

Issue No. 29 (2015)

Mathematics Bulletin

Department of Mathematics

COMSATS Institute of Information Technology
Lahore Campus

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Department of Mathematics Faculty and Staff



A Year of Success for Mathematics Department

By the grace of Almighty Allah, 2015 was a year of success for Department of Mathematics. Several milestones were reached and new records established in this era.

- 83 published/accepted research articles in ISI Impact factor journals.
- Two faculty members have achieved 100 impact factor.
- Two projects of worth Rs 3.3 million have been approved by HEC.
- Approval of the grants of worth Rs 1.5 million from HEC to organize 1) Workshop on Modern Aspects of Algebra and Graph Theory; 2) International Conference on Recent Advances in Applied Mathematics
- 07 travel grants for the faculty to attend conference/workshops in Iran Turkey, Germany, Brazil, Bosnia, Saudi Arabia.
- 03 international research visits of faculty members for at least one month to Germany, Brazil and china.
- 04 training camps of IMO have been organized in which about 100 students from all over Pakistan have participated.

Congratulations and Welcome from Department of Mathematics



Prof. Dr. Qaisar Abbas holds PhD degree in Human Resource Development from Nankai University Tianjin China and has a Post-Doctoral Research experience at Cardiff Business School, Cardiff University, UK

On behalf of faculty and staff of Mathematics Department we avail the opportunity to welcome the worthy director and to congratulate you as Head of our Campus. Sir, Mathematics is a universal language for the expression of the laws of nature, whether it is in Physics, Chemistry, Biology, Engineering or Economics. Thus the Department of Mathematics at COMSATS Institute of Information Technology (CIIT) Lahore campus provides its services to all other departments both at undergraduate and graduate levels including dual degree program of CIIT and Lancaster University, UK. Beside the fact that as per number of courses, we are the biggest service Department. The department offers its own BS-Mathematics, MS-Mathematics and Ph.D. Mathematics programs with diverse research areas. Faculty members of the department are committed for quality teaching as well as research and are dynamic and vibrant part of our team.

Message From Head of Department

Dr. Sarfraz Ahmad has been given the responsibilities of the Head of Mathematics Department CIIT Lahore Campus on July 24, 2014. He did his Ph.D from Abdus Salam School of Mathematical Sciences, Government College University in 2008 and completed his Post Doctorate fellowship from Phillips Universitat Marburg Germany in 2011 .



We, as a department, had a successful time during 2015 and aims to continue this journey in the upcoming years. The major contributions include successfully hosting one international and four national conferences/training camps, two of the faculty members got 100 impact factor, couple of research projects approved by HEC and we are able to have 87 international publications. This number is much bigger than the previous year. Two of our faculty members promoted to Associate Professor and we hired three more PhDs. One faculty member went to Post doctorate study while there are many short international visits by the faculty which included the visits of Germany, Iran, Saudi Arabia, Bosnia and Denmark.

My aim is to create a department having brilliant teachers, quality researchers and hardworking students. They, as a team, will work for the benefit of our university, our community and our country. I am very optimistic with my goals by having a wonderful team. I along with my office staff make effort to be enthusiastically helpful to the whole university community.

ICRAAM 2015

One of the major achievements of Department of Mathematics has been the International Conference on Recent Advances in Applied Mathematics (ICRAAM) on December 17-18, 2015.

The main topics of this conference were Theory of Relativity and Cosmology, Dynamical systems, Fluid Dynamics, Numerical Analysis, Fuzzy Inference and Relevant Application areas.



ICRAAM

was sponsored by HEC and COMSATS

ICRAAM was attended by more than 250 scholars and 40 distinguished national and international speakers delivered talks.

More than 250 participants registered themselves for the conference. On the morning of 17th December there were a memorable number of Research scholars, professors, heads of department and students from all over the Pakistan. Our BS, MS and PhD students along with faculty and staff of Mathematics Department exhibited great zeal, hospitality and management skills.

JERAAM 2015 Highlights



The opening ceremony was started with recitation of holy Quran presented by Dr. Mohd Younus. Dr. Saleem Farooq Shaukat, the Head of Academics & Research, CIIT-Lahore, inaugurated the conference and talked about the importance of Mathematics and its applications in emerging technologies.



Dr. Sarfraz Ahmed, the Head of the Mathematics department welcomed the participants and highlighted the national and international activities of the department.

Mathematics Department COMSATS
Islamabad, The university of Punjab,
UMT, Lahore Colleague for Women University and
Azad Kashmir University, Mirpur participated
actively in the conference.

Key Note Speakers and Highlights



Prof. Dr. A.M. Siddiqi (USA), was the key note speaker for 18th September session



Prof. Dr. Shamsul Qammar (CIIT, Islamabad)



Prof. Dr. Mujahid Abbas (South Africa),



Prof. Dr. M. Sharif (PU Lahore)



Prof. Dr. Amir Iqbal (ASSMS)



Prof. Dr. Ismat Beg (LSE, Lahore). talked about the fundamentals of fixed point theory

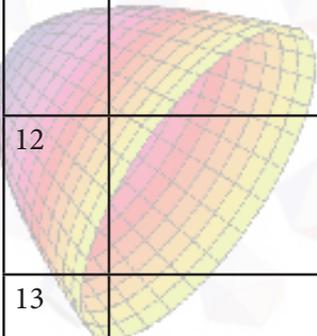
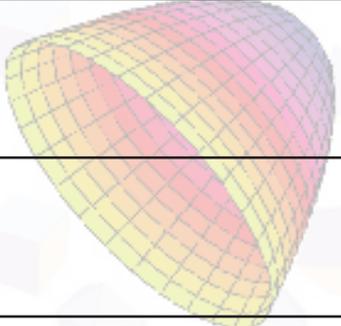
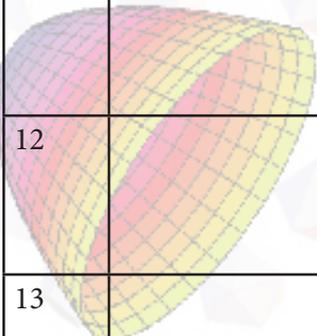
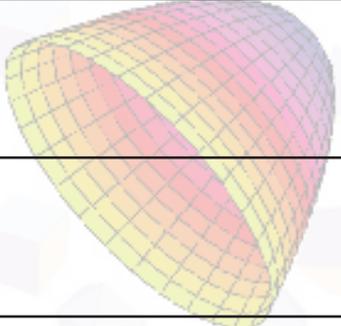
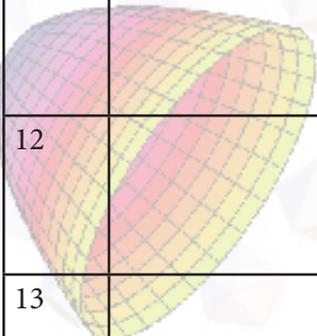
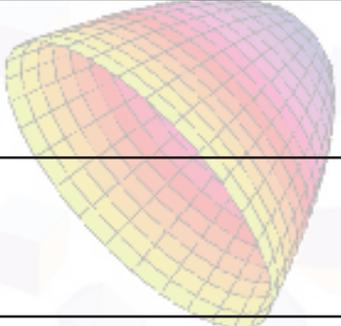
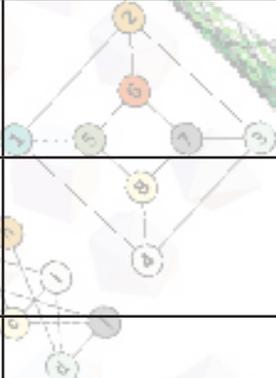
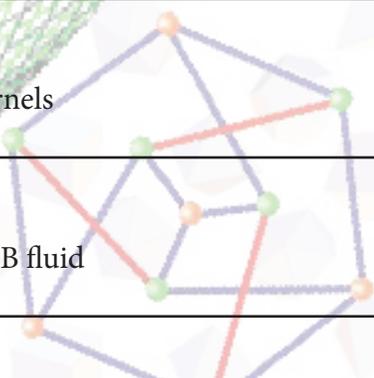
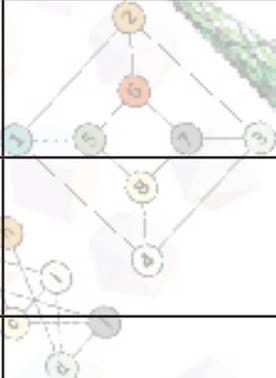
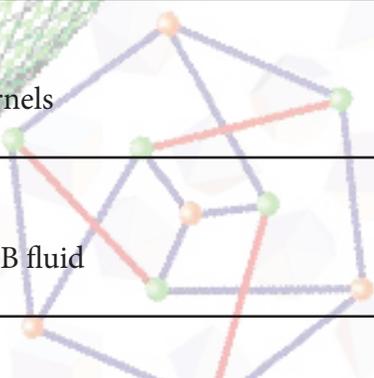
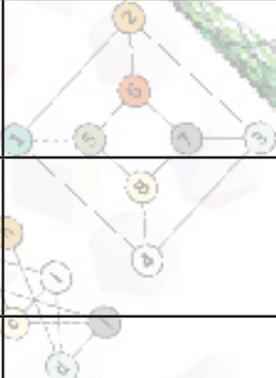
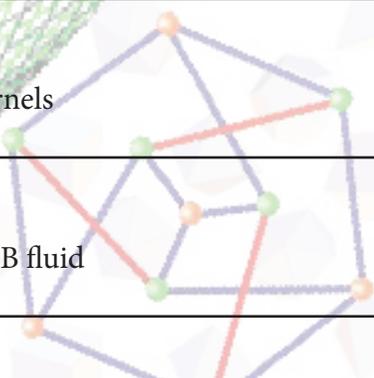
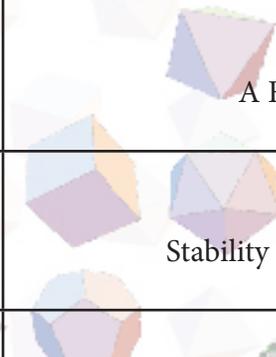
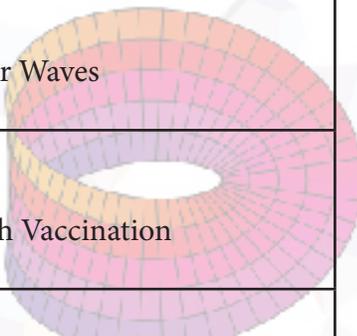
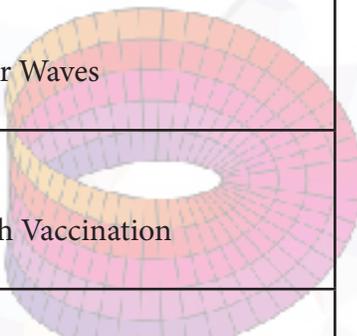
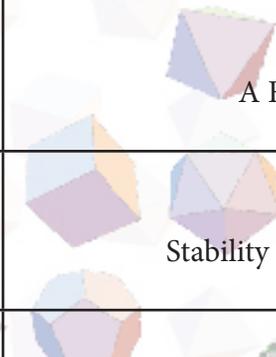
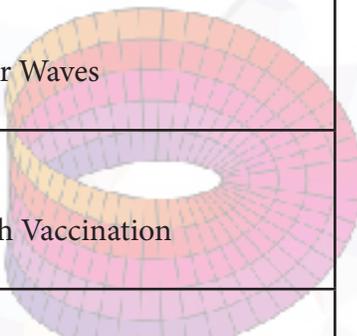
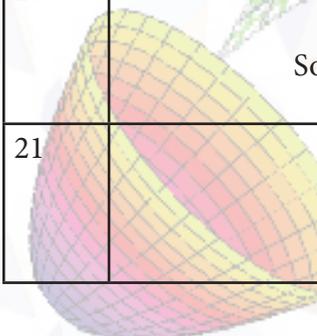
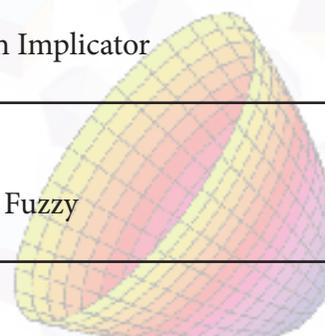
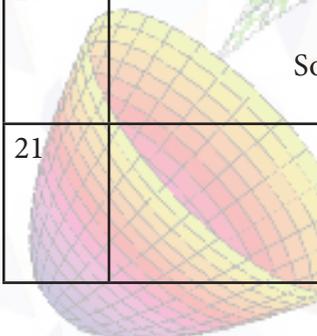
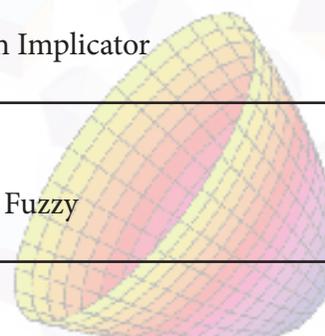
The other respected speakers were from Islamabad, Karachi, Peshawar, Abbottabad, Kohat, Malakand (KPK), Mirpur (Azad Kashmir), Multan, Sahiwal and Lahore



A poster presentation was part of conference. Prof. Dr. Cemil Tunc (Van-Turkey) is discussing a poster.

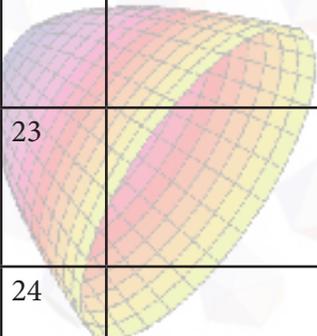
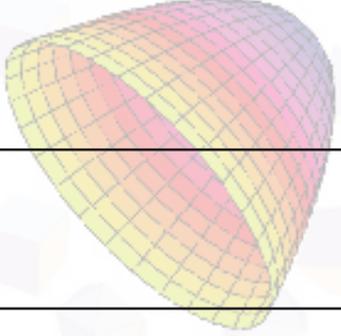
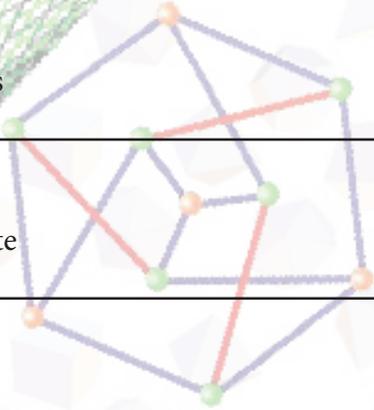
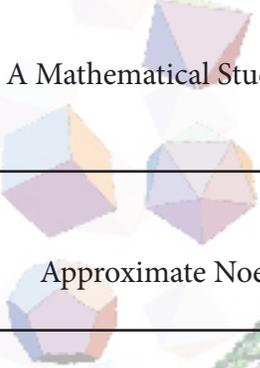
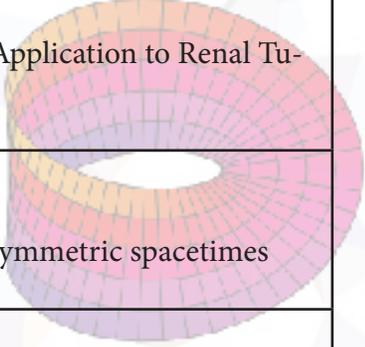
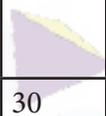
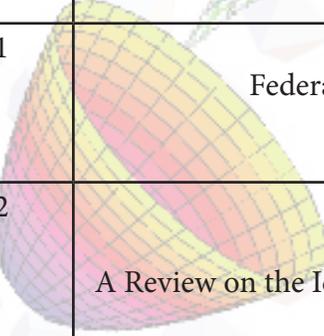
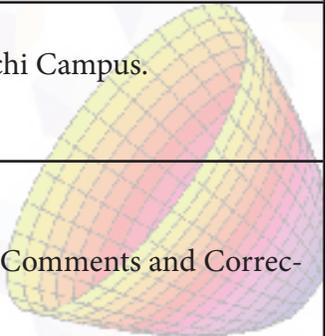
The national level presenters, their affiliation and their topics are as under:

1	Dr. Muhammad Imran Asjad UMT, Lahore Convective Flows of Viscous Fluid over an Infinite Vertical Plate with Fractional Derivatives
2	Mr. Muhammad Ahsan SCME, NUST, Islamabad Mathematical Modeling of Multicomponent Gas Separation Using Membrane
3	Mr. Muhammad Rafiq UCP, Lahore A Predictor-Corrector Non-Standard Finite Difference Scheme for SEIR epidemic
4	Dr. Ghazala Akram PU, Lahore Numerical Solution of Fractional Boundary Value Problem using Spline Technique
5	Ms. Wardat us Salam PU, Lahore Hyperbolic Form of Non-Stationary Binary 6-Point Interpolating Subdivision Scheme
6	Ms. Hira Tariq PU, Lahore A Spline Collocation Method for Boundary Value Problem of Fractional Order
7	Ms. Musawra Sarwar PU, Lahore. Certain metrics in intuitionistic fuzzy graphs
8	Ms. Sumera Naz PU, Lahore Interval-valued Intuitionistic Fuzzy Hypergraphs
9	Ms. Sundas Shehzadi PU, Lahore Coloring of Bifuzzy Graphs
10	Dr. H. Rizwana Kausar UCP, Lahore Gravitational Wave Polarization Modes in $f(R)$ theories

11		Dr. Zeshan Yousuf PU, Lahore Compact Stars and their Evolution	
12		Dr. Zaeem ul Haq Bhatti PU, Lahore Irregularity Factors for Collapsing System	
13		Dr. M. Umer Saleem EU, Lahore A linear Control of Hovorka model	
14		Mr. Irshad Ali Shah UET, Pashawar On the Solution of PDE System via Soliton Kernels	
15		Mr. Iftikhar Ahmed NED, Karachi Unsteady helical flows of fractionalized Oldroyd-B fluid	
16		Mr. Amir Shehzad CIIT, Abbottabad Creeping Flow of Viscous Fluid Through a Porous Slit with Periodic Absorption	
17		Mr. Sarmad Arshad BZU, Lahore-Campus A Fractional Order Approach for Nonlinear Shallow Water Waves	
18		Dr. Zakir Hussain CIIT, Abotabbad Stability Analysis of a Epatitis-B Virus Transmission Model With Vaccination	
19		Dr. Muhammad Riaz PU, Lahore Certain Properties of Soft Metric Space	
20		Mr. M. Aslam Javed FAST, Lahore Some Results on Fuzzy Transitive Relations using Reichenbach Implicator	
21		Mr. Farrukh Shehzad CIIT, Lahore Improved Intelligence Traffic Control System(IITCS) By Fuzzy	

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22		Dr. Ghulam Abbas CIIT, Sahiwal Black Holes for Beginners	
23		Dr. Wajiha Javed EU, Lahore Quantum Tunneling Phenomenon	
24		Dr. Muhammad Azam EU, Lahore Cracking of Compact Objects	
25		Dr. Muhammad Ayub CIIT, Abbottabad Lie Symmetry Analysis for System of ODEs	
26		Mr. Mohammad Zakria IBA, Karachi Current Stage of Black Hole Existence Debate	
27		Mr. Mutti Ur Rehman Gran Sasso Science Institute (GSSI), Italy Computing Structured Singular Value	
28		Mr. M. Kashan CIIT, Abbottabad A Mathematical Study of Flow of Micro Polar Fluid In a Permeable Tube: Application to Renal Tu- bule	
29		Dr. Farhad Ali KUST, Kohat Approximate Noether symmetries from geodetic Lagrangian for plane symmetric spacetimes	
30		Ms. Ifra Nourin UMT, Lahore Instability Range of Gravitating Sources in Gravity	
31		Dr. Imtiaz Husain Federal Urdu University of Arts, Science and Technology, Karachi Campus. Diversity Pattern Calculation Using Fractals	
32		Mr. Hammad Khalil UoM, KPK A Review on the Idea of Generalized Differential Transform Method, Some Comments and Correc- tions	

Closing Ceremony



In the closing ceremony the rector of Virtual University of Pakistan, Dr. Naveed Malik and the Director General of Abdul Salam School of Mathematical Sciences Lahore, Dr. Shahid S. Siddiqi awarded shields and certificates to speakers.



JMO - 2015

The department of Mathematics has been selected as a Home Institute to train the national team for International Mathematical Olympiad (IMO) each year. The IMO is the highest-level international mathematics competition for secondary school students. It is held annually in a different country/region since 1959 and over 100 countries compete in it, including all members of the G20. The aim of the IMO is to bring young people together from all over the world to enjoy the challenges of mathematics in a spirit of friendly competition. This provides a stimulus for Mathematics in each of the participating countries as young people strive for selection. Clearly it is a competitive event but for most participants, it is the people that they meet and they shared joy of discovery that is what they regard as most worthwhile. It is common that lifelong friendships are forged at IMO events. In 2015 the department has organized 04 training camps of IMO in which about 100 students from all over the Pakistan have participated. The IMO was held in Chiang Mai, Thailand and the national team won Bronze medal for Pakistan. The HEC has approved the grant of 1 million for IMO-2016 training camps.



Foreign Visits

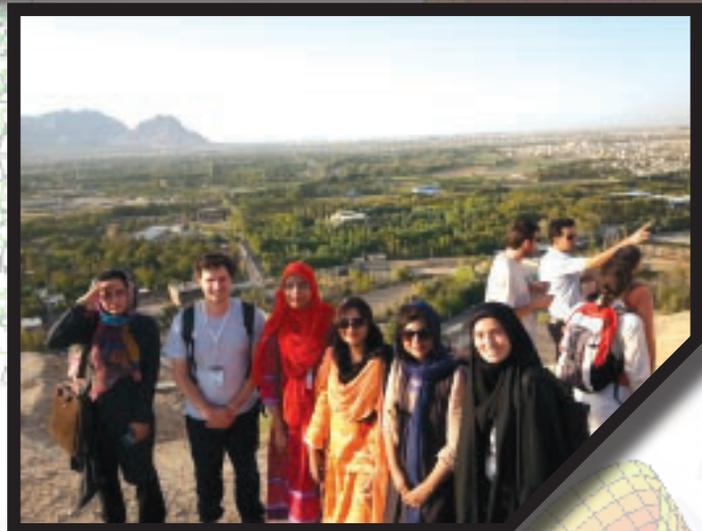
ICMCMST' 15 - IZMIR UNIVERSITY, IZMIR TURKEY



Dr. Sadia Arshad presented her paper entitled "On stability of fractional order model of HIV infection" in International Conference "Mathematical and Computational Modelling in Science and Technology" ICMCMST'15, which was held at Izmir University, Izmir-Turkey, during August 02-07, 2015.

IASBS, ZANJAN, IRAN

Dr. Sana Javed and Dr. Sadia Arshad visited Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran for research collaboration on the topic of fuzzy and fractional differential equations. The duration of the research visit was two weeks from August 10-21, 2015.



Dr. Sana Javed and Dr. Sadia Arshad also attended CIMPA-IRAN research school on Tilings and Tessellations Isfahan, August 24-September 4, 2015. This school was devoted to mathematical aspects of tilings in the various contexts where they appear

International Visits

Dr. Saad Ihsan But presented a paper "GENERALIZATION OF POPOVICIU TYPE I NEQUALITIES VIA GREEN'S FUNCTION AND FINK'S IDENTITY" in international conference on "Mathematical Inequalities and Applications 2015, held on 11-15 Nov, 2015 at Bosnia and Herzegovina.



Dr. Ayesha and her team won the PSF Travel Grant to attend "International Conference on Agriculture and Biotechnology" from 26-27 January, 2015 at Jeddah, Saudi Arabia to present research paper "Numerical Modeling of Effective Diffusivity in Bone Tissue Engineering".

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100 Impact Factor Achievers

Dr. Abdul Jawad



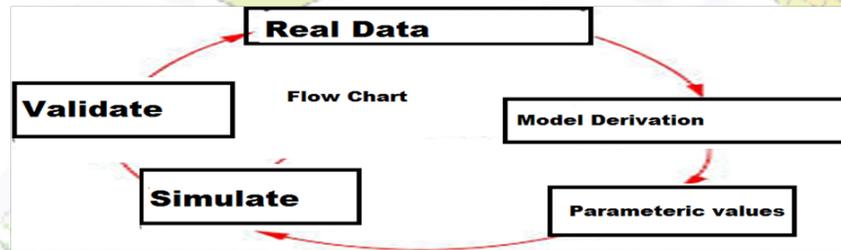
Dr. Abdul Jawad, Assistant Professor in the department of Mathematics has acquired 130 impact factor against 55 publications in short span of time. He did Ph.D. in the field of "General relativity and cosmology" from the Punjab University Lahore in 2014. Dr. Jawad has an honour to receive the Research Productivity Award thrice (2012, 2013, 2014) from the "Pakistan Council of Science and Technology". He is a reviewer of two well known international journals.

Dr. Muhammad Zubair

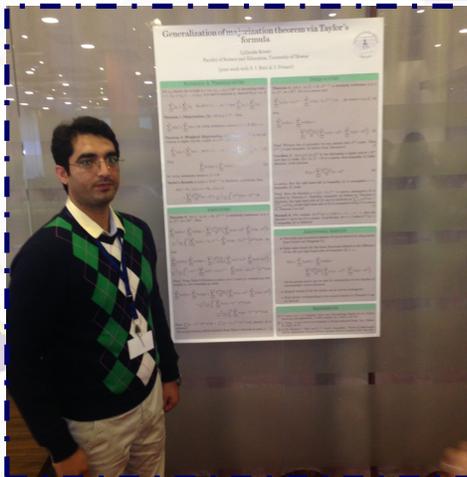


Dr. Muhammad Zubair has recently touched the level of 100 impact factor by only 35 publications, with one publication having the highest impact factor of 6+. Dr. Zubair has done PhD in "Modified theories of gravity" from University of the Punjab, Lahore in 2014. He was honoured by "HEC outstanding research award" in the category of best research paper in Pakistan and he also received two consecutive research productivity awards from the "Pakistan Council of Science and Technology" in 2013 and 2014. Dr. Zubair has visited "The National Astronomical Observatories, Chinese Academy of Science, Beijing, China." He is supervising 2 MS and one PhD student. Dr. Zubair is working as an Assistant Professor in the department of Mathematics.

Projects Approved

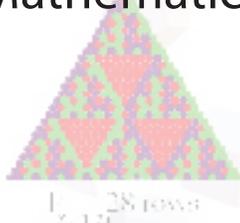


A project of Dr. Ayesha Sohail, "Mathematical modeling of effective diffusivity for bone tissue engineering" has been approved by Higher Education Commission of Pakistan for funding of 3.5 Million. She has received PhD degree from University of Sheffield, UK in 2012 and now serving as an Assistant Professor in the department of Mathematics.



A research project of Dr. Saad Ihsan Butt, "New Integral Inequalities and their refinements" has approved by the Higher Education Commission as a Startup Research Grant.

Dr. Saad is working as Assistant Professor in the department of Mathematics and he has completed his Ph.D. from Abdus Salam School of Mathematical Sciences, GCU Lahore.



Our New Team Members

Muhammad Faisal Nadeem

Dr. Muhammad Faisal Nadeem was born in Lahore. He received his basic education from a private school, after 7th he went to government high school Shahdra.

He secured first division in Matric from the same school. He did intermediate in Pre-Eng from government science college Wahdat road Lahore. After intermediate he went to University of Punjab (PU) for B.S mathematics. He was very active member of interdepartmental cricket team in PU. After his under graduation he joined Abdus Salam School of Mathematical Sciences (ASSMS), GC University Lahore for PhD in 2008.



ASSMS is one of the best institute of mathematics in the world. He also qualified for HEC Indigenous Scheme 5000 Fellowships Program and received scholarship.

In 2012, he was invited by the Combinatorial Mathematics Research Group, Faculty of Mathematics and Natural Sciences, "Institut Teknologi Bandung (ITB)", Bandung, Indonesia, for research purpose. He also presented his research work in 5th International Workshop on Optimal Network Topologies (IWONT2012) at ITB Bandung, Indonesia.

He also received a grant from Emerging Nations Science Foundation (ENSF) during his visit. He completed his PhD degree under the supervision of Prof. Dr. Tudor Zamfirescu (HEC Foreign Professor). During his PhD, he participated in various international conferences and presented his research work over there. Dr. Muhammad Faisal Nadeem is currently working as an Assistant Professor in the Department of Mathematics at CIIT Lahore.

He has also served as a faculty of information technology at University of Central Punjab, Lahore.

Dr. Muhammad Aqeel Ahmad Khan

Dr. Muhammad Aqeel Ahmad Khan was born on 18-03-1982, in a historical city, Bahawalpur, of Punjab, Pakistan. He pursued his doctoral studies in The Islamia University of Bahawalpur under the supervision of Dr. Hafiz Fukhar-ud-din. His fields of expertise are metric fixed point theory and logical analysis of proofs via proof mining.

Dr. Aqeel has the privilege to avail the opportunity of Indigenous PhD scholarship and IRSIP scholarship by Higher Education Commission of Pakistan.

During his doctoral studies, he was also awarded by the prestigious German DAAD scholarship to collaborate with one of the leading experts of Proof Mining, Prof. Dr. Ulrich Kohlenbach, in Technical University of Darmstadt, Germany. Meanwhile, he was also engaged in a joint project with Prof. Dr. Ulrich Kohlenbach in "Extraction of effective bounds from proofs based on sequential compactness via logical analysis" funded by the German Science Foundation. As the result of this collaboration, he has two ISI publications with Prof. Dr. Ulrich Kohlenbach. The total number of international publication of Dr. Aqeel are 12 (8 ISI, 4 Non-ISI but international).

After graduation from The Islamia University of Bahawalpur, He served as an Assistant Professor for 1 Year (01-09-2014 to 31-08-2015) on Interim basis in the Department of Mathematics, GC University Faisalabad. Currently, he is working as an Assistant Professor on TTS basis at the COMSATs Institute of Information Technology, Lahore, since 01-09-2015.



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Dr. Shumaila Rani

Dr. Shumaila Rani was born in district Gujrat, Pakistan. She got her early education upto HSSC from well-known institutes in Gujrat. She has received bachelor degree in 2006 from Government Ibn-e-Ameer College Jalal Pur Jattan by selecting Mathematics and Physics as major subjects. She got master degree in applied Mathematics from the Punjab University, Lahore.

After completion of master degree, she took admission in M.Phil leading to PhD program in the same department. She remained lucky throughout her university education in the sense that Prof. Dr. Muhammad Sharif supervised her during M.Phil and PhD programs.

Moreover, she has completed her PhD in December 2014. She got HEC scholarship during her PhD study. Her field of research is General Relativity and Cosmology. During her PhD, She presented her research articles in various national and international conferences.

She is also doing research work in collaboration with internationally vigorous research scholars. Uptill now, she has made 25 publications which are in the international journals with 60 impact factor.

Dr. Shumaila Rani won the Research Productivity Award for the years 2014 (Category D) from Pakistan Council for Science and Technology. She has also served as Lecturer (Oct 2014-Mar 2015) in University of Management and Technology Lahore Pakistan.



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$P_{(2,1)} = 82$ rows

Welcome and Farewell Dinner



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U-82 rows
Z-117

Research Publications

Sr.	Title	Authors	Journal Name	Volume/ Issue	Page/ Article ID	IF / ISI	Remarks
1	On the Dichotomy of Non-Autonomous Systems Over Finite Dimensional Spaces	Sadia Arshad, Akbar Zada, Gul Rahmat and Aftab Khan	Applied Mathematics and Information science	9	1-6	1.232	Published
2	EVOLUTION EQUATIONS WITH CAUSAL OPERATORS	RAVI P. AGARWAL, SADIA ARSHAD, VASILE LUPULESCU AND DONAL O'REGAN	Differential Equations & Applications	7	15-26	ISI	Published
3	"Numerical Modelling of Effective Diffusivity in Bone Tissue Engineering"	Ayesha Sohail	World Academy of Science & Technology	09	01	ISI	published
4	VASILE LUPULESCU AND DONAL O'REGAN, EVOLUTION EQUATIONS WITH CAUSAL OPERATORS	RAVI P. AGARWAL, SADIA ARSHAD	Applied Mathematics and Information science	07	15-26 01(2015)	1.232	Published
5	Numerical Solutions of Fractional Order Tumor Model	Ayesha Sohail, Sadia Arshad, Sana Javed,	International Journal of Biomathematics	Vol. 8, No. 5 (2015)	1550069 (13 pages)	0.571	Published
6	On certain Topological indices of the line graph of subdivision graphs	M. Faisal Nadeem, Sohail Zafar, Zohaib Zahid	Applied Mathematics and Computation	270	790-794	1.6	Published
7	Nonlinear shallow water waves: A fractional order approach	S Arshad, A Sohail, K Maqbool	Alexandria Engineering Journal,	2015		ISI	Published
8	Popoviciu Type Inequalities Via Green Function and Generalized Montgomery Identity	Saad Ihsan Butt, Khurram Ali Khan and Josip Pecaric.	Mathematical Inequalities & Applications	Volume 18, issue 4,	1519-1538	0.645	Published
9	On Path-Sunflower Ramsey Numbers	Kashif Ali, Ioan Tomescu, Imran Javaid	Mathematical Reports	17(67)/4	385-390	0.114	Published
10	Numerical Study of Free Convective Flow of a Nanofluid over a Chemically Reactive Porous Flat Vertical Plate with a Second-Order Slip Model	Sohail, A., Uddin, M., and Rashidi, M. (2015)	Journal of Aerospace Engineering			0.84	Published

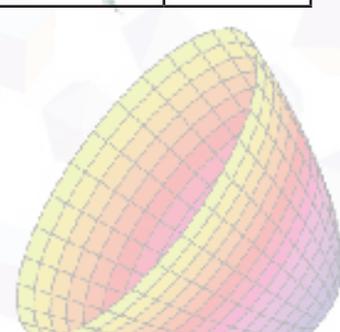
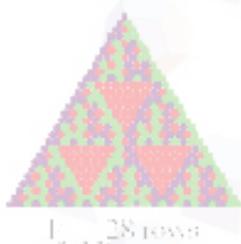
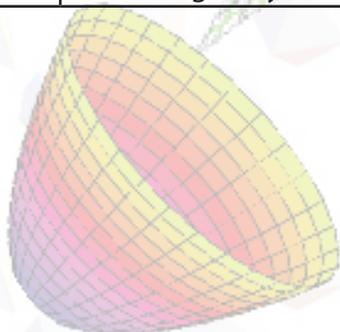
11	Optical solitons in dual-core fibers with inter-modal dispersion	Muhammad Younis, Syed TahirRazaRizvi, Syed AmerMahmood, Jose-Vega Guzman, Qin Zhou, Anjan-Biswas, MilivojBelic	Optoelectronics and Advanced Materials-Rapid Communications	09	1126-1134	0.394	Published
12	Analysis of Dark Energy Models in DGP Braneworld	Abdul Jawad	Astrophysics and Space Science	360	52	2.263	Published
13	Modified QCD Ghost $f(T, T_G)$ Gravity	Abdul Jawad, Shamaila Rani and Surajit Chattopadhyay	Astrophysics and Space Science	360	37	2.263	Published
14	Dynamical Instability of Shear-free Collapsing Star in Extended Teleparallel Gravity	Abdul Jawad and Shamaila Rani	European Physical Journal C	75	548	5.084	Published
15	Holographic Polytropic $f(T)$ -Gravity Models	Surajit Chattopadhyay, Abdul Jawad and Shamaila Rani	Advances in High Energy Physics	2015		2.203	Published
16	Strange Stars in $f(T)$ Gravity With MIT Bag	Ghulam Abbas, Shahid Qaisar and Abdul Jawad	Astrophysics and Space Science	359	57	2.263	Published
17	Generalized Ghost Pilgrim Scalar Field Models of Dark Energy	Abdul Jawad, Ujjal Debnath and Fazal Batool	Communications in Theoretical Physics	64	590-596	0.893	Published
18	Reconstruction of Generalized Ghost Pilgrim Dark Energy in $F()$ Gravity	Abdul Jawad and Shamaila Rani	Astrophysics and Space Science	359	23	2.263	Published
19	Thermodynamics with Entropy Corrections in Kaluza-Klein Universe	M. Sharif and Abdul Jawad	Chinese Journal of Physics	53		0.413	Published
20	Thermodynamic study in modified $f(T)$ gravity with cosmological constant regime	Muhammad Zubair, Saira Waheed	Astrophysics and Space Science	360	68	2.26	Published
21	Anisotropic Strange Quintessence Stars in $f(R)$ Gravity	Ghulam Abbas, Ghulam Mustafa, Muhammad Zubair,	Astrophysics and Space Science	358	26	2.26	Published

22	Odd Graceful Labeling of Acyclic Graphs,	Ayesha Riasat, Sana Javed	American Journal of Applied Mathematics	Volume 3, Issue 3-1, June 2015	Pag- es:14-18		Published
23	On Super d-anti-magic labeling of subdivided KC_5 ,	M. Hussain, A. Tabraiz	Turkish Journal of Mathematics	(2015) 39	773-783.	0.311	Published
24	On (a,d) edge-anti-magic total labeling of subdivided caterpillar,	M. Javaid, A. A. Bhatti, M. Hussain	Utilitas Mathematica	(2015)98	227-241	0.28	Published
25	Face Antimagic Labeling Of Generalized KC_n snake graph,	M. Hussain, A. Tabraiz,	Science International,	(2015) 3	1715-1718.	ISI	Published
26	On cycle anti-supermagic labelings of the ladder and triangular ladder graphs	I. Z. Cheema M. Hussain, H. Shakir	Science International,	(2015) 3	1719-1722.	ISI	Published
27	Near-optimality conditions in mean-field control models involving continuous and impulse controls	Chighoub, Farid; Sohail, Ayesha; Alia, Ishak	Nonlinear Studies	22(4) 2015).	719-738	scopus	Published
28	Highly non-concurrent longest paths in lattices	YASIR BASHIR, FAISAL NADEEM, AYESHA SHABBIR	Turkish Journal of Mathematics	Volume 40,	21-31	impact factor journal	Published
29	Dynamics of anisotropic collapsing spheres in Einstein Gauss–Bonnet gravity	Muhammad Zubair,	Modern Physics Letter A	30			Published
30	Ghulam Abbas	[Jawad, Abdul]; [Majeed, Asim]	ASTROPHYSICS AND SPACE SCIENCE	356/2	375-381	impact factor journal	Published
31	Optical solitons in dual-core fibers with G'/G -expansion scheme	[Younis, M.] ; [Rizvi, S. Tahir Raza] ; [Zhou, Q.] ; [Biswas, Anjan] ; [Biswas, Anjan] ; [Belic, M.]	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS	17/3-4	505-510	impact factor journal	Published

32	On dynamical instability of spherical star in $f(R, T)$ gravity	[Noureen, Ifra]; [Zubair, M.]	ASTROPHYSICS AND SPACE SCIENCE	356/1	103-110	impact factor journal	Published
33	Cosmological reconstruction of pilgrim dark energy model in $f(T, T-G)$ gravity	[Jawad, A];	ASTROPHYSICS AND SPACE SCIENCE	356/1	119-127	impact factor journal	Published
34	Dynamical instability and expansion-free condition in $f(R, T)$ gravity	[Noureen, Ifra]; [Zubair, M.]	EUROPEAN PHYSICAL JOURNAL C	75/2	62	impact factor journal	Published
35	Impact of extended Starobinsky model on evolution of anisotropic, vorticity-free axially symmetric sources	[Noureen, Ifra; Bhatti, Abdul Aziz]; [Zubair, M.]	JOURNAL OF COSMOLOGY AND ASTROPARTICLE PHYSICS		33	impact factor journal	Published
36	Energy conditions in $f(T)$ gravity with non-minimal torsion-matter coupling	[Zubair, M.; Waheed, Saira]	ASTROPHYSICS AND SPACE SCIENCE	355/2	361-369	impact factor journal	Published
37	Group Decision Making by Using Incomplete Fuzzy Preference Relations Based on T-Consistency and the Order Consistency	[Atiq-ur-Rehman; Ashraf, Samina]; [Kerre, Etienne. E.]	INTERNATIONAL JOURNAL OF INTELLIGENT SYSTEMS	30/2	120-143	impact factor journal	Published
38	Cosmological Analysis of Dynamical Chern-Simons Modified Gravity via Dark Energy Scenario	[Jawad, Abdul; Rani, Shamaila]	ADVANCES IN HIGH ENERGY PHYSICS			impact factor journal	Published
39	QUASI-LINEAR QUOTIENTS AND SHELLABILITY OF PURE SIMPLICIAL COMPLEXES	[Anwar, Imran]	COMMUNICATIONS IN ALGEBRA	43/11	4698-4704	impact factor journal	Published
40	Cosmological Evolution of Pilgrim Dark Energy in $f(G)$ Gravity	[Jawad, Abdul; Rani, Shamaila]	ADVANCES IN HIGH ENERGY PHYSICS		952156	impact factor journal	Published
41	Quintessence and Holographic Dark Energy in $f(T)$ Gravity	[Zubair, M]	ADVANCES IN HIGH ENERGY PHYSICS		292767	impact factor journal	Published

42	Quintessence and Holographic Dark Energy in $f(T)$ Gravity	[Zubair, M]	ADVANCES IN HIGH ENERGY PHYSICS		292767	impact factor journal	Published
43	Certain types of vague cycles and vague trees	[Akram, Muhammad] ; [Farooq, Adeel] ; [Saeid, Arsham Borumand] ; [Shum, Kar Ping]	JOURNAL OF INTELLIGENT & FUZZY SYSTEMS	28/2	621-631	impact factor journal	Published
44	Spanning Simplicial Complexes of Uni-Cyclic Graphs	[Anwar, Imran] ; [Raza, Zahid; Kashif, Agha] [Kashif, Agha]	ALGEBRA COLLOQUIUM	22/4	707-710	impact factor journal	Published
45	Cosmological evolution of modified QCD ghost dark energy in dynamical Chern-Simons gravity	[Jawad, Abdul; Sohail, Ayesha]	ASTROPHYSICS AND SPACE SCIENCE	359/2	55	impact factor journal	Published
46	Bianchi type-III models with anisotropic dark energy in Brans-Dicke-Rastall theory	[Salako, Ines G.]; [Jawad, Abdul]	ASTROPHYSICS AND SPACE SCIENCE	359/2	46	impact factor journal	Published
47	Energy constraints and $F(T, T-G)$ cosmology	[Waheed, Saira] ; [Zubair, M.]	ASTROPHYSICS AND SPACE SCIENCE	359/2	47	impact factor journal	Published
48	Fuzzy dissimilarity and generalization of Valverde's theorem on T-indistinguishability relations	Ashraf, Samina,	FUZZY SETS AND SYSTEMS	275	144-154	impact factor journal	Published
49	Reconstruction of generalized ghost pilgrim dark energy in $F(\tilde{R})$ gravity	[Jawad, Abdul; Rani, Shaimaila]	ASTROPHYSICS AND SPACE SCIENCE	359/1	23	impact factor journal	Published
50	Numerical analysis of fractional-order tumor model	[Sohail, Ayesha; Arshad, Sadiya; Javed, Sana] ; [Maqbool, Khadija]	INTERNATIONAL JOURNAL OF BIOMATHEMATICS	8/5		impact factor journal	Published

51	Analytical and soliton solutions: Nonlinear model of nanobioelectronics transmission lines	[Younis, Muhammad]; [Rizvi, Syed Tahir Raza]; [Ali, Safdar]	APPLIED MATHEMATICS AND COMPUTATION	265	994-1002	impact factor journal	Published
52	New Agegraphic Pilgrim Dark Energy in $f(T, T-G)$ Gravity	[Jawad, Abdul]; [Debnath, Ujjal]	COMMUNICATIONS IN THEORETICAL PHYSICS	64/2	145-150	impact factor journal	Published
53	ON CYCLE-SUPERMAGICNESS OF SUBDIVIDED GRAPHS	[Rizvi, Syed Tahir Raza; Khalid, Madiha; Ali, Kashif]; [Miller, Mirka]; [Miller, Mirka]; [Miller, Mirka]; [Ryan, Joe]	BULLETIN OF THE AUSTRALIAN MATHEMATICAL SOCIETY	92/1	11-18	impact factor journal	Published
54	Interacting new agegraphic version of pilgrim dark energy	[Jawad, Abdul], Dept Math, Lahore; [Abbas, G.] Dept Math, Sahiwal	INTERNATIONAL JOURNAL OF MODERN PHYSICS D	24/8		impact factor journal	Published
55	Holographic dark energy reconstruction in $f(T, \tau)$ gravity	[Salako, Ines G.]; [Jawad, Abdul]; [Chattopadhyay, Surajit]	ASTROPHYSICS AND SPACE SCIENCE	358/1	13	impact factor journal	Published
56	Extremal Bicyclic 3-Chromatic Graphs	[Tomescu, Ioan] Univ Bucharest, Fac Math & Comp Sci, Bucharest 010014, Romania; [Javed, Sana]	GRAPHS AND COMBINATORICS	31/4		impact factor journal	Published
57	Evolution of axially symmetric anisotropic sources in $f(R, T)$ gravity	[Zubair, M.]; [Noureen, Ifra]	EUROPEAN PHYSICAL JOURNAL C	75/6	265	impact factor journal	Published



58	Anisotropic compact stars in $f(T)$ gravity	[Abbas, G.; Kanwal, Afshan] Dept Math, Sahiwal ; [Zubair, M.]	ASTROPHYSICS AND SPACE SCIENCE	357/2	109	impact factor journal	Published
59	Energy conditions in $f(T, T-G)$ gravity	Jawad, A.	EUROPEAN PHYSICAL JOURNAL PLUS	130/5	94	impact factor journal	Published
60	Cosmological analysis of pilgrim dark energy in loop quantum cosmology	Jawad, A.	EUROPEAN PHYSICAL JOURNAL C	75/5	206	impact factor journal	Published
61	Reconstruction scenario in modified Horava-Lifshitz $F(R)$ gravity with well-known scale factors	[Jawad, Abdul; Rani, Shamaila]	ASTROPHYSICS AND SPACE SCIENCE	357/1	88	impact factor journal	Published
62	Interacting modified QCD ghost scalar field models of dark energy	Jawad, Abdul	ASTROPHYSICS AND SPACE SCIENCE	357/1	19	impact factor journal	Published
63	Cosmological analysis of $F(\tilde{R})$ models via pilgrim dark energy	[Jawad, Abdul] ; [Chattopadhyay, Surajit]	ASTROPHYSICS AND SPACE SCIENCE	357/1	37	impact factor journal	Published
64	Lorentz distributed noncommutative wormhole solutions in extended teleparallel gravity	[Jawad, Abdul; Rani, Shamaila]	EUROPEAN PHYSICAL JOURNAL C	75/4	173	impact factor journal	Published
65	Optical Solitons for Ultrashort Pulses in Nano Fibers	[Younis, Muhammad] ; [Rizvi, Syed Tahir Raza]	JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS	10/2	179-182	impact factor journal	Published
66	Modified Holographic Ricci Dark Energy in Chameleon Brans Dicke Cosmology and Its Thermodynamic Consequence	[Jawad, A.] ; [Chattopadhyay, S.] ; [Bhattacharya, S.]; [Pasqua, A.]	COMMUNICATIONS IN THEORETICAL PHYSICS	63/4	453-458	impact factor journal	Published
67	Super edge-magic total labeling of subdivided stars	[Ali, Kashif.; Husain, M.; Shaker, H.]; [Javaid, M.]	ARS COMBINATORIA	120	161-167	impact factor journal	Published

68	Traveling wave solutions for nonlinear dispersive water-wave systems with time-dependent coefficients	[Ali, S.]; [Rizvi, S. T. R.]; [Younis, M.]	NONLINEAR DYNAMICS	82/4	1755-1762	impact factor journal	Published
69	On Characteristic Poset and Stanley Decomposition of S/I	[Ahmad, Sarfraz; Anwar, Imran]	ALGEBRA COLLOQUIUM	22/1	739-744	impact factor journal	Published
70	Group Decision Making with Incomplete Interval-valued Fuzzy Preference Relations Based on the Minimum Operator	[Ashraf, S.; Rehman, A.]; [Kerre, E. E.]	INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL	10/6/SI	789-802	impact factor journal	Published
71	Anisotropic charged fluids with Chaplygin equation of state in (2+1) dimension	[Bhar, Piyali; Rahaman, Farook; Islam, Sayeedul] [Jawad, Abdul]	ASTROPHYSICS AND SPACE SCIENCE	360/1	32	impact factor journal	Published
72	Generalized second law of thermodynamics in f (T, T-G) gravity	[Zubair, M.; Jawad, Abdul]	ASTROPHYSICS AND SPACE SCIENCE	360/1	11	impact factor journal	Published
73	On super edge-magicness and deficiencies of forests	[Javed, Sana]; [Riasat, Ayesha]; [Kawal, Salma];	UTILITAS MATHEMATICA	98	149-169	impact factor journal	Published
74	Multiple travelling wave solutions for electrical transmission line model	[Sardar, A.; Husnine, S. M.]; [Rizvi, S. T. R.; Ali, Kashif.]; [Younis, M.]	NONLINEAR DYNAMICS	82/3	1317-1324	impact factor journal	Published
75	Dynamical Study of Fractional Order Tumor Model	[Arshad, Sadia; Sohail, Ayesha; Javed, Sana]	INTERNATIONAL JOURNAL OF COMPUTATIONAL METHODS	12/5		impact factor journal	Published

$\Gamma_{(2,1)} = 28$ rows

$\Gamma_{(2,1)} = 82$ rows

83	Design, Development and Testing of a Combined Savonius and Darrieus Vertical Axis Wind Turbine	M. Abid, K. S. Karimov, H. A. Wajid, F. Farooq, H. Ahmed, O. H. Khan	Iranica Journal of Energy & Environment	15-18	I.F.= 1.40	6 (1)	Published
84	Assembly performance of a gasketed bolted flanged pipe joint using different bolt tightening strategies	M. Abid, A. Abbas, Y. Mehmood, H. A. Wajid	Iranian Journal of Science and Technology:Transactions of Mechanical Engineering	39 (M1+): 2015	253-261	I.F.= 0.69 ISI=YES	Published
85	Parametric study for residual stresses and deformations in welded pipe-flange joints	M. Abid, H. A. Wajid, S. Ullah	Iranian Journal of Science and Technology:Transactions of Mechanical Engineering	39 (M2): 2015	427-436	I.F.= 0.69 ISI=YES	Published
86	An experimental study on The relaxation of bolts	M. Abid, M. S. Khalil, H. A. Wajid	IIUM Engineering Journal	16(1)	43-52	I.F.= 0.019 ISI=YES	Published

