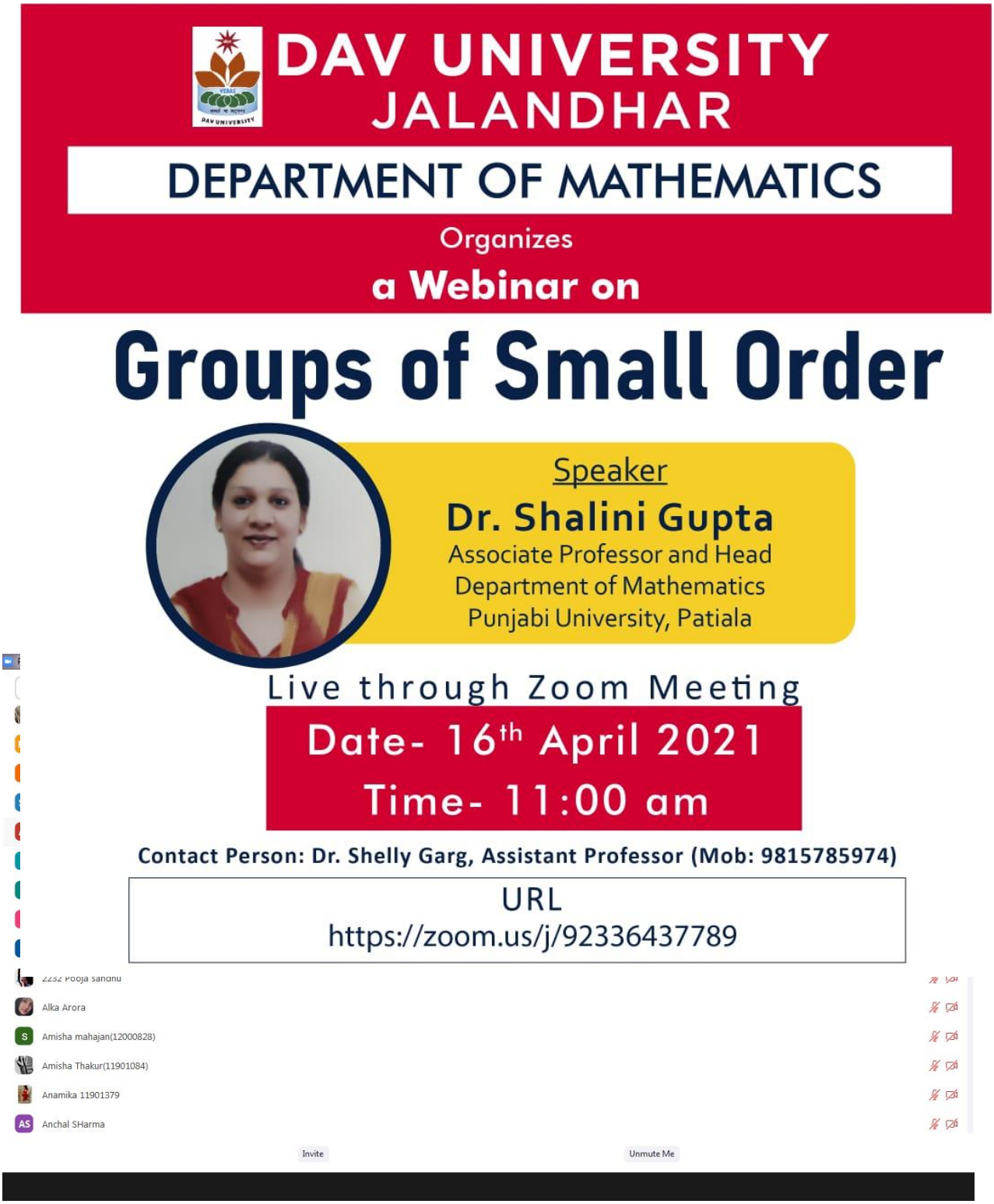
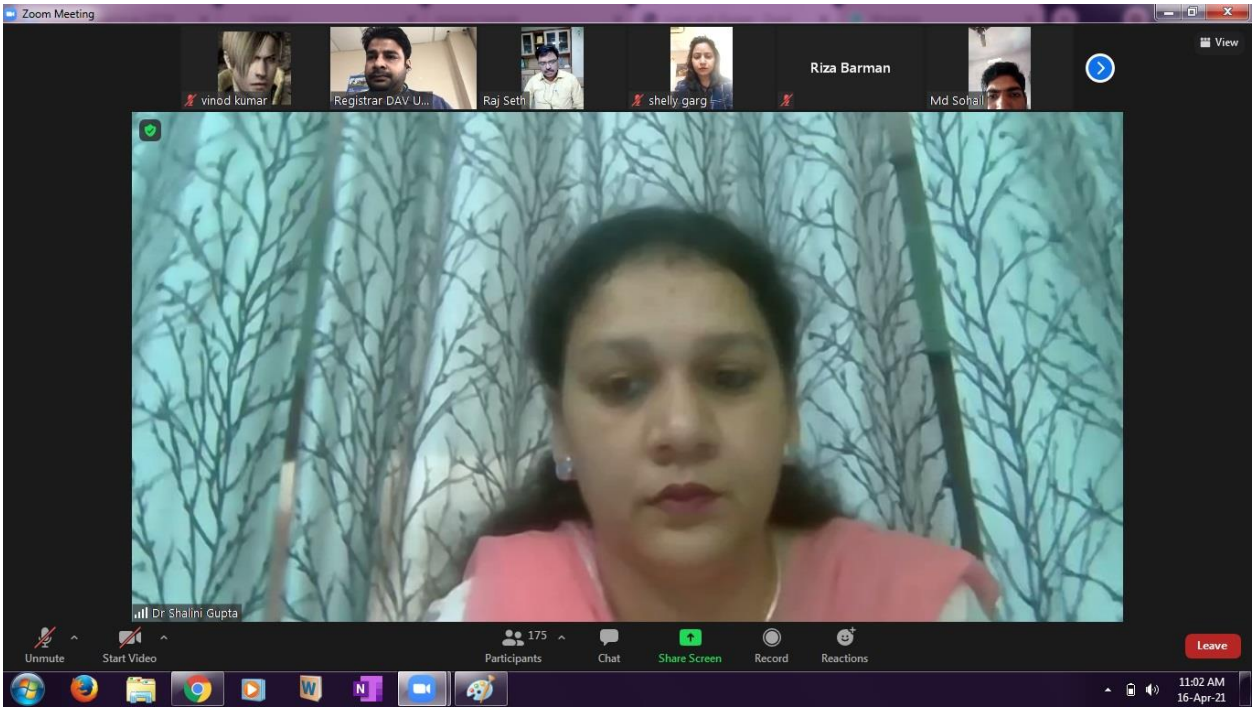
Departmental Activities at a Glance

1. On April 16, 2021, the department has organized a webinar on ‘Groups of Small Order’ delivered by Dr. Shalini Gupta, Associate Professor, Department of Mathematics, Punjabi University, Patiala.
2. A guest lecture was delivered by Dr. Martha from IIT Roorkee on ‘Differential Equations and their Applications in Engineering’ on November 23, 2019.
3. On April 3, 2019, the department has organized a guest lecture on ‘Past, Present and Future of Mathematics’ delivered by Prof. (Dr.) T.D.Narang, Head, Department of Mathematics, Guru Nanak Dev University, Amritsar.
4. On August 10, 2018, the department has observed National Mathematics Day in memory of S. Ramanujan.
5. The department has organized a ‘Teacher’s Enrichment Workshop (TEW) on Algebra and Multivariate Calculus’ from May 28 to June 02, 2018.
6. On February 28, 2017, the department organized an Intra-department PowerPoint competition.
7. On September 8-9, 2017, the department organized ‘Science Academies Lecture Workshop on Algebra and Number Theory’.

Webinar on 'Groups of Small Order'

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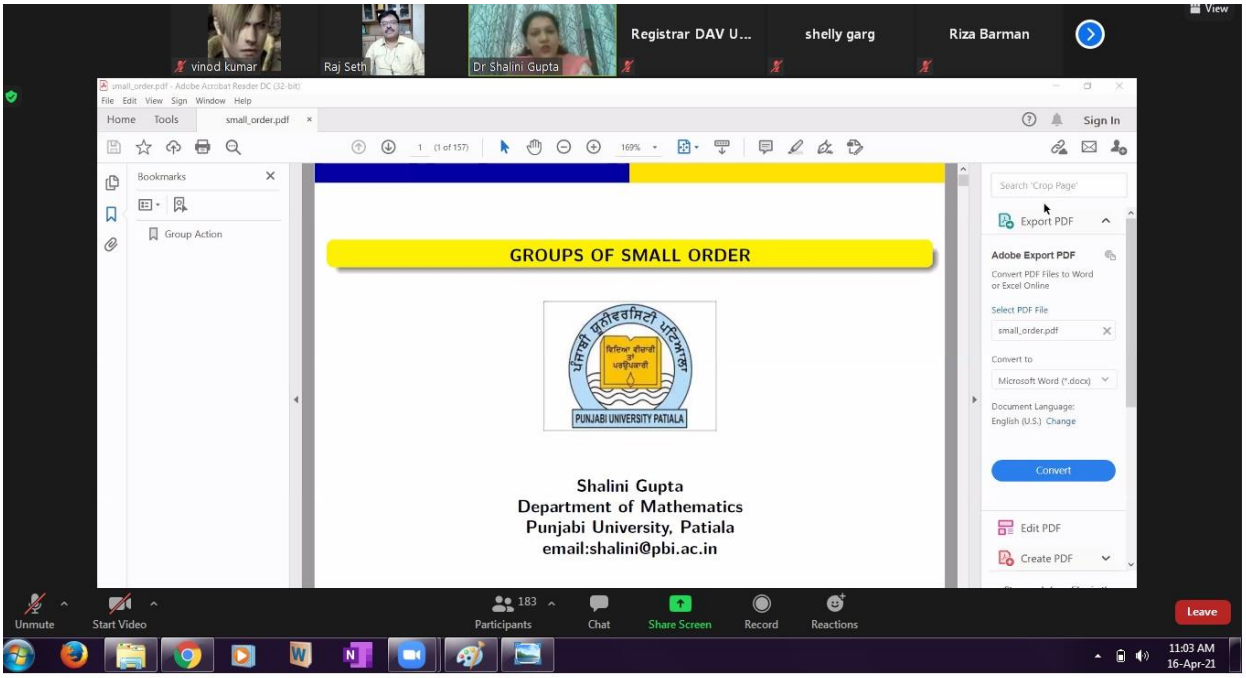
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GROUPS OF SMALL ORDER
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Shalini Gupta
Department of Mathematics
Punjabi University, Patiala
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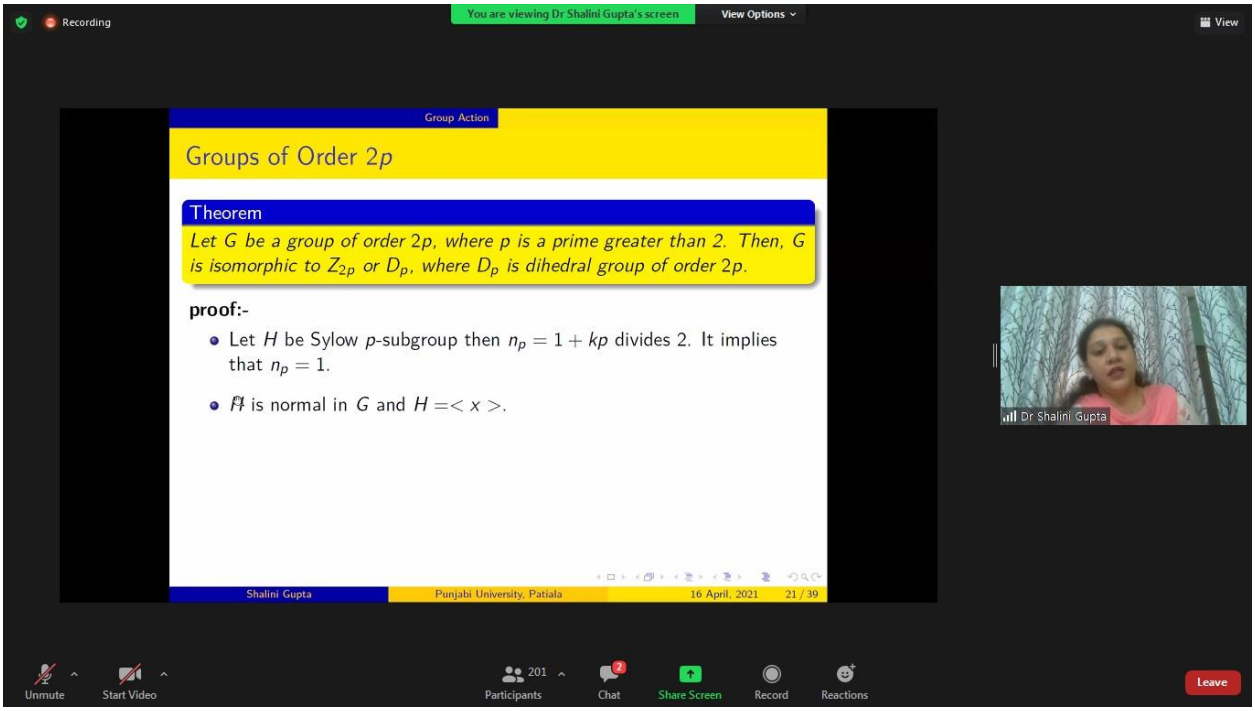

News Report

A webinar on “groups of Small order’ was organized by Department of Mathematics, DAV University, Jalandhar. The webinar started with the welcome speech by Dean Academics Dr. R.K.Seth. He introduced and welcomed resource person Dr. Shalini Gupta, Head and Associate Professor, Department of Mathematics, Punjabi University, Patiala.

Dr. Shalini Gupta discussed the groups of order upto 15. She explained the tools to find the number of non-isomorphic abelian and non-abelian groups of some particular order. More than 200 participants joined the webinar. Dr. Shelly Garg, Assistant Professor, Department of mathematics thanked the resource person for enlightening the students with her knowledge. Vice-chancellor Dr. Jasbir Rishi and Registrar Dr. K N Kaul congratulated the organizing team for the success of the webinar.

Guest Lecture by Dr. Martha, IIT Rurki on 'Differential Equations and Its Applications in Engineering

News Report

The Department of Mathematics, DAV University Jalandhar organized a lecture on 'Differential Equations and Its Applications in Engineering' on November 23, 2019. Dr. Sarika Verma, HoD of the department and other faculty members welcomed the speaker Dr. S. C. Martha, Associate Professor, IIT Ropar, along with memento in the honour of the speaker.

Dr. S.C. Martha started his talk with the motivation to do Mathematics and its uses in daily life. He told the students that they must fix an aim and start working on it. He showed different real life problems which need Mathematical modeling. Further Dr. Martha explained the graphical method to find the roots of a transcendental equation and also discussed a special case of mixed boundary value problem arising in scattering of water waves by obstacles in case of finite depth of fluid. He concluded his talk by obtaining the solutions of these equations by using Linear Algebra techniques. At last he motivated he students for research in Science. At the end, Dr. Raj Kumar presented a vote of thanks, on the behalf Department of Mathematics.

Guest Lecture by Professor T.D.Narang on 'Past, Present and Future of Mathematics'

News Report

The Department of Mathematics, DAV University Jalandhar organized a lecture on Past, Present and Future of Mathematics on April 3, 2019. Prof. (Dr.) Rakesh Kumar Mahajan,Vice Chancellor, DAV University along with Dr. Sarika Verma, HoD of the department and other faculty members welcomed the speaker Prof. (Dr.) T.D.Narang; former Head of Department of Mathematics, Guru Nanak Dev University, Amritsar with a bouquet and memento along with a welcome address in the honor of the speaker.

Prof. (Dr.) T.D.Narang started his talk by saying that nothing is interesting if you are not interested. He added that Mathematics is king of all arts, queen of all sciences, mother of technologies and heart of engineering. It has applications in Physical Sciences, Biological Sciences, Engineering, Industries, and Robotics etc. Further he said that in spite of all these applications, students are losing interest in Mathematics due to non availability of good teachers at school level. Discussing about past of Mathematics, he told the students about great Mathematicians like Gauss, Fermat, Ramanujan, Euclid, Abel, Pythagorus etc and famous discoveries made by them. He ended his talk by motivating the students to put their best efforts to learn the new upcoming concepts in Mathematics by devotion, dedication and hard work. , On the behalf of Mathematics Department, Dr. Raj Kumar presented a vote of thanks.

National Mathematics Day

Important Guidelines:

- More than one team is allowed in any event.
- Judges opinion shall be honored & accepted.
- Tea and lunch shall be served to the participants.
- Team must reach by 9 a.m and should bring their authority letter and ID cards with them.
- Three Distinct Categories of awards for each Event.
- **No Registration fee.**

Deadlines for entries:

Last Date for registration of Event is 7th Aug, 18'.

Kindly ensure timely registration to help us serve in a better way.

Link for Registration:

Contact Details:

Rajat Taneja	Abhay Sankhyan
7986653336	9418776389
tanejarajat2@gmail.com	abhay3938@gmail.com

ORGANIZING COMMITTEE

Chief Patron

Prof (Dr.) Rakesh Kumar Mahajan

Vice-Chancellor, DAV University

Patron

Prof (Dr.) Desh Bandhu

Dean (Academics)

Convener

Dr. Sarika Verma

Head, Department of Mathematics

Dr. Raj Kumar

Assistant Professor, Department of Mathematics

Organizing Committee:

Dr. Shelly Garg, Assistant Professor

Dr. Ajay Kumar, Assistant Professor

Dr. Suraj Goyal, Assistant Professor

Dr. Himani Arora, Assistant Professor

DAV UNIVERSITY
JALANDHAR
Department OF Mathematics
Organizes
National Mathematics Day (2018)
On 10th Aug, 18'

In The Memory of

Srinivasa Ramanujan

Catalyzed and Supported by:
NCSTC, DST, GOI & Punjab State Council for Science & Technology Chandigarh

REPORT ON NATIONAL MATHEMATICS DAY 2018

DAV UNIVERSITY, JALANDHAR

National Mathematics Day, sponsored by PSCST (Punjab State Council of Science and Technology), was celebrated at DAV University, Jalandhar on 10th August, 2018. It is celebrated in the memory of genius Indian mathematician Srinivasa Ramanujan, in recognition of his contributions to mathematics.

Prof. Dr. Rakesh Kumar Mahajan, Vice-Chancellor, DAV University was the Chief Patron followed by Prof. Dr. Desh Bandhu Gupta, Dean Academics, DAV University as Patron of the organizing committee of the event. Vice-Chancellor Prof. Dr. R. K. Mahajan and Registrar Dr Sushma Arya welcomed the Chief Guest Prof. Dr. A. L. Sangal, Dean Student Welfare, NIT, Jalandhar at the inauguration of National Mathematics Day. Prof. Dr. R. K. Mahajan congratulated the Department of Mathematics for celebrating this day and highlighted the importance of Mathematics in sciences and other fields. He also thanked the Punjab State Council of Science and Technology for financial support and emphasized that such events help in popularizing mathematics in Science and Engineering. During this celebration there was an expert lecture, by Prof. Dr. A. L. Sangal, Dean Student Welfare, NIT, Jalandhar about "Mathematical Models in Daily Life".

Various competitions were organized such as power point presentation, poster presentation, Mathematical rangoli and extempore. More than 150 students participated in these competitions. Excellent thoughts were reflected through their presentations, posters and rangolis which included context such as Mathematical Science, Facts of Pie, Number system and Symmetry etc. Mini Militia Game was also a part of the event which was seen as a step to break the stereotype attached to the subject.

A Mathematical Quiz was also organized for the students of B.Sc. (Mathematics) and M.Sc. (Mathematics). Apart from DAV University other institutions such as HMV College, Doaba College, DAV College and Lyallpur Khalsa College took part in celebrations of National Mathematics Day. Winners of various competitions were awarded with trophies and certificates. The over-all winner's trophy was bagged by HMV College, Jalandhar. The National Mathematics Day activities were coordinated by Dr. Sarika Verma (Head) and Dr. Raj Kumar, Assistant Professor, Department of Mathematics, DAV University, Jaladhar. The program concluded with the prize distribution and a vote of Thanks by Dr. Raj Kumar.

8) The mean value theorem.
9) The implicit function theorem.

IV. Lectures by Dr. Chanchal Kumar (May 31 to June 02, 2018)

Dr. Chanchal gave a series of six lectures on *Elementary Group Theory* and conducted one and a half tutorial sessions in the workshop. The basic notions of Groups, Sub-groups, Quotient groups, Group homomorphisms, and Isomorphism theorems were introduced in the first two lectures on May 31, 2018. Actions of groups on sets were discussed with many examples on June 01, 2018. Using group actions, Cauchy's and Sylow's theorems were proved in the lectures. Applications of Sylow's theorems were also discussed. On June 02, 2018, direct product and semi-direct products of groups were introduced and classification of all groups of order ≤ 16 were obtained. A tutorial question set having more than 20 problems were given to the participants on the first day and these problems were discussed in the tutorial as well as in lecture sessions.

Feedback:

The feedbacks for all the speakers and also the feedbacks for the entire workshop were collected on the prescribed forms from all the participants. We are happy with the feedback as the same is very positive. All the dully-filled feedback forms have been sent to NCM by post. On the last day certificates were distributed among the participants who had attended the entire workshop.

Dr D.K. Khurana (Academic Convener)	Dr. Ajay Kumar (Convener)	Dr. Suraj Goyal (Convener)

Teacher's Enrichment Workshop (TEW) on Algebra and Multivariable Calculus

Lectures:

I. Lectures by Dr. D. K. Khurana (May 28-30, 2018)

In his six lectures of one hour each from May 28-30, 2018, the following topics were covered.

Vector spaces and their basic properties, Existence of basis and invariance of its cardinality, Linear Transformations and Matrices, Change of Basis, Triangulation and Diagonalization, Modules, Modules versus Vector Spaces, Free Modules, Matrices over PIDs, Smith Normal Form, Finitely Generated Modules over PIDs and their structure, Rational and Jordan Canonical Forms.

In the discussion sessions, the following exercises were discussed.

1) Suppose V is an n −dimensional vector space over a field of order m. Find the number of basis of V.
2) Let V and F be as above and L be a linearly independent set with k elements. Find the number of ways in which L can be extended to a basis of V.
3) Find the order of $GL_n(F)$ and $SL_n(F)$, where F is a field of order m.
4) Let W_1 and W_2 be two isomorphic subspaces of a finite dimensional vector space V. Prove that there exists a subspace U such that $V = W_1 \oplus U = W_2 \oplus U$. Show that this is not true if V is infinite dimensional.
5) Let W_1, W_2 and W_3 be three isomorphic subspaces of a finite dimensional vector space V. Does there exist a subspace U such that \$$V = W_1 \oplus U = W_2 \oplus U = W_3 \oplus U$?
6) Let f and g be two linear transformations of a finite dimensional vector space V such that $fg = I$. Prove that $gf = I$. Show that this is not true if V has infinite dimension.
7) Suppose V is a 2 −dimensional vector space over a field of order m. Find the number of idempotents linear transformations from $V \to V$.
8) Let $A \in \mathbb{M}_n(F)$, where F is a field, be a nilpotent matrix. Prove that the trace of A is zero.
9) Find the number of nilpotent linear transformations in $\mathbb{M}_n(F)$, where F is a finite field.
10) Prove that any characteristic root of a square matrix over a field is also a root of its minimal polynomial.
11) Let V_i be finite dimensional vector spaces with basis $B_i, i = 1,2,3$ and $f: V_2 \to V_3$ and $g: V_1 \to V_2$ be linear transformations. Prove that $[fg]_{B_1B_3} = [g]_{B_1B_2}\,[f]_{B_2B_3}$, where $[f]_{B_2B_3}$ denotes the matrix of f with respect to bases B_2, B_3 and so on.
12) Let $f: V \to V$ be a linear transformation of a finite dimensions vector space V. Prove that there exists an invertible linear transformation $g: V \to V$ such that $f = fgf$. Show that the result does not hold if dimension of V is infinite.
13) Let $f: V \to V$ be a linear transformation of a finite dimensions vector space V_F with basis B, $A = [f]_B$ and $R = F[x]$. Then prove that
    (i) As R −modules $V \cong R^n/(A - xI)R^n$.
    (ii) If $diag(f_1, f_2, \ldots, f_k)$ is the Smith normal form of $A - xI$, then prove that $diag(C(f_1), C(f_2), \ldots, C(f_k))$ is the rational canonical form of A where $C(f)$ denotes the companion matrix of f.
14) Find the rational canonical form of $A = \begin{pmatrix} 0 & -1 & 2 \\ 3 & -4 & 6 \\ 2 & -2 & 3 \end{pmatrix}$ over $\mathbb{Q}$.

II. Lectures by Dr. Rahul Kitture (May 28-30, 2018)

Day 1 (May 28, 2018)

In first lecture, he revised *Groups* through *symmetries,* which provided a quick link to *Group Action* and discussed several examples of finite groups by considering them as symmetries of some objects,

Speakers:

1. Dr Dinesh Khurana, Panjab University, Chandigarh. **(DK)**
2. Dr Rahul Kitture, IISER Mohali. **(RK)**
3. Dr Surya Ramana, HRI, Allahabad. **(SR)**
4. Dr Chanchal Kumar, IISER Mohali. **(CK)**

Time Table followed:

I. Schedule for Day-1 (May 28, 2018)

9:00-9:30 Registration
9:30-10:30 Inauguration by Vice Chancellor and Dean Academics
10:30-11:00 Tea and Snacks

Date	**11:00-12:00**	**12:00-1:00**	**1:00-2:00**	**2:00-3:00**	**3:00-4:00**	**4:00-4:30**	**4:30-5:30**
May 28	DK	RK	Lunch	DK	RK	Tea	DK, RK

II. Schedule for rest of the Days

Date	**9:30-10:30**	**10:30-11:00**	**11:00-12:00**	**12:00-1:00**	**1:00-2:30**	**2:30-3:30**	**3:30-4:00**	**4:00-5:00**
May 29	DK	Tea and Snacks	DK	RK	Lunch	RK	Tea	RK
May 30	DK	Tea and Snacks	RK	DK	Lunch	RK	Tea	DK
May 31	SR	Tea and Snacks	SR	CK	Lunch	CK	Tea	SR, CK
June 01	SR	Tea and Snacks	SR	CK	Lunch	CK	Tea	CK
June 02	SR	Tea and Snacks	SR	CK	Lunch	CK	Tea	SR

such as Klein-4 group, Cyclic groups, Dihedral Groups, and A_4. Dr. Rahul introduced basic notions in Group action and proved orbit-stabilizer theorem. As an interesting example, through group of symmetries of a square, which was familiar to everyone, it was easy to verify the three theorems of Sylow explicitly (for Sylow-*2* subgroups). In the second lecture, he discussed simple examples of group action through symmetries of some objects, in which one can naturally see the orbits, stabilizers, and verify the orbit-stabilizer theorem. Specifically he discussed the orders of groups of symmetries of platonic solids.

Day 2 (May 29, 2018)

In first lecture, the topic was the action of a group on a set, which provided a homommorphism from the group to the permutation group of the set under consideration. As a simple application, he illustrated the structure of groups of symmetries of platonic solids. In the second lecture, he discussed the groups of isometries of $\mathbb{R}^n$ with main aim towards the classification of finite subgroups of it. With this focus, he proved some important theorems about structure of an isometry (composition of translation and orthogonal transformation). In the tutorial session, he discussed following problems

1) In any group action, any two orbits are either equal or disjoint.
2) Elements of same orbit have conjugate stabilizers, and in particular, have same order.
3) Discuss the group of rotational symmetries of tetrahedron.
4) The general form of 2×2 orthogonal matrix is $\begin{bmatrix}\cos\theta & \sin\theta \\ -\sin\theta & \cos\theta\end{bmatrix}, \begin{bmatrix}\cos\theta & \sin\theta \\ \sin\theta & -\cos\theta\end{bmatrix}$. Show that the first matrix represents rotation and second matrix represents reflection in a line through origin with angle $\frac{\theta}{2}$ with $x-$axis.
5) Any orthogonal matrix has determinant ± 1.
6) If A is a 3×3 orthogonal matrix with determinant 1 then A has an eigenvector with eigenvalue 1.

Day 3 (May 30, 2018)

In first lecture, he discussed Burnside's theorem on counting number of orbits for action of finite group on a finite set and the finite subgroups of 2×2 orthogonal matrices. As a primary step in classification of finite subgroups of $\mathbb{O}_3(\mathbb{R})$, he introduced poles on sphere for a rotation, and that a finite subgroup of $\mathbb{O}_3(\mathbb{R})$, permutes (acts on) poles of its (non-identity) elements. This allowed them to locate possible vertices of a regular body inside unit sphere on which G is acting. The explicit discussion (proof) of finite subgroups of $\mathbb{O}_3(\mathbb{R})$, involves some amount of pure algebraic computations and some amount of geometry. In the next lecture, he stressed on geometric part of the proof with attention towards how the platonic solids arise for finite subgroup of $\mathbb{O}_3(\mathbb{R})$ under consideration. Instead of highlighting the five possible groups, he discussed one example in detail namely how the octahedron arises, as a case, in the classification theorem, explicitly.

Lectures by Dr. D. Surya Ramana (May 31 to June 02, 2018)

In his six lectures of one hour each and one and a half tutorial sessions from May 31 to June 02, 2018, the following topics in Multivariable Calculus were covered.

1) The Euclidean structure of $\mathbb{R}^n$; Cauchy-Schwarz inequality.
2) Lipshitz functions, contraction mappings.
3) Fixed point theorem, application to calculation of square roots.s
4) $\mathbb{R}$ Linear mappings from $\mathbb{R}^n$ to $\mathbb{R}^n$, norms on the space of such mappings.
5) Differentiability in several real variables; Derivatives and basic examples.
6) Hadamard's lemma and the chain rule.
7) Directional derivatives, partial derivative ad the Jacobian matrix.

8) The mean value theorem.
9) The implicit function theorem.

IV. Lectures by Dr. Chanchal Kumar (May 31 to June 02, 2018)

Dr. Chanchal gave a series of six lectures on *Elementary Group Theory* and conducted one and a half tutorial sessions in the workshop. The basic notions of Groups, Sub-groups, Quotient groups, Group homomorphisms, and Isomorphism theorems were introduced in the first two lectures on May 31, 2018. Actions of groups on sets were discussed with many examples on June 01, 2018. Using group actions, Cauchy's and Sylow's theorems were proved in the lectures. Applications of Sylow's theorems were also discussed. On June 02, 2018, direct product and semi-direct products of groups were introduced and classification of all groups of order ≤ 16 were obtained. A tutorial question set having more than 20 problems were given to the participants on the first day and these problems were discussed in the tutorial as well as in lecture sessions.

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Dr D.K. Khurana (Academic Convener)	Dr. Ajay Kumar (Convener)	Dr. Suraj Goyal (Convener)

Intra-department Power Point Presentation Competition

Report

The intra-department Power Point Presentation Competition was held on Feb 28, 2017 at Department of Mathematics in Room no. AC-402. The competition was a good opportunity to display the collaborative effort of students from different classes. It brought forth a lovely amalgamation of Great Mathematicians, their contributions and utility of Mathematics in different streams of life. Not only did the students have to gather information on the topics but also find innovative ways of putting them across. They also studied the topics at length so that they could answer questions related to them.

The PPT's encompassed a vast variety of topics, namely Applications of Probability, Fibonacci sequence and Golden Ratio, Vedic Mathematics, A Great Mathematician- Leonhard Euler, Riemann Hypothesis and Riemann Surfaces, Cryptography and its Applications, Lake Pollution Model, Riemann Integration etc.

All the students put up great presentations and faced the Question-Answer round rather bravely. The winner of the competition was **Rajat Taneja and Nikita Saini (B.Sc. (Hons.) Mathematics- 4th sem)**, who gave presentation on the topic "Cryptography". The second prize went to **Lokesh Kohli (M.Sc. (Hons.) Mathematics- 2nd sem)**. The third prize was shared by **Himanshu Garg and Sangeeta Sharma (M.Sc. (Hons.) Mathematics- 2nd sem)**.

The entire program was energetic and went smoothly. The program was attended by a large number of students. Whole event was judged by Er. Inderjeet Singh (Assistant Professor, Electronics Engineering), Dr. Sarika Verma and Mr. Avtar Chand from the Department of Mathematics.

Science Academies Lecture Workshop

DAV UNIVERSITY

JALANDHAR

DEPARTMENT OF MATHEMATICS

SCIENCE ACADEMIES' LECTURE WORKSHOP ON ALGEBRA AND NUMBER THEORY

September 8-9, 2017

FUNDED BY

INDIAN ACADEMY OF SCIENCES

INDIAN NATIONAL SCIENCE ACADEMY

THE NATIONAL ACADEMY OF SCIENCES

ABOUT THE ACADEMIES

INDIAN ACADEMY OF SCIENCES

The Indian Academy of Sciences (IASc), Bangalore was founded in 1934 by C. V. Raman. Its objectives include promoting the progress of science in pure and applied branches. Major activities include organizing meetings for discussions on important topics, publication of scientific journals, recognizing scientific talent, improvement of science education and taking up other issues of concern to the scientific community.

INDIAN NATIONAL SCIENCE ACADEMY

The Indian National Science Academy (INSA), New Delhi founded in 1935 is a premier science academy in the country, INSA plays crucial role in promoting, recognizing and rewarding excellence.

THE NATIONAL ACADEMY OF SCIENCES

The National Academy of Sciences (NASI), Allahabad was founded in 1930. The main objective of the academy is to provide a national forum for the publication of research work carried out by Indian scientists.

CONVENER

PROF. KAPIL HARI PARANJAPE

IISER, MOHALI

CO-ORDINATOR

DR. AJAY KUMAR

DAV UNIVERSITY, JALANDHAR

CONTACT NO.: 9779330255

RESOURCE PERSONS

PROF. KAPIL HARI PARANJPE

IISER MOHALI

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IISER MOHALI

PROF. DINESH KHURANA,

PANJAB UNIVERSITY, CHANDIGARH

DR. AMIT KULSHRESTHA

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ABOUT THE UNIVERSITY

DAV University, Jalandhar is promoted by DAV College Managing Committee which is India's largest non-government educational organization managing more than 800 institutions in the country.

It has been providing students with an excellent education in modern academic environment. The University traces its roots to the legacy that has been reforming and redefining India's educational scenario for 130 years. The University has been established by a Legislative Act of the Punjab Government and empowered to confer degrees under Section 22 of the UGC Act 1956.

It is a multi-disciplinary institution, home to faculties of teaching excellence in subjects from engineering to languages to natural sciences including physical and life sciences. DAV University is spread across an area of about 72 acres and it provides an ideal ambience for pursuing professional courses and ensuring all-round development of students. The campus is well equipped with modern infrastructure, round-the-clock power backup, canteens and huge parking area.

ABOUT THE DEPARTMENT

In keeping up with the heritage of imparting quality education, teaching and research are the prime areas of concern for the Department of Mathematics. The Department focuses on research and development; science and technology; and meritorious careers in academics and proficient industries. The Department has highly qualified, young and dynamic faculty members. Students gain deep insight into various new areas of research. They get the opportunities to attend seminars and invited/guest lectures delivered by eminent mathematicians.

To meet the latest demands of the industry, the Department keeps on periodically updating and revising its teaching pedagogies, research schemes and introduces new courses. The syllabi of both the undergraduate and postgraduate courses are designed to equip students to qualify exams such as GATE, UGC NET etc. The Department has a well-equipped computer Lab with latest softwares like MATLAB, MATHEMATICA etc.

Srinivasa Ramanujan

ABOUT THE WORKSHOP

The objective of the workshop is to introduce some of the basic facts of algebra and number theory that UG and PG Mathematics students should know. Algebra and number theory are two main branches of modern mathematics which are playing a significant role in the other areas of mathematics. The interaction between algebra and number theory is found to be beneficial in computing and communications as evident from the applications of these subjects in cryptography and coding theory. The main topics to be covered in this workshop are as follows:

- Group Actions and their Applications
- Matrices and Quadratic Forms
- Prime Numbers, Congruences, Reciprocity
- Diophantine Equation and Elliptic Curves

TERMS OF PARTICIPATION

- **There is NO registration fee for attending the workshop.**
- Limited number of participants will be entertained.
- Tea and lunch will be served to the participants.
- No accommodation will be provided.
- Participation restricted to UG/PG students, research scholars and faculty members.

Please visit www.davuniversity.org for application form and details.


S.Chawla

Shanti Swarup BhatnagarPrize awardee motivates students at DAV University

September 09, 2017 03:12 PM

FACULTY and students at DAV University got a rare opportunity to interact with Professor Kapil Hari Paranjape – one of the pioneers of Algebraic Mathematics in the world. Professor Paranjape, who was the Convener of a two-day Academies' Lecture Workshop on Algebra and Number Theory said that a teacher could only play his role as a motivator in the process of learning.

(MOREPIC1)

Prof Paranjape was interacting with students at the workshop organized by DAV University in collaboration with Indian Academy of Sciences, Indian National Science Academy and the National Academy of Science – three major scientific organizations in India. The workshop was inaugurated by Dr A K Paul, Vice-Chancellor while DrJasbir Rishi, Dean (Academics), DrRekhaKalia Bhardwaj (Registrar) and Dr Raj Kumar, organizing secretary of the workshop were also present.

(MOREPIC2)

Professor Kapil Hari Paranjapewas awarded the Shanti Swarup Bhatnagar Prize for Science and Technology in 2005 – the highest science award in India – for outstanding contributions in the field of algebraic geometry. Professor Paranjape's achievements included about eight-year stint at different visiting positions at California Institute of Technology between 2001 and 2009. At present, he serves at Indian Institute of Science Education and Research (IISER), Mohali.

(MOREPIC3)

Other highlights of the workshop included workshops and activity sessions on the advancement in mathematical research and its application in real life. The experts said that Mathematics had been influencing life of every individual and the world managed by

smart devices including personal computers could not function in the absence of mathematical calculations.

(MOREPIC4)

Another noted algebraist Dr Dinesh Khurana from Panjab University said that Mathematics had always evoked curiosity and fascination among brilliant minds of the world.The modern world owes its existence to Mathematics to a large extent. Citing example of prime numbers, he said that they have mesmerized scientists and the experts across the world. They have been working relentlessly to discover biggest prime number. The biggest prime number discovered till date has 22338618 digits. A prime number is a number which cannot be divided by any other number. Great Internet Mersenne Prime Search (GIMPS) – a collaborative project of volunteers to search for prime numbers – has been in the process of finding even bigger prime numbers.

Professor Chanchal Kumar from Indian Institute of Science Education and Research (IISER), Mohali discussed complicated pure mathematical concepts like “Group Actions and Their Applications”.Dr Amit Kulshrestha from IISER Mohali said spoke on Matrices and Quadratic Forms.