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COMMUNITY OUTREACH: ACCOMPLISHMENTS AND GOALS

My Philosophy of Life

While there is a will there is a way

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Summary — **Realizing that the roots of all endeavors lie in community acceptance and support, start on what the community knows and build on what the community has to educate in numeracy, in addition to literacy, in this era of knowledge-based and computer-oriented public. This should create a society in which people ask for backing of a claim or proposal on the basis of data collected according to established statistical principles.**

Philosophy To take into confidence the community (where work is being done) through involvement in the decision-making process, the planning and the implementation of various programs. To educate society about the importance of mathematics as a tool of the tools, having predictive power and as a branch of knowledge, which appreciates and cultivates beauty of nature through the use of numbers.



Addressing High Achievers of Beacon Light Academy
as Chief Guest on March 26, 2006

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Methodology General public needs to be educated in terms of *numeracy* (ability to interpret numbers/data), in addition to *literacy* (ability to read/write/express). Popular articles and lectures to be used to achieve this goal. Students to be trained to generate mathematical solutions of indigenous problems. Schoolteachers to be motivated so that they pass on a positive learning attitude to their students.

Accomplishments A six-fold approach is adopted:

- Writing popular articles for general public (please click "Articles on Science and Modeling" hyperlink appearing on my homepage to review sample work).
- Conducting programs on local radio stations and television channels (*e. g.*, Geo TV, Radio Pakistan, FM 107, Aaj TV, Express News TV) elaborating the importance and the applicability of mathematics, the most recent one telecast on Indus News TV on April 12, 2009 at 1815h (paths in the sky).
- Demonstrating the power of mathematics to the community in the health care of children through *the NGDS Pilot Project*, conducted in schools run by Armed Forces of Pakistan since 1998.
- Introducing high-school students to prominent researchers and exposing them to research conducted in universities through *the Early Talent Research Participation Program*, conducted, every year, since 2002.
- Mathematics pre-university-teachers-training through *the NGDS Workshop Series*.
- Community involvement through training in anthropometric techniques for Dept. of Special Education on November 10, 11 and 13, 2006, and most recently, at Beacon Light Academy during the months of April and May 2011 (good health habits to be imparted in community through educating parents about maintaining proper weight-for-height).

These efforts have proven fruitful. SUPARCO (space agency of Pakistan) started hiring mathematicians starting 2003. During 2007 and 2008, Ambreen Kanwal and Nazish Rafiq Khan (last one took Astronomy I and II from me), respectively, accepted positions in SUPARCO. Engro Asahi Polymers & Chemical (Ltd) offered internship to the students of MSc (Applied Mathematics) and MIBM. Data Communications & Controls, Private (Ltd) has, also, expressed interest in training our students. A seminar "Industrial and Business Mathematics in the Third Millennium" was organized by Department of Mathematics, University of Karachi, in which economists, industrialists and mathematicians gave presentations in order to establish a dialogue between university and industry.

Goals For the coming years priorities are arranging internships in industry for undergraduate students, founding Cyber Science Society (utilizing internet to provide students living in remote areas an opportunity to interact with renowned mathematicians), preparing Pre-University Integrated Science and Mathematics Curriculum.

Selected *What is Science?*

Articles **KAMAL SA**, *the News International*, Karachi, July 21, 1997 (Technotalk Page)

What is a Scientific Method After All?

KAMAL SA, *the News International*, Karachi, December 8, 1997 (Technotalk Page)

Observations and Experiments in Science

KAMAL SA, *Agahi* (Magazine of the Shaheed-é-Millat Government Degree College for Women, Azizabad, Karachi), 2007, pp 1-3 (Intellectual Preview)

Handling Industrial Projects

KAMAL SA, *Rawish* (Magazine of the Government Degree College, Malir Cantt., Karachi), 2008, pp 47-49

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Public Appearances *Presided*
The Thirty-Second Imam Ahmed Raza Conference, University of Karachi (January 14, 2012)

Chief Guest
Annual Functions, Government Degree College, Malir Cantonment, Karachi (March 25, 2006 and January 24, 2008) and Outstanding-Achievers-Celebration Function, Beacon Light Academy, Karachi (March 26, 2006)

Guest of Honor
Inter Branch Tournaments 2011, the City School, Southern Region, Physical Education Department, Karachi (March 9, 2011), Annual-Prize-Distribution Ceremony, Government Degree College, Malir Cantonment, Karachi (April 19, 2008) and Independence Celebration, Markaz-é-Umeed (school for special children), Federal 'B' Area, Karachi — opening remarks of the function (August 20, 2007) [Provincial Minister, Mr. Rauf Siddiqui was the Chief Guest]

Guest Scientist
Pakistan Academy of Sciences Karachi Chapter Program, LEJ national Science Center, Karachi (November 4, 2010)

Panelist (Panel Discussion)
The Fourth National Conference on Information and Communication Technologies (COMNET 2012), Usman Institute of Technology, Karachi (February 11, 2012)
The Twelfth IEEE International Multi-Topic Conference (IEEE INMIC 2008), Bahria University, Karachi (December 23, 2008)

Judge
Mathematics Category, Science Olympiad, the Aga Khan Higher Secondary School, Karachi (March 7, 2008, February 20, 2009 and February 10, 2012) and (Usman Institute of Technology, Karachi Poster Session, ACM Student Chapter, UIT Computer Society (January 31, 2008) and Final Year Projects Exhibition (July 21, 2011).

Web address of this statement: <http://www.ngds-ku.org/goals/Univcom.pdf>

HTML version of this statement: http://www.ngds-ku.org/goals/community_syn.htm

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