



Workshop on



**“Advancements in  
Pure and Applied Mathematics”**

**April 24-25, 2014**

**COMSATS** Institute of Information Technology, Attock Campus  
Department of Mathematics

# **Advancements in Pure and Applied Mathematics**

## **Introduction**

The mathematical sciences constitute a rich and complex ecosystem, one in which people and ideas move across boundaries. It is constantly evolving. For the mathematical sciences to be healthy, all parts of this ecosystem must be nurtured. Keeping this in view, Department of Mathematics is organizing a workshop which will provide a platform to disseminate recent developments in pure and applied mathematics. It will provide a good exposure to students and encourage them to pursue their research in pure and applied math.

## Purpose of Workshop

The motivation of this workshop is to discuss and explore future directions of pure and applied mathematics. The workshop will comprise of a paper session where authoring papers, late-breaking results and state of the art approaches will be presented. This workshop aims to present latest developments and worldwide border results in specific fields of pure and applied mathematics. The main purpose of the workshop is to encourage and motivate young researchers and bring them together with country wide known names in respective fields. This workshop will provide research collaboration opportunities to the graduate students and young researchers to have interaction with renowned researchers for continuous process of quality research/education.



**Director and Faculty of Mathematics, Department**

**COMSATS Institute of Information Technology, Attock Campus**

Request the honor of your presence at the 1st mathematics workshop on

**“Advancements in Pure and Applied Mathematics”**

**On April 24-25, 2014**

**At 10:00 A.M.**

**Venue: COMSATS Attock (New Campus)**

**Kamra Road Attock**

# PROGRAMME GUIDE

**Day-1, April 24, 2014**

**(Thursday)**

**Registration (08: 30 AM – 10: 00 AM)**

## **Inaugural Session**

Guest to be seated:	10: 00 AM
Arrival of Chief Guest:	10: 15 AM
Recitation of the Holy Quran:	10: 20 AM
Welcome address by the HOD:	10: 30 AM
Address by the Director:	10: 40 AM
Address by the Chief Guest:	10: 50 AM
Refreshments:	11: 00 AM

**First Session (11: 30 AM – 01: 00 PM)**

**Speaker: Prof. Dr. Tahira Haroon (CIIT Islamabad)**

**Time:** 11: 30 AM – 12: 00 PM

**Title:** Comparison between VIM and ADM to obtain exact solutions for thin film flow and generalized Couette flow.

**Speaker: Dr. Naeem Mustafa (PINSTECH Islamabad)**

**Time:** 12: 00 PM – 12: 20 PM

**Title:** Modelling and Solution of an example fluid mechanics problem for young researchers.

**Speaker: Dr. Muhammad Imran (GCU Faisalabad)**

**Time:** 12: 20 PM – 12: 40 PM

**Title:** Taylor-Couette flow of a fractional second grade fluid in an annulus due to a time-dependent couple.

**Speaker: Dr. Muhammad Irfan (IMCG, F-6/2 Islamabad)**

**Time:** 12: 40 PM – 01: 00 PM

**Title:** Algebraic structures of soft sets associated with new operations.

**Lunch and prayer break: 01:00 PM - 02: 00 PM**

**Second Session (02: 00 PM – 03: 30 PM)**

**Speaker: Prof. Dr. Saleem Asghar (CIIT Islamabad)**

**Time:** 02: 00 PM – 02: 30 PM

**Title:** Boundary layer analysis for the flow of non-Newtonian power-law fluid over an exponentially stretching surface with suction and injection.

**Speaker: Dr. Khurram Ali Khan (University of Sargodha)**

**Time:** 2: 30 PM – 02: 50 PM

**Title:** Refinement of Jensen's Inequality for operator convex functions.

**Speaker: Dr. Atiq-Ur-Rehman (CIIT Attock)**

**Time:** 02: 50 PM – 03: 10 PM

**Title:** Stephenson generalization of Chebyshev's inequality.

**Speaker: Mr. Mirza Azhar (CIIT Islamabad)**

**Time:** 03: 10 PM – 03: 30 PM

**Title:** On the steady two-dimensional flow of blood with heat transfer in the presence of a stenosis.

**Tea Break: 03:30 PM – 03: 50 PM**

### **Third Session (03: 50 PM – 5: 20 PM)**

**Speaker: Prof. Dr. M. Aslam (GCU Lahore)**

**Time:** 03: 50 PM – 04: 20 PM

**Title:** Introduction to the theory of commutators in semi-rings.

**Speaker: Dr. Ammara Nosheen (University of Sargodha)**

**Time:** 04: 20 PM – 04: 40 PM

**Title:** Fuzzy functional equations under dissipative-type condition.

**Speaker: Mr. Shafqat Ali (GIKI Swabi)**

**Time:** 04: 40 PM – 05: 00 PM

**Title:** Newtonian heating in a stagnation point flow of burgers' fluid over a stretching surface.

**Speaker: Dr. Mohsin Raza (GCU Faisalabad)**

**Time:** 05: 00 PM – 05: 20 PM

**Title:** Regions of variability for Janowski functions.

### **Fourth Session (05: 20 PM – 06: 30 PM)**

**Trip to Attock City**



**Dat-2, April 25, 2014**

**(Friday)**

**First Session (09: 00 AM – 10: 30 AM)**

**Speaker: Dr. Sadia Siddiq (CIIT Attock)**

**Time:** 09: 00 AM – 09: 20 AM

**Title:** Natural convection flow of a dusty fluid along a vertical surface.

**Speaker: Dr. M. Adil Khan (University of Peshawar)**

**Time:** 09: 20 AM – 09: 40 AM

**Title:** On the refinement of Jensen's inequality.

**Speaker: Dr. Saima Noor (CIIT Abbottabad)**

**Time:** 09: 40 AM – 10: 00 AM

**Title:** An efficient numerical method for solving a model describing crystallization of polymorphs.

**Speaker: Prof. Dr. M. Aslam Noor (CIIT Islamabad)**

**Time:** 10: 00 AM – 10: 30 AM

**Title:** Generalized convexity and application.

**Tea Break: 10: 30 AM – 11: 00 AM**

**Second Session (11: 00 AM – 12: 30 PM)**

**Speaker: Prof. Dr. Tasawar Hayat (Quaid-e-Azam University Islamabad)**

**Time:** 11: 00 AM – 11: 30 AM

**Title:** Mathematical modeling and Peristalsis

**Speaker: Dr. Adnan Aslam (GCU Gujrat)**

**Time:** 11: 30 AM – 11: 50 AM

**Title:** The stable set of associated prime ideals of a squarefree principal borel ideal.

**Speaker: Dr. Ali Gohar (Islamia College Peshawar)**

**Time:** 11: 50 AM – 12: 10 PM

**Title:** Necessary and sufficient condition for the chromatic number of  $G$ .

**Speaker: Dr. Irshad Ahmed (GCU Faisalabad)**

**Time:** 12: 10 PM – 12: 30 PM

**Title:** Reiteration of certain limiting real interpolation spaces.

**Lunch and prayer break: 12: 30 PM – 02: 30 PM**

**Third Session (02: 30 PM – 04: 00 PM)**

**Speaker: Dr. M. Awais (CIIT, Attock)**

**Time:** 02: 30 PM – 03: 00 PM

**Title:** Mass transfer and chemical reaction in a flow of non-Newtonian fluid over a permeable surface: Dual solutions.

**Speaker: Dr. Amir Bilal Mann (FUUST, Islamabad)**

**Time:** 03: 00 PM – 03: 20 PM

**Title:** Diffraction of waves by oscillating half plane.

**Speaker: Dr. M. Ramzan (MAJU Islamabad)**

**Time:** 03: 20 PM – 03: 40 PM

**Title:** Acoustic diffraction by an oscillating strip.

**Speaker: Dr. Abdul Qayyum (FUUST Islamabad)**

**Time:** 03: 40 PM – 04: 00 PM

**Title:** Radiation effects in a squeezing flow.

## **Closing Session**

Guest to be seated:	04: 15 PM
Arrival of Chief Guest:	04: 20 PM
Recitation of the Holy Quran:	04: 25 PM
Closing address by the HOD:	04: 30 PM
Address by the Director:	04: 40 PM
Address by the Chief Guest:	04: 50 PM
Distribution of shields/certificates	05: 00 PM
Refreshments:	05: 30 PM

## **Registration**

Registration is free of cost.

## **Contact**

### **Dr. Sadia Siddiq**

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## **Venue and Important Dates**

**Workshop Date:** 24<sup>th</sup>-25<sup>th</sup> April, 2014

**Time and Place:** 10:00 am to 5:00 pm

**Venue:** COMSATS Attock, New Campus

## **Keynote Speakers**

Prof. Dr. Tahira Haroon (CIIT, Islamabad)

Prof. Dr. Saleem Asghar (CIIT, Islamabad)

Prof. Dr. Tasawar Hayat (QAU)

Prof. Dr. Aslam Noor (CIIT, Islamabad)

Prof. Dr. M. Aslam (GCU Lahore)

Dr. Muhammad Ramzan (MAJU, Islamabad)

Dr. Naeem Mustafa (PINSTECH, Nilore)