of Language Computing in Asia 2005** (co-authors: Sana Gul and Nadir Durrani), published by PAN Localization Project, International Development Research Center, Canada. ISBN: 969-8961-00-3. Also available at [www.PANL10n.net](http://www.PANL10n.net) (Outputs link). 2005.

**Arabic Script Internationalized Domain Names**, in CIIT Workshop on Research in Computer (CWRC), Lahore, S. Hussain, N. Karamat and A. Mansoor (2008).

**Urdu Internationalized Domain Names**, in *Proceedings of the IEEE International Multi-Topic Conference*, Islamabad. S. Hussain, N. Durrani (2006).

## SALIENT HONORS AND AWARDS

**ICANN Fellowship**, ICANN Nairobi Meeting, 2010.

**IDRC Grant to attend Internet Governance Forum (IGF)**, Sharm Al Sheikh, Egypt, 2009.

**ICANN Fellowship**, ICANN Cairo Meeting, 2008.

**ICANN Grant**, ICANN Dubai Meeting, 2008.

**ICANN Fellowship**, ICANN Delhi Meeting 2008.

**IDRC Grant to attend Internet Governance Forum (IGF)**, Rio de Janeiro, Brazil, 2007.

**Digital Pioneer**, IDRC Canada 2005 (<http://www.idrc.ca/IMAGES/ICT4D/PanAsia/PAN/chap3.html>).

**Gold Medal for Research Development**, FAST-National University, Pakistan 2005.

**National Free and Open Source Software Award 2005**, FOSSAC, Lahore, Pakistan

**Dr. M. N Azam Prize for Computer Science (Software)**, Pakistan Academy of Sciences, Government of Pakistan, 2002.

## RELEVANT R&D/OTHER ACTIVITIES

**Chair**, 8<sup>th</sup> Workshop on Asian Language Resources, COLING 2010, Beijing, China, Aug. 2010.

**Organizer**, Language Table Sub-Committee Meeting, پاکستان IDN ccTLD Committee, Ministry of IT, Government of Pakistan, April 2010.

**Organizer**, “Local Language Computing in Developing Asia,” Fourth Asian Regional Training on Local Language Computing, PAN Localization Project, Vientiane, Laos (2009).

**Conference Chair**, Conference on Language and Technology, CRULP, NUCES, Pakistan, Jan. 2009.

**Organizer**, National Workshop on IDNs for Pakistani Languages, CRULP NUCES, Pakistan, 2008, [www.crulp.org/clt09](http://www.crulp.org/clt09).

**Organizer**, “Local Language Computing Policy in Developing Asia,” Third Asian Regional Training on Local Language Computing Policy, PAN Localization Project, Thimphu, Bhutan (2007).

**Organizer**, Summer School in Asian Language Processing, PAN Localization Project, Lahore, Pakistan (June-August 2006).

**Organizer**, “From Localization to Language Processing,” Second Asian Regional Training on Local Language Computing, PAN Localization Project, Siem Reap, Cambodia (June 2005).

**Organizer**, “Fundamentals of Local Language Computing,” First Asian Regional Training on Local Language Computing, PAN Localization Project, Lahore, Pakistan (January 2004).