

|| OM SRI MANJUNATHAYA NAMAHA ||
MMK & SDM MAHILA MAHA VIDYALAYA
K.M.PURAM MYSORE

DEPARTMENT OF MATHEMATICS

WEBINARS ORGANISED

(2020-21)



PRINCIPAL

**MMK & SDM Mahila Maha Vidyalaya
Krishnamurthypuram, Mysuru-570004**

PREFACE

Department of mathematics organised webinars to inculcate an in-depth knowledge on the areas "Application of Mathematics" and "Ramanujan's life and his elementary works" for the students. The topics discussed imbibe the students with independent mathematical learning and reasoning skills. The online platform helped us to impart knowledge not only to our students, but also to students and faculties of other institutions irrespective of their regions.



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MMK & SDM Mahila Maha Vidyalaya
Krishnamurthypuram, Mysuru-570004

MMK & SDM MAHILA MAHA VIDYALAYA, MYSORE

Department of Mathematics

Webinars Organised in the Year 2020-21

DATE: 26/12/2020

PROGRAMME: National Level Webinar

TOPIC: "Application of Mathematics"

OBJECTIVES: To develop fundamental mathematical skills and the ability for independent mathematical learning and reasoning.

RESOURCE PERSON: Mr.Malegaonkar Swapnil Deepak, Junior research fellow, Department of Mathematics, SRM University, Andra Pradesh.



Resource Person

Mr.Malegaonkar Swapnil Deepak

SESSION DISCUSSION: Applied mathematics is the application of mathematical methods by different fields such as physics, engineering, medicine, biology, finance, business, computer science, and industry. Thus, applied mathematics is a combination of mathematical science and specialized knowledge. The term "Applied Mathematics" also describes the professional specialty in which Mathematicians work on practical problems by formulating and studying mathematical models.


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Applied mathematics is associated with the following mathematical sciences:

- Scientific computing
- Computer science
- Operations research and management science
- Statistics
- Actuarial science
- Mathematical economics

Time-varying coefficient estimation in differential equation models with noisy time-varying covariates:

Ordinary differential equations (ODEs) are widely used to describe systems in physics, chemistry, biology and medicine. These ODEs usually involve quite a few unknown parameters that need to be estimated from observational data. Thus unlike traditional studies of dynamical systems that seek solutions for the equations, here we are concerned with the inverse problem of estimating the equations themselves given time-variable measurements. Unfortunately, most ODE systems used in these applications are often complicated in form and thus do not entertain analytical solutions. Besides, the observations typically contain measurement errors and statistical methods are required to estimate these parameters.

In general, such a system can be written as,

$$\dot{X}(t) = F(X(t), \beta(t), V, \alpha),$$

where $X(t) = (X_1(t), \dots, X_p(t))^T$ are time-varying covariates, V are non-time-varying covariates, and $\beta(t), \alpha$ are time-varying and non-time-varying parameters, respectively. F is assumed to be known. We also assume $t \in [0, 1]$ without loss of generality. However, we do not observe $X(t)$ directly. Instead, we have noisy observations:

$$Y = \beta X + \epsilon,$$

where $Y = (Y_1, \dots, Y_p)^T$ are our actual observations and $\epsilon_i = (\epsilon_{1i}, \dots, \epsilon_{pi})^T$ are the mean zero measurement errors assumed to be independent and identically distributed.

Method of Vector Product and its Application :

In 1773, Joseph-Louis Lagrange introduced the component form of both the scalar and cross products in order to study the tetrahedron in three dimensions. In 1843, William Rowan Hamilton introduced the quaternion product, and with it the

terms "vector" and "scalar". Given two quaternions $[0, u]$ and $[0, v]$, where u and v are vectors in \mathbb{R}^3 , their quaternion product can be summarized as $[-u \cdot v, u \times v]$. James Clerk Maxwell used Hamilton's quaternion tools to develop his famous electromagnetism equations, and for this and other reasons quaternions for a time were an essential part of physics education.

In 1878 William Kingdon Clifford published his Elements of Dynamic which was an advanced text for its time. He defined the product of two vectors to have magnitude equal to the area of the parallelogram of which they are two sides, and direction perpendicular to their plane.

Applications:

- Computational geometry
- Angular momentum and torque
- Rigid body
- Lorentz force

BENEFICIARIES: Students and Faculties.

NUMBER OF PARTICIPANTS: 227

OUTCOME: Students communicate mathematical understanding to others verbally and in written form. Apply precise and logical reasoning to problem solving. Utilization of symmetric approach and critical thinking skills to solve a problem is developed.

CONCLUSION: The skills acquired by the students assist them carry out Research Projects in future.



Organizers

Faculty, Department of Mathematics.

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Krishnamurthypuram, Mysore-570 004

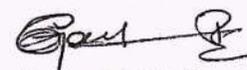
Date: 10/12/2020

Department of Mathematics
MMK & SDM Mahila Maha Vidyalaya, Mysore

The Principal
MMK & SDM Mahila Maha Vidyalaya, Mysore

Sub - Proposal for organizing One Day National Level Webinar on "Applications of Mathematics" - permission sought for- regarding.

In reference to above, we write to state that we wish to conduct One Day National Level Webinar on "Applications of Mathematics" during the month of December 2020 in our college through virtual mode for the B.Sc Degree Students with Mathematics Combination. In view of the same, kindly permit us to conduct the Webinar.



Yours faithfully
HEAD OF THE DEPARTMENT
Department of Mathematics
MMK & SDM Mahila Maha Vidyalaya
KRM Puram, MYSURU



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MMK & SDM Mahila Maha Vidyalaya
Krishnamurthypuram, Mysuru-570004



Department of Mathematics
 In association with Internal Quality Assurance Cell (IQAC)
 ONE DAY NATIONAL LEVEL WEBINAR
 on
“Application of Mathematics”

Department of Mathematics

In association with Internal Quality Assurance Cell (IQAC)
 Organizer

ONE DAY NATIONAL LEVEL WEBINAR

on

“Application of Mathematics”

Resource Person:

Mr. Malegaonkar Swapnil Deepak

Junior Research Fellow (Ph.D.)

Department of Mathematics

ERM University, Andhra Pradesh



Date : 26/12/2020 Time : 10.30 A.M. to 1.00 P.M

Registration Link : <https://forms.gle/7sWXX9>

Platform :

Google Meet Link: <https://meet.google.com/om-owm-owm>

YouTube Link : <https://youtu.be/7sWXX9>

College Website : <http://www.ermuniversity.ac.in>

Ph: 0821-2332865

All are cordially invited

Prof. Sainath Mahalingam
 Principal

Smt.G.R.Sumithra
 IQAC Co-Ordinator &
 HOD of Electronics

Ms. Gayathri R
 Convener & HOD of Mathematics

Mrs. Chandra K
 Asst. Professor
 Co-Convener

Mrs. Vidhya P V
 Asst. Professor
 Co-Convener

Note : E- Certificates will be issued to all the participants & No Registration fee.

Paul

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MMK & SDM Mahila Maha Vidyalaya
 Krishnamurthyapuram, Mysuru-570004

॥ OM SHRI MANJUNATHAYA NAMAH ॥

MMK

&

SHRI KSHETRA DHARMASTHALA MANJUNATHESHWARA MAHILA MAHAVIDYALAYA

(Affiliated to University of Mysuru)

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Email: principal@sdmmmkmysore.in, sai_malligemadu@sdmmmkmysore.in

(Managed by : **SDME Society (R.), Ujire**)

PRESIDENT : **Dr. D. VEERENDRA HEGGADE**, Shri Kshetra Dharmasthala

Office of the Principal

Ref. No.: MMK & SDM / MMV / 30 / 12020 2021

Date : 24/12/2020

Dr. Sai Malligemadu
Assistant Professor (PhD)
Department of Mathematics
Osaka University, Andhra Pradesh.

Invitation as Resource Person.

MMK & SDM Mahila Mahavidyalaya, established in the year 1990 is a Pioneering College in the field of Women's Education and Empowerment. Our President Padma Vibhushana awardee Dr. D. Veerendra Heggade's name instantly brings in a stamp of integrity & quality. Our institution has been striving to attain all round excellence and to impart quality Education along with cultural awareness to students of all strata of society under the dynamic guidance of Dr. Heggade.

We are cordially inviting you as a resource person for the one day **National Level Webinar** on the topic "Application of Mathematics" organized by Department of Mathematics on 26th December 2020.

Kindly accept our invitation. Looking forward to your kind response.

Yours faithfully



Principal
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Mysuru - 570 004

MMK & SDM MAHILA MAHAVIDYALAYA, MYSORE

DEPARTMENT OF MATHEMATICS

ONE DAY NATIONAL LEVEL WEBINAR ON

"APPLICATION OF MATHEMATICS"

The Department of Mathematics has organized National Level Webinar on "Application of Mathematics" on 26-12-2020 at 10.30 A.M. and Mr. Malegaonkar Swapnil Deepak, Post Doctoral Fellow (PhD), Department of Mathematics, SRM University, Andhra Pradesh, will be the resource person. We humbly request the entire faculty to take active participation. The faculty of Physics, Chemistry, Electronics and B.Sc Computer Science are requested to suspend their classes from 10.30A.M. -12.30.P.M.



Principal

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MMK & SDM Mahila Maha Vidyalaya
Krishnamurthypuram, Mysuru-570004



[Faint handwritten notes and signatures in the bottom left corner, including the word 'Principal' and some illegible scribbles.]

M.M.K.

&

DHARMASTHALA MANJUNATHESHWARA MAHILA MAHAVIDYALAYA

(Affiliated to University of Mysuru)

Krishnamurthypuram, Mysuru - 570 004

Phone : 0821 - 2330039 Mob. : 9886166750 Off. : 0821 - 2332865 Fax : 0821 - 2331431

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Email : principal@sdmmmkmysore.in, sai_malligemadu@sdmmmkmysore.in

(Managed by : **SDME Society (R.), Ujire**)

RESIDENT **Dr. D. VEERENDRA HEGGADE**, Shri Kshetra Dharmasthala

Office of the Principal

Ref. No.: MMK & SDM / MMV / 300 / 20 20 20 21

Date : 26 / 12 / 2020

Principal
Dr. D. Veerendra Heggade
Ph.D.
Department of Mathematics
Kshetra Dharmasthala

We are extremely thankful to you, for your gracious presence as the Resource Person in the "National Level Webinar" on the topic "Application of Mathematics" organized by Department of Mathematics on 26th December 2020. Our participants were highly benefited by your lecture.

Thank you for having associated with us and looking forward for your co-operation in future as well.

Yours faithfully



Principal

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MMK & SDM Mahila Mahavidyalaya
Krishnamurthypuram, Mysore-570 004

|| OM SHRI MANJUNATHAYA NAMAHA ||

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(Managed by : SDME Society (R.), Ujire)

President : **Dr. D. VEERENDRA HEGGADE**, Shri Kshetra Dharmasthala

Office of the Principal

Ref. No.: MMK & SDM / MMV / 299 / 2020 / 2021

Date : 26/12/2020

One Day National Level Webinar Certificate

This is to certify that Mr. MALEGAONKAR SWAPNIL DEEPAK, Junior Research Fellow (Ph.D) Department of Mathematics, SRM University, Kattankulathur has delivered a talk on the topic "Application of Mathematics" on 26.12.2020 as a resource person for one day "National Level Webinar" and it was organized by the Department of Mathematics, Mysore Makkala Koota & Shri Kshetra Dharmasthala, Mysore for the year 2020 - 2021.



Head of the Department

Department of Mathematics

Shri Kshetra Dharmasthala

Mysore



Principal

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Krishnamurthypuram, Mysuru-570004

1000 of participants

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- 6 Very good session
- 5 Good session
- 5 Noo
- 5 No suggestions
- 5 Nothing
- 5 Conduct more of these
- 3 -
- 5 No
- 5 No suggestions I was useful a webinar
- 4 Nice session
- 4 It's too informative
- 4 no suggestion
- 4 The webinar was very informative
- 4 Its very useful ...
- 2 Nothing much
- 5 Its very useful...thank you
- 5 No suggestions
- 5 No suggestions
- 4 Nothing
- 5 Very informative
- 4 No, it's very helpful ar Option 1
- 5 Thanks for webinar
- 5 Very interesting...
- 5 Nothing
- 4 Nothing
- 5 I joined
- 5 Ok
- 5 Very informative sees Option 1
- 5 Nothing
- 5 No suggestions
- 3 Nothing
- 4 It was aGood webinar
- 4 No
- 5 Good
- 5 No
- 5 No
- 5 No suggestions
- 5 Organisers please m
- 4 Good information
- 4 There was little netw
- 5 Solve
- 3 -
- 5 No suggestion
- 5 No suggestion
- 4 It was informative
- 4 Good
- 4 Nice program, thank you
- 5 No
- 5 It was a good experience. By participating i
- 4 -

- MMK & SDM MAHILA Faculty
- MMK & SDM MMV Faculty
- MMK and SDM Mahil student
- SDM MMK AND MMV student
- Sdm mmk mmv mysc student
- MMK AND SDM MMV student
- SDM&MMK MAHILA student
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- JSS College for wom Faculty
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- PES arts Commers a student
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- 12:08:41 abhinjakedliya@gmail.com Abhinja R Kedliya
- 12:09:41 Niharika M.S
- 12:09:55 gynivetha2001@gmail.com Ms G.Nivetha

National level webinar on "Applications of Mathematics" held on 30/12/2020. List of participants (Designation/Institution)

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Feedback form to be filled after the session. Link to be shared before the session. List of participants

Sl. No.	Name	Registration No.	Phone No.	Address	Feedback	Option
1	Deepika R	28/28/2020	16:53:20	deepikarameshgowd,deepika.r7676	Thankyou for made this session and it's very	Option 1
2	Manasa NK	28/28/2020	16:57:18	lokeshana.nk24@gmail.com	Interested and done it very well	Option 1
3	Manasa NK	28/28/2020	17:03:28	lokeshana.nk24@gmail.com	5 No	Option 1
4	Anusha V S	28/28/2020	17:12:42	afunusv29091998@gmail.com	5 The webinar is very good	Option 1
5	Anusha B M	28/28/2020	20:06:39	anushreeta593@gmail.com	3 Use full	Option 1
6	Sumana	28/28/2020	03:16	sumashivamoggae2@gmail.com	3 Nothing	Option 1
7	Sanjana R	28/28/2020	04:14:06	anmusanjana@gmail.com	5 Nothing	Option 1
8	Bhurnika	28/28/2020	6:36:19	anuyashu2001@gmail.com	4 No webinar is good	Option 1
9	Bhurnika	28/28/2020	6:51:27	bhunikabhumika488@gmail.com	5 This is very helpful for students and very	Option 1
10	Nimiya V J	28/28/2020	7:03:48	nimiya1729@gmail.com	5 Nothing	Option 1
11	Nimiya V J	28/28/2020	7:16:15	chinnu6678@gmail.com	5 It is a satisfied webinar	Option 1
12	Priyanka C L	28/28/2020	7:18:41	priyankepriyanke633@gmail.com	3 No suggestions	Option 1
13	Meghana B	28/28/2020	7:24:47	meghanameghana72@gmail.com	3 No	Option 1
14	Meghana B	28/28/2020	7:30:46	arpathimk66@gmail.com	4 Good	Option 1
15	Arpathimk66	28/28/2020	7:46:37	kumrikumars@gmail.com	4 Good	Option 1
16	Shambhavi K	28/28/2020	7:54:59	pallavinareppa18@gmail.com	5 No	Option 1
17	Pallavi M	28/28/2020	8:03:06	harshithachinnu1412@gmail.com	5 Nice	Option 1
18	Harshitha M U	28/28/2020	8:03:44	manasav24@gmail.com	5 Helpful for students	Option 1
19	Manasa V S	28/28/2020	8:07:10	mohammadimadeeh@gmail.com	5 Nil	Option 1
20	Mohammadimadeeh	28/28/2020	8:07:10	mohammadimadeeh@gmail.com	5 Pls send me a certificate as faster	Option 1
21	Keerthana	28/28/2020	8:18:49	keerthanakeerthana@gmail.com	5 Good	Option 1
22	Pavithra K R	28/28/2020	8:19:59	praphullakumar123@gmail.com	5 I'm happy to collect the certificate	Option 1
23	Pavithra K R	28/28/2020	8:33:23	puttegowda215@gmail.com	4 Thank you...	Option 1
24	Yamini P	28/28/2020	8:35:31	premagowda2525@gmail.com	5 Nothing	Option 1
25	Prema R	28/28/2020	8:57:48	9663660032@gmail.com	5 Good	Option 1
26	Sunashini Mallikar	28/28/2020	9:01:52	sandhyasandy16032@gmail.com	5 No	Option 1
27	R Sandhya	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
28	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
29	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
30	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
31	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
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48	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
49	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		
50	Tabassum Banu	28/28/2020	9:20:25	tabassumbanu.8197@gmail.com		

National level workshop on 'Application of Mathematics' held on 28/12/2020. List of participants

Sl. No.	Date	Name	Institution	Remarks
1	12/29/2020 9:41:42	leventiya ha2001	Govt. First grade colleg student	4 No
2	12/29/2020 9:47:17	poorja13200001320004	Govt first grade colleg student	5 No
3	12/29/2020 9:53:24	meghanammeghanar	Govt first grade colleg student	4 No
4	2/29/2020 10:11:46	shruthiyograj26	Govt first grade colleg student	5 No
5	2/29/2020 10:16:58	kamakshibeeresh2	Govt first grade colleg student	4 No
6	2/29/2020 10:29:41	manasamanasa6362	Govt first grade colleg student	5 No
7	2/29/2020 10:44:27	sahanadj@gmail.com	Govt first grade colleg student	4 No
8	2/29/2020 10:47:47	anjalianjaliniyak1236	Govt first grade colleg student	5 No
9	2/29/2020 11:00:12	varshithasuresh1	Govt first grade colleg student	4 No
10	2/29/2020 11:06:01	sahanadj11@gmail.com	Govt first grade colleg student	5 No
11	2/29/2020 14:35:52	mohammadimisbahs	Govt first grade colleg student	4 No
12	2/29/2020 15:06:06	shilpagowds3428	Govt first grade colleg student	5 No
13	2/29/2020 17:02:33	veenamarjunath1854	Govt first grade colleg student	4 No
14	2/29/2020 17:03:30	devamanibmdavamai	Govt first grade colleg student	5 No
15	2/29/2020 12:12:59	18517@sdmnmkmkyt	Govt first grade colleg student	4 No
16	2/29/2020 12:40:23	apeksha.d.s2002	Govt first grade colleg student	5 No
17	2/29/2020 12:56:20	maheshwarvmbts	Govt first grade colleg student	4 No
18	1/1/2021 21:52:59	ssm68700@gmail.com	Govt first grade colleg student	5 No

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Merged Page 85 : 8 is merged from 1998. Link to merged file: https://docs.google.com/document/d/1GUYVw7MjY0H1T1/files/https://docs.google.com/document/d/1wly0lq1NjKvY1C1/files/https://docs.google.com/document/d/14QjdtLORkcnFZx5Y/files/https://docs.google.com/document/d/1uQAznuUH8ertf88P/files/https://docs.google.com/document/d/1opWckFy3cuMYopf/files/https://docs.google.com/document/d/1pK9a3POT7pex8x0/files/https://docs.google.com/document/d/1MP2kxva3Pz9KxvK/files/https://docs.google.com/document/d/1qk3HAY1GFwVyzC/files/https://docs.google.com/document/d/1hy1A_royV17U8EZI/files/https://docs.google.com/document/d/1L_PXorRmfHDX4kl/files/https://docs.google.com/document/d/1dEHEUm05Hc7W1r/files/https://docs.google.com/document/d/1VZexYRjtczTW5F_J/files/https://docs.google.com/document/d/1UpFR4yQcFgJnls4I/files/https://docs.google.com/document/d/1EgajUOH1kmJU2Y/files/https://docs.google.com/document/d/1AqHnz_KYczZ6Q9K/files/https://docs.google.com/document/d/1Mh_cE5WWh~Zm1XC/files/

MMK & SDM MAHILA MAHA VIDYALAYA, MYSORE

Department of Mathematics

Webinars Organised in the Year 2020-21

DATE: 30/12/2020

PROGRAMME: University level webinar

TOPIC: "Ramanujan's life and his elementary works"

OBJECTIVES: To spread awareness on the life and work of Srinivasa Ramanujan among students and faculty.

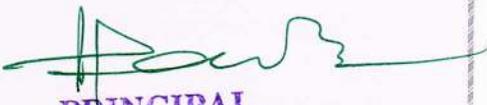
RESOURCE PERSON: Dr.Guruprasad.P.S, Assistant Professor, Department of Mathematics, Govt.First Grade College, Chamarajanagar



Resource Person

Dr.Guruprasad.P.S

SESSION DISCUSSION: Srinivasa Ramanujan (born Srinivasa Ramanujan Aiyangar, IPA: 22 December 1887 – 26 April 1920) was an Indian mathematician who lived during the British Rule in India. Though he had almost no formal training in pure mathematics, he made substantial contributions to mathematical analysis, number theory, infinite series, and continued fractions, including solutions to mathematical problems then considered unsolvable.



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Ramanujan initially developed his own mathematical results according to Hans Eysenck: "He tried to interest the leading professional mathematicians in his work, but failed for the most part. What he had to show them was too novel, too unfamiliar, and additionally presented in unusual ways; they could not be bothered". Seeking mathematicians who could better understand his work, in 1913 he began a postal correspondence with the English mathematician G. H. Hardy at the University of Cambridge, England.

Recognizing Ramanujan's work as extraordinary, Hardy arranged for him to travel to Cambridge. In his notes, Hardy commented that Ramanujan had produced groundbreaking new theorems, including some that "defeated me completely; I had never seen anything in the least like them before", and some recently proven but highly advanced results.

With Aiyer's help, Ramanujan had his work published in the Journal of the Indian Mathematical Society. One of the first problems he posed in the journal was to find the value of:

$$\sqrt{1 + 2\sqrt{1 + 3\sqrt{1 + \dots}}}$$

He waited for a solution to be offered in three issues, over six months, but failed to receive any. At the end, Ramanujan supplied the solution to the problem himself. On page 105 of his first notebook, he formulated an equation that could be used to solve the infinitely nested radicals problem.

$$x + n + a = \sqrt{ax + (n + a)^2 + x\sqrt{a(x + n) + (n + a)^2 + (x + n)\sqrt{\dots}}}$$

Using this equation, the answer to the question posed in the Journal was simply 3, obtained by setting $x = 2$, $n = 1$, and $a = 0$. Ramanujan wrote his first formal paper for the Journal on the properties of Bernoulli numbers. One property he discovered was that the denominators (sequence A027642 in the OEIS) of the fractions of Bernoulli numbers are always divisible by six. He also devised a method of calculating B_n based on previous Bernoulli numbers. One of these methods follows:

It will be observed that if n is even but not equal to zero,

1. B_n is a fraction and the numerator of B_n/n in its lowest terms is a prime number,
2. the denominator of B_n contains each of the factors 2 and 3 once and only once,
3. $2^n(2^n - 1)B_n/n$ is an integer and $2(2^n - 1)B_n$ consequently is an odd integer.

The first two professors, H. F. Baker and E. W. Hobson, returned Ramanujan's papers without comment. On 16 January 1913, Ramanujan wrote to G. H. Hardy. Coming from an unknown mathematician, the nine pages of mathematics made Hardy initially view Ramanujan's manuscripts as a possible fraud. Hardy recognized some of Ramanujan's formulae but others "seemed scarcely possible to believe".


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One of the theorems Hardy found amazing was on the bottom of page three (valid for $0 < a < b + 1/2$):

$$\int_0^{\infty} \frac{1 + \frac{x^2}{(b+1)^2}}{1 + \frac{x^2}{a^2}} \times \frac{1 + \frac{x^2}{(b+2)^2}}{1 + \frac{x^2}{(a+1)^2}} \times \dots dx = \frac{\sqrt{\pi}}{2} \times \frac{\Gamma(a + \frac{1}{2}) \Gamma(b+1) \Gamma(b-a+1)}{\Gamma(a) \Gamma(b + \frac{1}{2}) \Gamma(b-a + \frac{1}{2})}$$

Hardy was also impressed by some of Ramanujan's other work relating to infinite series:

$$1 - 5\left(\frac{1}{2}\right)^3 + 9\left(\frac{1 \times 3}{2 \times 4}\right)^3 - 13\left(\frac{1 \times 3 \times 5}{2 \times 4 \times 6}\right)^3 + \dots = \frac{2}{\pi}$$

Ramanujan was plagued by health problems throughout his life. His health worsened in England; possibly he was also less resilient due to the difficulty of keeping to the strict dietary requirements of his religion there and because of wartime rationing in 1914–18. He was diagnosed with tuberculosis and a severe vitamin deficiency, and confined to a sanatorium. In 1919 he returned to Kumbakonam, Madras Presidency, and in 1920 he died at the age of 32. After his death his brother Tirunarayanan compiled Ramanujan's remaining handwritten notes, consisting of formulae on singular moduli, hypergeometric series and continued fractions.

Ramanujan's widow, Smt. Janaki Ammal, moved to Bombay; in 1931 she returned to Madras and settled in Triplicane, where she supported herself on a pension from Madras University and income from tailoring. In 1950 she adopted a son, W. Narayanan, who eventually became an officer of the State Bank of India and raised a family. In her later years she was granted a lifetime pension from Ramanujan's former employer, the Madras Port Trust, and pensions from, among others, the Indian National Science Academy and the state governments of Tamil Nadu, Andhra Pradesh and West Bengal. She continued to cherish Ramanujan's memory, and was active in efforts to increase his public recognition; prominent mathematicians, including George Andrews, Bruce C. Berndt and Béla Bollobás made it a point to visit her while in India. She died at her Triplicane residence in 1994.

A 1994 analysis of Ramanujan's medical records and symptoms by Dr. D. A. B. Young concluded that his medical symptoms—including his past relapses, fevers, and hepatic conditions—were much closer to those resulting from hepatic amoebiasis, an illness then widespread in Madras, than tuberculosis. He had two episodes of dysentery before he left India. When not properly treated, amoebic dysentery can lie dormant for years and lead to hepatic amoebiasis, whose diagnosis was not then well established. At the time, if properly diagnosed, amoebiasis was a treatable and often curable disease; British soldiers who contracted it during the First World War were being successfully cured of amoebiasis around the time Ramanujan left England.

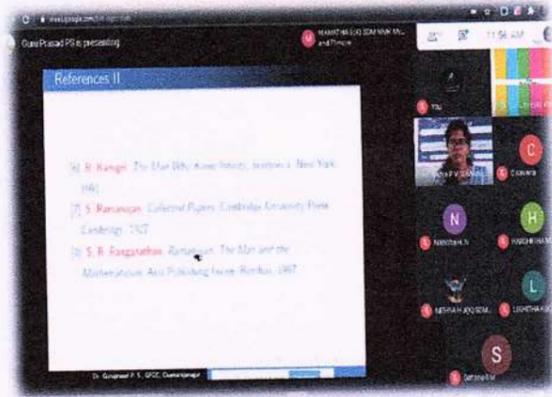


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Krishnamurthypuram, Mysuru-570004

BENEFICIARIES: Students and Faculties.

NUMBER OF PARTICIPANTS: 101



OUTCOME: Participants were able to know about the life of Ramanujan and his contribution towards q-series, theta functions, Hardy Ramanujan's Magic number etc...

CONCLUSION: The knowledge gained from the life and work of Srinivasa Ramanujan is an inspiration to carry out Mathematical Research Projects in future.



Organizers

Faculty, Department of Mathematics.

HOD
HEAD OF THE DEPARTMENT

Department of Mathematics
MMK & SDM Mahila Maha Vidyalaya
K.M Puram, MYSURU - 570004

PRINCIPAL
PRINCIPAL

MMK & SDM Mahila Mahavidyalaya
Krishnamurthypuram, Mysore-570 004

Date: 10/12/2020

From
Department of Mathematics
MMK & SDM Mahila Maha Vidyalaya, Mysore

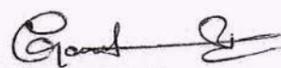
To
The Principal
MMK & SDM Mahila Maha Vidyalaya, Mysore

Respected Sir,

Sub – Proposal for organizing One Day University Level Webinar on “Ramanujan’s Life and His Elementary Works”- permission sought for- regarding.

With reference to above, we write to state that we wish to conduct One Day University Level Webinar on “Ramanujan’s Life and His Elementary Works” during the month of December 2020 in our College through virtual mode for the B.Sc Degree Students with Mathematics Combination. In view of the same, kindly permit us to conduct the Webinar and also kindly sanction the remuneration of Rs.1000/- for the resource person.

Thanking you



Yours faithfully

HEAD OF THE DEPARTMENT
Department of Mathematics
MMK & SDM Mahila Maha Vidyalaya
K.M Puram, MYSURU - 570004



PRINCIPAL
MMK & SDM Mahila Maha Vidyalaya
Krishnamurthypuram, Mysuru-570004

Prof. Sabinath Mangemana
Principal

Convener

Ms. Gayathri R
HOD of Mathematics

Co-Convener

Mrs. Chaitra N
Asst. Professor

Mrs. Vidhya P V
Asst. Professor

IQAC Coordinator

Smt. G.R. Sumithra
HOD of Electronics

No Registration fee.

Contact:

Ph: 0821-2332865

College Website:

<http://www.sbmankmysuru.in>

Department of Mathematics

in association with Internal Quality Assurance Cell (IQAC)

Organizes

ONE DAY UNIVERSITY LEVEL WEBINAR

on

RAMANUJAN'S

LIFE AND HIS ELEMENTARY WORKS

DATE - 30/12/2020

TIME - 10:30AM

Resource Person:

Dr. Guruprasad, P.S

Assistant Professor

Department of Mathematics

Govt. First Grade College,

Chamarajanagar, Karnataka



LINKS

Registration Link - <https://forms.gle/8jcFabGfq8zCkKs7A>

PLATFORM:

YouTube Link - <https://youtu.be/2xRvK3L8cWE>

Google Meet Link - <https://meet.google.com/btf-dgzc-zwb>

Note : E- Certificates will be issued to all the participants

Office of the Principal

Prof. Sainath Malligemadu

To Principal

Ref. No.: MMK & SDM / MMV / 316 / 20 20 21

Date : 28/12/2020

Dr. Guruprasad.P.S

Assistant Professor

Department of Mathematics

Govt. First Grade College,

Chamarajanagar.

Dear Sir,

Sub: Invitation-as Resource Person.

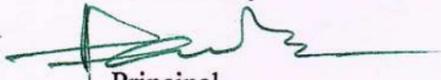
MMK & SDM Mahila Mahavidyalaya, established in the year 1990 is a Pioneering College in the field of Women's Education and Empowerment. Our President Padma Vibhushana awardee Poojya Dr.D.Veerendra Heggade's name instantly brings in a stamp of integrity & quality. Our Institution has been striving to attain all round excellence and to impart quality Education along with ethical and cultural awareness to students of all strata of society under the dynamic guidance of Poojya Heggadeji.

We are cordially inviting you as a resource person for the one day **University level webinar** through virtual mode on the topic "**Ramanujan's Life and His Elementary Works**" organized by Department of Mathematics on 30th December 2020 at 10.30am.

Kindly accept our invitation. Looking forward to your kind response.

With regards,

Yours sincerely



Principal

PRINCIPAL

MMK & SDM Mahila Maha Vidyalaya
Krishnamurthypuram, Mysuru-570004

