Report of the International Conference on Algebra and Related Topics (ICART- 2019) conducted by the Department of Mathematics, Panampilly Memorial Government College, Chalakudy on 13th and 14th of December 2019 sponsored by NBHM, SERB(DST) and the Department of Collegiate Education, Government of Kerala, Thiruvananthapuram.

Dr.

The department of Mathematics conducted an International Conference on Algebra and Related Topics on 13th and 14th December, 2019. The conference was initiated based on the plan fun sanctioned by the Director of Collegiate Education, Thiruvanathapuram. But based on the further request to various government agencies, the conference was financially supported by CSIR, NBHM, and SERB (DST). Subsequently, an organizing committee was constituted for smooth conduct of the conference. Internationally well-known eminent resource persons in the related field of Mathematics around the globe were invited for the programme.

The foreign resource persons, who agreed to deliver invited talks on the conference are Dr John C Meakin, Professor of Mathematics, University of Nebraska-Lincoln, NE 68588-0323, United States, Dr Jorge Almeida, Departamento de Matematica Pura, Faculdade de Cijncias Universidade do Porto, Rua do Campo Alegre, 687, 4169-007 Porto, Portugal, Dr Laszlo Marki, Alfred Renyi Institute of Mathematics Hungarian Academy of Sciences, Budapest, H-1364 Budapest, Pf. 1, Hungary, Dr Mikhail Volkov, Department of Algebra and Mathematics, Institute of Mathematics and Computer Science, Russia, Dr Nguyen Van University, 620000-Ekaterinburg, Sanh, Department of Mathematics, Faculty of Science, Mahidol University, Rama 6 Road, Rajadhevee, Bangkok 10400, Thailand, Dr Pham Ngoc Anh, Alfred Renyi Institute of Mathematics, Hungarian Academy of Sciences Budapest, H - 1364 Budapest Pf. 127, Hungary, Dr. Pascal Weil, Professor of Mathematics, Department of Mathematics, CNRS and Bordeaux University, Bordeaux, France, Dr. Guterman A E, Professor, Faculty of Algebra, Department of Mathematics and Mechanics, Moscow State University, Russia, Moscow, Dr. Frederique Bassino, Professor of Mathematics, Paris-Nord Computer Science Laboratory, UMR CNRS 7030 Galileo Institute - Paris 13 University, 99, France, Dr. Azeef Muhammed P. A., Assistant Professor of Mathematics, Department of Mathematics and Natural Sciences, Prince Mohammad Bin Fahd University, Al Khobar, Kingdom of Saudi Arabia and Dr. Laure Daviaud, Professor, School of Mathematics, Computer Science and Engineering, Department of Computer Science, University of London, Northampton Square, London, United Kingdom.

The resource persons from India who agreed to deliver invited talks on the occasion are *Dr Rajan A R*, Former Professor and Head, Department of Mathematics, University of Kerala, Trivandrum, Kerala and presently the Director, Kerala State Encyclopaedic Publications, Government of Kerala, Thiruvananthapuram, *Dr Krishnan E*, Department of Mathematics, University College, Trivandrum, *Dr Ramesh Kumar P*, Department of Mathematics, University of Kerala, Thiruvananthapuram, *Dr Romeo P G*, Department of Mathematics, Cochin University of Science and Technology, Cochin, and Dr Tamizh Chelvam T, Department of Mathematics, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu, India.

Smt. Vigneshwari V. IAS, Director of Collegiate Education, Government of Kerala, Thiruvananthapuram was the special invitee for the conference. A website, 'www.sites.google.com/site/icart2019math/', dedicated to the conference was created and launched. The first announcement of the conference was made through the website and brochure. An email is circulated to around 150 universities. Around 300 invitation letters and nearly 300 brochures were sent by post to various colleges and institutions in Kerala and various universities all over India. Renowned heads of the departments were invited in person. Invitations were circulated within the college too. Along with this, a press meet was conducted at Thrissur for wide publicity of the event. Online registration for the conference was done by 203 persons from all over India.

On Friday, the 13th of December 2019, registration started at 8.30 a.m. 15 resource persons (including 9 Foreign resource persons), 70 teachers from various colleges in Kerala and 5 from outside Kerala, 17 research scholars (12 from outside Kerala and 5 from Kerala), 2 M.Phil. scholars and 44 Postgraduate students from various colleges, a total of 153 participated in the Conference. The College Conference Hall and Edusat Room were the venues of the Conference.

The inaugural session started at 9.15 a.m.

The inaugural session started with the prayer by Kumari Deepthi Dinesh, Kumari Krishnendu T A, Kumari Nandana A. B. and Kumari Sreelekshmi Suresh. **Dr.** *G N Prakash*, Head of the Department of Mathematics welcomed the gathering. In his welcome speech, he specifically honoured and remembered *Prof. Dr K. S. S. Nambooripad*, the then living legend of Mathematics. He was remembered as the key person who bonded all the national and international resource persons. All the participants bowed and prayed for his blessings.

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The Principal, Dr. Aravind Krishnan K. presided over the function. In his presidential speech, he highlighted the importance of the International Conference as well as the relevance of the topic of the conference.

Smt. Vigneshwari V. IAS. Director of Collegiate Education. Government of Kerala, Thirnovananthapuram inaugurated the conference by jointly lighting the lamp with Dr. John C Meakin. In her inaugural speech, she explained the importance of the topics and some recent advances in this area Dr. John C Meakin, University of Nebraska-Lincoln, USA delivered a keynote address Dr. A. R. Rajan, former Professor and Head of the Department of Mathematics, University of Kerala, Kariavattom, Academic Secretary of ICART delivered the concept note of the conference. In the absence of Vice Principal, Dr Jojomon NA, Dr. Parvathy B, Head of the Department of Malayalam felicitated. Since Dr. Parvathy B is retiring from her long service, the department honoured her with a memento, presented by Smt. Vigneshwari V, IAS. Sri. Albert Antony T, Assistant Professor of Mathematics, Joint Convener and Treasurer of the Conference expressed vote of thanks. The inaugural session concluded at 10.00 a.m. with National Anthem.

The session I of the conference started at 10.15 a. m in Conference Hall. In this session, *Dr. John C Meakin*, University of Nebraska-Lincoln, US delivered his talk on "Algorithmic Problems in Algebra" The session was chaired by *Dr. Jorge Almeida*. The first session concluded at 11.10 a.m. after the interaction of the participants with these resource persons.

Tea and snacks were served in the Final year M Sc Mathematics Class Room.

Session II of the conference started at 11.35 am in the Conference Hall. In this session, *Dr. Pascal Weil* from CNRS and Bordeaux University, 63 rue Jean Soula, 33000 Bordeaux, France delivered his talk on "Representing subgroups of free groups and computing with them". The session was chaired by *Dr. Mikhail Volkov*. Many participants interacted with them. The second session concluded at 12.30 pm.

A photo session was arranged by the organizing team to take a group photo of all the participants from 12.30 p.m. to 12.45 p.m.

Lunch was served to all the participants and resource persons in the College Auditorium.

The session III of the conference started at 2 00 p m in the Conference Hall. In this session, *Dr. Alexander E Guterman*, Faculty of Algebra, Department of Mathematics and Mechanics, Moscow State University, Russia delivered his talk on "On Krauter conjecture"

about permanent" followed by Dr. Frederique Bassino, Paris-Nord Computer Science Who delivered a talk of the Counting and random generation of finitely generated subgroups of a free group". The third resource person of the session was Dr. Azeef Muhammed PA, Department of Mathematics and Natural Sciences, Prince Mohammad Bin Fahd University, Kingdom of Saudi Arabia, whose talk was on "Structure of Semigroups: A Nambooripad Perspective". The session was chaired by Dr. Rajan A R. The participants interacted with them. The third session

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Tea and snacks were served in the Final year M Sc Mathematics Class Room.

The session IV started at 4.45 p.m in the College Conference Hall. The session was co-chaired by Dr Jeepamol J chaired by Dr Nguyen Van Sanh. The session was co-chaired by Dr papers detailed as Palathingal. In this session, about four participants presented their papers detailed follows:-

Archa S S, Research Scholar, Department of Mathematics, University of Kerala, Thiruvananthapuram, Kerala, India on "Data Compression of Sensor arrays using Bezier Curves"; Ashitha Tom, Department of Mathematics-DDE, Madurai Kamaraj University, Madurai, Tamil Nadu, India on "Cohen-Macaulayness of Unit Graphs"; Rabikka V, Madurai, Tamil Nadu, India Department of Mathematics-DDE, Madurai Kamaraj University, Madurai, Tamil Nadu, India On "Weiner Index of Unit Graph Associated with Commutative Ring"; Vibitha Kochamani, Centre for Research in Mathematical Sciences, St Joseph's College, Irinjalakuda, Thrissur, Kerala, India on "Hash functions using Free Generators theorem over Projective General Linear Group". The other participants interacted with them. The fourth session came to an end at 5.25 p.m.

A Cultural Programme was arranged by the students of the college to entertain the participants of the Conference, which started at 6.00 p. m in College auditorium. The programme was inaugurated by *Dr. Babu C C*, the Controller of Examinations, University Calicut. Various traditional items were performed by the students constituted Nation Integration Programme, Mime, Thiruvathira, Margom kali, Oppana, Nadodi Nritham, Gro Dance, Solo and Duet Songs and Vande Matharam. All the participants were happy ab this feast to them. In between this, the birthday of Ms. Susana Volkov, wife of Prof Mike Volkov was celebrated. The programme came to an end at 9.00 p.m.

Dinner was served to the participants in the College auditorium and

On Saturday, 14th of December 2019, the second day of the conference, registration started as usual at 8 30 a.m. Breakfast was served to the delegates and participants in College auditorium. All the participants arrived at the venue by 9.00 a.m., and the sessions started at 9.15 a.m.

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The session V of the conference started at 9.15 a.m in the Seminar Hall. In this session, *Dr Mikhail Volkov* from Department of Algebra and Discrete Mathematics, Institute of Mathematics and Computer Science, Ural Federal University, Ekaterinburg, Russia delivered his talk on "Smart Search: a Practical Facet of Theoretical Mathematics" followed by *Dr. Jorge Almeida*, Departmente de Matematica Pura, Universidade do Porto, Portugal who delivered his talk on "Locally countable pseudovarieties." The sessions were chaired by *Dr John C Meakin*. The participants interacted with the delegates. The fifth session concluded at 11.10 a m

Tea and snacks were served in the Final year M Sc Mathematics Class Room

The session VI of the conference started at 11.25 a.m in the Conference Hall. In this session, *Dr Laure Daviaud*, School of Mathematics, Computer Science and Engineering, Department of Computer Science, University of London, UK delivered her talk on "An Introduction to the Algebraic Theory of Rational Languages (and a little bit of topology.....)" followed by *Dr Tamizh Chelvam T*, Department of Mathematics, Manonmanian Sundaranar University, Tirunelveli, Tamil Nadu, India, who delivered a talk on "Trace Graph and its Complement of Matrices over a Commutative Ring". The session was chaired by *Dr Pascal Weil*. Many participants interacted with them. The sixth session concluded at 1.00 p.m.

Lunch was served to all the participants and resource persons in the College Auditorium.

The session VII of the conference started at 2.00 p.m in the College Conference Hall. In this session, *Nguyen Van Sanh*, Department of Mathematics, Centre of Excellence in Mathematics, Mahidol University, Bangkok, Thailand, delivered his talk on "*Primeness in Module Category: An Introduction to Prime Radicals, Nil Radicals and Levitzki Radicals of modules*" followed by *Dr Rajan A R*, Department of Mathematics, University of Kerala, Thiruvananthapuram, India, who delivered a talk on "*Normal Categories of Certain Special Classes of Semigroups*". The session was chaired by *Dr Tamizh Chelvam T*. The participants interacted with the delegates. The seventh session concluded at 3.20 p.m.

Tea and snacks were served in the Final year M Sc Mathematics Class Room.

The spirit of th

The session VIII of the conference started at 3.30 p m in the Edusat Room Semigroup Session Dr Romeo P G. Department of Mathematics, Cochin University of Science Cochin University of Semigroup Semigroup of Mathematics, University of Kerala University of Kerala University of Kerala Of Mathematics, University of Science Cochin Universi

The Valedictory Ceremony commenced at 4.35 p.m. over by the Vice Principal, Dr Jojomon NA. Dr A R Rajan, over by the Vice Principal, Dr Jojomon NA. Dr A R Rajan, over by the Vice Principal, Dr Jojomon NA. Dr A R Rajan evaluated the conduct Meakin and Sri Albert Antony T adorned the dais. Sri Albert Antony T, Joint convener and the Treasurer of the conference welcomed the gathering. Dr A R Rajan evaluated the conduct of the conference. Dr. John C Meakin from the United States and Dr Mikhail Volkov from Russia, and Dr Laure Daviaud from the UK, representing the delegates appreciated the time of the conference. Some of the participants also management and the overall conduct of the conference. Some of the participants in writing. All of expressed their feedback reedback was collected from all the participants in writing. They were them confined to the opinion that the objective of the conference was achieved. They were all satisfied with the conduct of the conference and promised to join the college whenever it all satisfied with the conduct of the conference and promised to the resource persons and constituted an event in future. The certificates were distributed to the resource persons and participants during the ceremony. Dr G N Prakash, Head of the Department and Convener of the Conference expressed vote of thanks and gratitude to all for making the dream of International Conference a success. The ceremony was concluded at 5.00 p.m with the National Anthem

The resource persons were accommodated in the Siddhartha Hotel and the participants in the PWD Rest Guest House. All the teaching and non-teaching staff had unanimously contributed for the success of this International Conference.

The charge of publicity was taken up by Sri Girish M C lead by Dr Jojomon N A. The finance was handled by Dr. Madhusoodanan Kartha N V and Sri Sumesh S (Head Accountant), headed by Sri Shinto M Kuriakose. The reception of the conference was managed by Smt Sini G, Smt Jismy M J, Smt Sruthy K Velayudhan and Kum. Vidhya K Soman, lead by Dr Jomy John. The stage and programmes were arranged by Dr Leena Samuel, Smt Kadambari P G and Sri Ajith P B, headed by Smt Jeepamol J Palathingal. The food committee constituted Dr Sathian M K, Smt Swapna R and Sri Krishnadas K, lead by Sri Sunilkumar M. Accommodation for the resource persons and participants were arranged

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by the team constituting Sri Pushparajan M M, and Smt Tintu Devassy, lead by Sri Albert Antony T. Transportation for the resource persons and participants were effectively arranged by Sri Krishnakumar P G, and Sri Sreejith Y, headed by Sri Thomas Mathew. The cultural programme was arranged for entertainment to the participants by Dr Parvathy B, Sri Sreedharan P N and Sri Tobio P D, lead by Smt Asha Carol Antony and Smt Sisa S. Compering was lead by Dr Deepa K S, Dr Sreerekha N and Smt Sumayya Khalid. Local hospitality was taken care of by the entire office staff headed by Sri Binu C Babu (Senior Superintendent).

All the local bodies such as Municipality, KSEB, Kerala Police, BSNL, Water Authority and News-Press also extended their wholehearted support.

We had received strong moral and financial and support from Smt. Haritha Vijay IAS, the former Director of Collegiate Education, Smt. Vigneshwari V, IAS, the present Director of Collegiate Education and Dr Suma K K, Additional Director of Collegiate Education, starting from the initial stages of the conference itself. Moreover, the ORICE team of Directorate of Collegiate Education was present in the college, for the live telecast of the International Conference.

We are grateful for financial support rendered from NBHM vide order numbers No. NBHM/Conf.128/2019 dated November 13, 2019 and No. 02010/39/2019/R&D-II/15255 dated 12, 2019 for a sum of Rs. 75,000/- and from SERB (DST) for a sum of Rs. 75,000/- via file no SSY/2019/000951 dated 07-Nov-2019. We also acknowledge academic support from Institute of Mathematics Research and Training (IMRT), Thiruvananthapuram.

The International Conference on Algebra and Related Topics (ICART-2019) was a grand success which was well appreciated by all members and delegates. Involvement of 153 participants from within and outside the state, was a wonderful incident and for many of them, it was an unforgettable experience. It was a challenge to conduct an international conference at the college, as it was the first of its kind. The feedback received from attendees confirms that the event is majorly deemed successful and that participants enjoyed a pleasant and productive experience.

Dr. G. N. Prakash

(Convener ICART-2019)

Associate Professor and Head

Department of Mathematics

Panampilly Memorial Government College,

Chalakudy, Thrissur.

The Department of Mathematics Panampilly Memorial Government College, Chalakudy Sponosred by DCE, NBHM and SERB (DST) 2019, December 13 and 14.

Registration

		Registration	
Sl. No	Name	Designation and Officical Address	Signature
1	Smt. V Vigneshwari IAS	Director of Collegiate Education, Trivandrum	AL:
2	Aravind Krishnan K	Principal Panampilly Memorial Government College, Chalakudy	tul,
3	Alexander E. Guterman	Faculty of Algebra Department of Mathematics and Mechanics, Moscow State University, 119991, GSP-1, Russia, Moscow	A
4	Azeef Muhammed P. A.	Assistant Professor Department of Mathematics and Natural Sciences, Prince Mohammad Bin Fahd University, Al Khobar Kingdom of Saudi Arabia	3.40
5	Frederique Bassino	Professor Paris-Nord Computer Science Laboratory UMR CNRS 7030 (LIPN), UMR CNRS 7030, 93430 Villetaneuse – France	Now?
6	John C Meakin	Professor Department of Mathematics University of Nebraska-Lincoln, Lincoln, NE 68588- 0323, US	J C Meal
7	Jorge Almeida	Professor Departamento de Matematica Pura, Faculdade de Cijncias, Universidade do Porto, Rua do Campo Alegre, 687, 4169-007 Porto, Portugal	Mhunda
8	Laure Daviaud	School of Mathematics, Computer Science and Engineering, Department of Computer Science, University of London, United Kingdom	Quanta
9	Mikhail Volkov	Professor Department of Algebra and Discrete Mathematics, Institute of Mathematics and Computer Science, Ural Federal University, 620000- Ekaterinburg, Russia	Mikello.
10	Nguyen Van Sanh	Professor Department of Mathematics, Faculty of Science, Mahidol University, Rama 6 Road, Rajadhevee, Bangkok 10400, Thailand	äxanh

	- F	2019, December 13 and 14.	
1	1 Pascal Weil	Professor, CNRS and Bordeaux University, 63 rue Jean Soula, 33000 Bordeaux - France	PW
12	Pajan A R	The Director Kerala State Institute for Encyclopeadic Publications, Thiruvananthapuram Kerala	Andres
13	Rameshkumar P	Professor Department of Mathematics, University of Kerala, Thiruvananthapuram, Kerala	Ru
14	Romeo P G	Professor Department of Mathematics, Cochin University of Science and Technology, Cochin, Kerala	Pour
15	Tamizh Chelvam T	Professor Department of Mathematics Manonmaniam Sundaranar University, Tirunelveli - 627012 Tamil Nadu, India	8:5
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J	51	No	Name		Designa	ition	Department		Office Address	State	Signature
W.		16	Aarthi S		Assistan Professo	et er	Department Mathematics	of	PSG College of Arts and Science, Colmbatore	Tamil Nadu	2. mint
	1	7	Aelyamma P	J	Assistan Professo	1	Department of Commerce	of	Maharaja's College, Ernakulai	n Kerala	d
	- Bigeria	-	Uphy Jose		Assistant Professor		Department of Mathematics	of	Little Flower College,	Kerala	
CONTRACTOR CONTRACTOR CONTRACTOR	18	A	nantharaman	S	Research Scholar	- 1	Department o Mathematics	f	Annamalai University, Annamalainagar	Tamil Nadu	51A ×
	19	A	nil Kumar P t		Assistant Professor	1	Department of Mathematics	- 1	Government Arts \& Science College, Santhanpara, Idukki	Kerala	Calls
6	20	An	itha T	1	PG studen	ı I	Department of Mathematics	F	Sri Vyasa NSS College, Wadakkanchery	Kerala	alle-
4	21	An	uja Thankapı	oan F	G studen	E N	Pepartment of Mathematics		Carmel College, Mala	Kerala	come
á	2 2	Aps	ara hambaran		assistant rofessor	D M	epartment of lathematics	- 1	Thejus Engineering College, Vellarakkad	Kerala	kx
a	3	Arch	a S S		esearch cholar	D ₀	epartment of athematics	ŀ	Iniversity of Kerala, Kariavattom, Thiruvananthapuram	Kerala	Andr
Q.	4	Arch	ana S	- 1	.Phil. holar		epartment of athematics	C	Government College, Chittur, Jalakkad	Kerala	MARIE
25	- /	Arikri	shnan A		search holar		partment of thematics	A	nnamalai University, nnamalai Nagar	Tamil Nadu	A. Mag
	- A	ritra	Roy	PG	student		partment of thematics		anaras Hindu University, aranasi	Uttar Pradesh	
6	. A:	shitha	a Tom	Res Sch	earch olar		partment of thematics- E		ladurai Kamaraj University, alkalai Nagar, Madurai	Tamil Nadu	Aslah.
7	As	hok	Kumar M G		stant essor		artment of hematics		matana Dharma College, appuzha	Kerala	Jehole
3	Ay	ana V	/ijayan	PG s	THEFT		artment of hematics	Ca	irmel College, Mala	Kerala	Ala
-	Dee	epā V	′ G	Assis Profe					ee Krishna College, iruvayur	Kerala	
,	Dee	pthi .	a N I	Assis Profe	1	,			re Narayana College, ttika, Thrissur	Kerala	Japan.

				Reg	istration	,	
	51. No	Name	Designation	on Department	Office Address	State	Signature
	30	Dhanyashree V	Assistant Professor	Department of Mathematics	SMVITM, Bantakal, Uduppi	Karnataka	Ingle
/	31	Diana Mary Ge	orge Assistant Professor	Department of Mathematics	St. Mary's College, Thrissur	Kerala	Clay
/	32	Diviya K D	Assistant Professor	Department of Mathematics	S N College, Nattika, Thrissur	Kerala	20
		Elavarasan B	Assistant Professor	Department of Mathematics	Karunya University, Coimbatore, Tamilnadu	Tamil Nadu	A Company
1	34 E	Emily Ittiachan	Vice- Principal		Naipunnya Institute of Management and Information Technology, Pongam, Koratty	Kerala	25
	_ F	Semi K J	PG student	Department of Mathematics	Sacred Heart College, Chalakudy	Kerala	
3	5 Fi	ilsy Francis V	Assistant Professor	AS \& H Department	Thejus Engineering College, Vellarakkad	Kerala	34
3,	6 G	opi R	Assistant Professor	Department of Mathematics	Srimad Andavan Arts and Science College, Tiruchirappalli	Tamil Nadu	\$-W
37	Ha	rish V N	Assistant Professor	Department of Mathematics	Sree Kerala Varma College, Thrissur	Kerala	Hrs)
	Jara	aldpushparaj S	Research Scholar	Department of Mathematics	Sacred Heart College (Autonomous), Tirupattur	Tamil Nadu	
38	Jeba	apresitha B	Research Scholar	Department of Mathematics	Karunya Institute of Technology and Sciences, Subramaniyapuram, Karaikudi	Tamil Nadu	Barry
39	Jeesi	ma Jojo			St. Josephs College, Irinjalakkuda	Kerala	usma
40	Jestir	n M G		Department	K. K. T. M. Government College, Pullut	Kerala	Sur.
41	Jino I	Nainan		JC Datellie	St. Gregorios College, Kottarakara, Kollam	Kerala	A.
2	Jinsm	- I I			Government Engineering College, Thrissur	Kerala	July
3	Jubiya	a K J		Department of Mathematics	Carmel College, Mala	Kerala	Juliano

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2019,	Deceml	er	13	and	14.

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	51. N	No Name	Designation	Department	Office Address	State	Signature
		Karthik S	Research Scholar	Department of Mathematics	Manonmaniam Sunaranar University, Tirunelveli	Tamil Nadu	-
1	41	Karthika S	Research Scholar	Department of Mathematics	St. Thomas' college (Autonomous), Thrissur	Kerala	bartlele
V	45	Keerthika V	Research Scholar	Department of Mathematics	Karunya Institute of Technology and Sciences, Subramaniyapuram, Karaikudi	Tamil Nadu	V Leether.
1	46	Kiruthika G	Research Scholar	Department of Mathematics	Bharathiar University PG Extension and Research Centre, Erode	Tamil Nadı	20°
1	47	Krishna M	Assistant Professor	Department of Mathematics	Sree Kerala Varma College, Thrissur	Kerala	W. Kousku
1	8	Krishnapriya C R	Guest Faculty	Department of Mathematics	Sri C Achutha Menon Government College, Thrissur	Kerala	
4	49	Kurian C Soman	Assistant Professor	Department of Mathematics	Union Christian College, Aluv	Kerala	1
S	0	Mariya Anto	PG student	Department of Mathematics	St. Joseph's College, Irinjalakkuda	Kerala	Mariga
57	1 N	Mary Shalet T J	Assistant Professor	Department of Mathematics	Government College, Chittur, Palakkad	Kerala	Start
57	2 M	Ieenakshi S		Department of Mathematics	Karunya Institute of Technology and Sciences, Subramaniyapuram, Karaikud	Tamil N	adu Gerrali
53	M	egha T M		Department of Mathematics	Christ College (Autonomous Irinjalakuda), Kerala	Maria
54	Mi	ni Joshy		Department of Mathematics	Naipunnya Institute of Management and Informatio Technology, Pongam, Korat		Vai.
55	Му	thily C V		Department of Mathematics	Bharathiar University PG Extension and Research Centre, Erode	Tamil I	Nadu autilus
56	Nid	hin T. I		Department of Mathematics	Sacred Heart College, Chalakudy	Kerala	Millin
フ	Poor	agadi D		Department of Mathematics	Bharathiar University PG Extension and Research Centre, Erode	Tamil	Nadu D. Poorgo

The Department of Mathematics Panampilly Memorial Government College, Chalakudy Sponosred by DCE, NBHM and SERB (DST)

2019, December 13 and 14.

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s	il. No	o Name	Designation	Department	Office Address	State	Signature
	58	Prabu J	Junior Research Fellow		Amrita Vishwa Vidyapeetham University, Sivakasi	Tamil Nadu	7 Pred
	59	Prasanth G N	Assistant Professor		Government College, Chittur, Palakkad	Kerala	2 100
	60	Preenu C S	Assistant Professor	Department of Mathematics	University College, Thiruvanathapuram	Kerala	my
4	61	Preethi C S	Assistant Professor	Department of Mathematics	Government College for Women, Thiruvananthapuram	Kerala	Fulla
(62	Rabikka Veeramani	Research Scholar	Department of Mathematics- DDE	Madurai Kamaraj University, Palkalai Nagar, Madurai	Tamil Nadı	1 Rule
E	3	Ramya G	Research Scholar	Department of Mathematics	Bharathiar University PG Extension and Research Centre, Erode	Tamil Nad	n Appar
6	4	Ratnakumari K A	Assistant Professor	Department of Economics	Maharaja's College, Ernakulan	Kerala	Roll
Ь	5	Reeja Kuriakose	Assistant Professor	Department of Mathematics	Government Polytechnic College, Koratty	Kerala	May
£	عرو	Reeja Sachith	Assistant Professor	Department of Mathematics	Thejus Engineering College, Vellarakkad	Kerala	cg/
L	7	Reshma Varghese	Assistant Professor on contract	Department of Mathematics	Carmel College, Mala	Kerala	Plu
		Sadhanandh Vishwanath B	Research Scholar	Department of Mathematics	Chennai Mathematical Institute, H1 Sipcot IT Park, Siruseri, Chennai	Tamil Na	ıdu ——
	=	Sailajaa Manoharan	PG student	Department of Mathematics	Pondicherry University, Kalapet	Puduche	ггу
7	n .	Santhosh Kumar K	Assistant Professor	Department of Mathematics	Government College, Kariavattom, Thiruvananthapuram	Kerala	1
	- S	Cathinathan T	Research Scholar	Department of Mathematics	Sacred Heart College (Autonomous), Tirupattur	Tamil N	adu -
6	7 S	'hahana A D I	Research Scholar	Department of Mathematics	St. Mary's College, Thrissur	Kerala	8
70). S	il -: - L DII	Assistant Professor	Department of Mathematics	Government Victoria Colleg Palakkad	Kerala	40

				Regi	istration	_	
	SI. N	No Name	Designatio	n Department	Office Address	State	Signature
/	71	Shajitha T B	Associate Professor	Department of Mathematics	Naipunnya Institute of Management and Information Technology, Pongam, Koratty	Kerala	Short
1	72	Sheeja T K	Assistant Professor	Department of Mathematics	T. M. Jacob Memorial Government College, Manimalakunnu	Kerala	Sharp
	73	Sibukumar D	Assistant Professor	Department of Mathematics	Government College, Attingal,Thiruvananthapuram	Kerala	Sien
-	74	Simi Sebastian	Assistant Professor	Department of Statistics	Government College Kattappana, Idukki	Kerala	- Juni
1	7:5	Sinu N Vijayan	Research Scholar	Department of Mathematics	St. Mary's College, Thrissur	Kerala	Sura .
	78	Smitha Davis	Assistant Professor	Department of Mathematics	Sacred Heart College, Chalakudy	Kerala	
7	17	Smruthi S	Assistant Professor	Department of Mathematics	Sree Kerala Varma College, Thrissur	Kerala	802
78	ے ا	Sona Pappachan	Assistant Professor	Department of Mathematics	Naipunnya Institute of Management and Information Technology, Pongam, Koratty	Kerala	
37	1 9 s	Sowmya K	Assistant Professor	Department of Mathematics	St. Mary's College, Thrissur	Kerala	Bonnye
81		reekrishnan amboothiri P V K	PG student	Department of Mathematics	Christ College (Autonomous), Irinjalakuda	Kerala	Macka
8.	, Sr	eekumar S		Department of Mathematics	Government College for Women, Thiruvananthapuram	Kerala	Shirt
	Sre	eelakshmi V U	Guest Faculty	Department of Mathematics	Union Christian College, Aluva	Kerala	
32	- Tin	a Blessy C J		Department of Mathematics	Thejus Engineering College, Vellarakkad	Kerala	Sid.
3	Vais	alamarri C		Department of Mathematics	Government College, Chittur, Palakkad	Kerala	Column
4	Vib	itha Kochamani		Courtman	St. Joseph's College, Irinjalakkuda	Kerala	V.Vibit
_	Viji	N /			St. Thomas' college (Autonomous), Thrissur	Kerala	

Organised by The Department of Mathematics

Panampilly Memorial Government College, Chalakudy Sponosred by DCE, NBHM and SERB (DST)

			9. December	IM and SEKB (DS)	.)	
			Registra			
SI. 1	NoName	Designation	Department	Office Address	State	Signature
_	Viji M	Assistant Professor	Department of Mathematics	St. Thomas' college (Autonomous), Thrissur	Kerala	
85	Vinay Madhusudanan	Assistant Professor	Department of Mathematics	Manipal Institute of Technology, Manipal	Karnatak a	8 my
86	Vishnupriya K	PG student	Department of Mathematics	Christ College (Autonomous), Irinjalakuda	Kerala	1
87	Mathai P V	Former Principal	Government College, Thanoor	Thanoor	Kerala	Grange
98	Shery Fernandez	Associate Professor	Department of Mathematics	Cochin University of Science and Technology, Ernakulam	Kerala	Mi
9	Dracad I	Assistant Professor	Department of Mathematics	Cochin University of Science and Technology, Ernakulam	Kerala	R.J.
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				Regis	stration				
	SI. No	Name	Designation	Department	Office Address	State	Signature		
	98	Albert Antony T	Assistant Professor	Department of Mathematics	P M Government College, Chalakudy	Kerala	De.		
The state of the s	91	Anjali Prakash	Assistant Professor	Department of Economics	P M Government College, Chalakudy	Kerala	AR		
	92	Asha Carol Antor	Assistant Professor	Department of Political Science	P M Government College, Chalakudy	Kerala	A-		
9		eepamol J alathingal	Assistant Professor	Department of Mathematics	P M Government College, Chalakudy	Kerala	V		
9	4 10	omy John	Assistant Professor	Department of Computer Science	P M Government College, Chalakudy	Kerala	Jamos		
9	5 Kr	rishnadas K	Assistant Professor	Department of Mathematics	P M Government College, Chalakudy	Kerala	1		
9.6	Kri	ish nakum ar P G	Assistant Professor	Department of Commerce	P M Government College, Chalakudy	Kerala	Juntahar		
97	Lee	na Samuel		Department of Hindi	P M Government College, Chalakudy	Kerala	2		
9 8	Man	tin K J	1 1	Department of Economics	P M Government College, Chalakudy	Kerala			
9 9	Praka	ash G N		Department of Mathematics	P M Government College, Chalakudy	Kerala	Cons		
00	Pushp	toroion NA NA I	Professor	Department of Political Science	P M Government College, Chalakudy	Kerala	Premus		
	Shinto Kurial	1		Department of Economics	P M Government College, Chalakudy	Kerala	Jankan		
S	Sini G			Department of Commerce	P M Government College, Chalakudy	Kerala	Some		
3 s	Sisa S	1	Assistant Professor	Department of Political Science	P M Government College, Chalakudy	Kerala	for		
4 Si	reedh	aran PN I		Department of Commerce	P M Government College, Chalakudy	Kerala	And		

			Regist	ration		
SI.	No Name	Designation	Department	Office Address	State	Signature
10	5 Sreejith Y	Assistant Professor		P M Government College, Chalakudy	Kerala	M.
10	Sunilkumar M	Assistant Professor		P M Government College, Chalakudy	Kerala	Schri
/0	9 Swapna R	Assistant Professor		P M Government College, Chalakudy	Kerala	A.
106	Jismy M J	Associate Professor	Department of Mathematics	P M Government College, Chalakudy	Kerala	gom
N9	Jojomon N A	Associate Professor	Department of Commerce	P M Government College, Chalakudy	Kerala	- sive
1) E	Parvathy B	Associate Professor	Department of Malayalam	P M Government College, Chalakudy	Kerala	B. Parwathy.
113	Sreerekha N	Associate Professor	Department of English	P M Government College, Chalakudy	Kerala	M.
14	Jinto E J	Guest Faculty	Department of Statistics	P M Government College, Chalakudy	Kerala	Ji
13	Sruthy K Velayudhan	Guest Faculty	Department of Chemistry	P M Government College, Chalakudy	Kerala	English)
4	Tintu Devassy	Guest Faculty	Department of Mathematics	P M Government College, Chalakudy	Kerala	\$00C .
5	Vidya K Soman	Guest Faculty	Department of Physics	P M Government College, Chalakudy	Kerala	(Age)
	Aiswarya Bhaskaran	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	A Breyon
,	Aiswarya P M	PG student	Department of Mathematics	P M Government College, Chalakudy	Keral	a Amount of
8	Anitta Varghese	PG student	Department of Mathematics	P M Government College, Chalakudy	Kera	la 🙀
9	Anjana $\mathcal{T}\cdot\mathcal{K}$	PG student	Department of Economics	P M Government College Chalakudy	, Kera	ıla

		20	13, Decemb	er 13 and 14.		
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SI. N	o Name	Designation	Department	Office Address	State	Signature
laa	Anju C S	PG student		P M Government College, Chalakudy	Kerala	1
12	Anju Shaji	PG student	25 6 5 6 5 6 5 6 5 6 6 6 6 6 6 6 6 6 6 6	P M Government College, Chalakudy	Kerala	N*/
إدا	Ankitha Merin Pauly	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	Ant Has
/23	Aswathi P K	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	Orating.
/2 \	Athira K S	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	Afficial
125	Athira O H	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	Alling and
128	Athira T S	PG student	Department of Mathematics	P M Government College, Chalakudy	kerala	Attorn
29	Christy Judeson	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	ent.
28	Deepthi Das K S	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	O TAKE
	Emaly Mariya George	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	Emaly
3 D	Fayiza Rashid	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	(Jest
23	Grace Baby	PG student	Department of Mathematics	P M Government College, Chalakudy	Kerala	a Grais
32	Greeshma T S	PG student	Department of Mathematics	P M Government College, Chalakudy	Keral	a (87) .
3	Jesmiya Joy Alven	PG student	Department of Mathematics	P M Government College, Chalakudy	Kera	la since from
34	Jisna Paul	PG student	Department of Mathematics	P M Government College, Chalakudy	Kera	ila Jim Pri

	The second secon	Registration											
	SI. No Name		Designation		Department		Office Address		State		Signatu	re	
	135	Krishnapriya	CU	PG stude	ent	Department Mathematics		P M Government College, Chalakudy		Kerala		Krish	a
The second secon	/36 Rathi MR		PG stude		nt	Department of Mathematics		P M Government College, Chalakudy		Kerala		Rath	ja-
1	139	Rosemol Kuria	ın	PG stude		Department of Mathematics		P M Government College, Chalakudy		Kerala		Dr.	//
1.	38	Rumaiza U K		PG studer		Department o		P M Government College, Chalakudy		Kerala		Rusch	0
/3	17 S	Sahla Farsana P		PG studen		Department o Mathematics		P M Government College, Chalakudy		Kerala		de	-, .
14	DSi	ilgi Jose	P	PG student		Department of Mathematics		P M Government College, Chalakudy		Kerala		849	30
143	So	niya Babu	Po	G student		epartment of lathematics	- 1	M Government College, Chalakudy		Kerala		8 just	
140	Sru	thila C V	PC	5 student		epartment of athematics	- 1	M Government College, Chalakudy		Kerala		Relie	<u></u>
143	Suva	arna Sundaran	PG	student		partment of athematics	P C	M Government College, halakudy		Kerala		d de	Minoritalitationsocial
144	Swat	hy P B	PG	student		partment of thematics		M Government College, halakudy		Kerala	6	Solly	?
145	Syam	ily PS	PG	student		partment of thematics		M Government College, alakudy	ŀ	(erala	4	Hil	3
146	Telja	Johnson C	PG s	student		eartment of hematics		M Government College, alakudy	K	erala		bj2	
	Thani Thaju	iya Bind ideen	PG s			artment of hematics		4 Government College, alakudy	Ke	rala	J.	illight	
148	Gopil	ka Ravindran	Alur					l Government College, lakudy	Ker	ala	4	مينم	

2019, December 13 and 14.										
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Sl. No	Name	Designation	Department	Office Address	State	Signature				
149	Kannandep	P. Co Sterden	mathemady	Kakkaddil (11) Kadaliana (p.o.)	Kerala	Hannes				
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Contact

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Organizing Committee

Chairman Dr. Aravind Krishnan. K., Government of Kerala Smt. V. Vigneshwari IAS Director of Collegiate Education

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Dr. Sathian. M. K. (PMGC

ismy. M. J. (PMGC) Sri Krishanadas. K.(PMGC

Invited Speakers include



John C. Meakin M. V. Volkov





Pascal Weil

France

Russia

USA



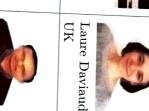












Russia

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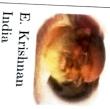
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Selvaraj C.

A. R. Rajan India



Panampilly Memorial Government (Affiliated to University of Calicut) College, Chalakudy



Algebra and Related Topics International Conference (ICART-2019)

Department of Mathematics December 13 and 14, 2019 Organized by

Academically Supported by IMRT

Chelvam-India T. Tamizh

CSIR, NBHM and SERB (Anticipating) DCE, Government of Kerala, Sponsored by

Venue : College Conference Hall

Invitation

Dear Sir/Madam,

With immense pleasure, we would like to inform you that the Department of Mathematics, Panampilly Memorial Government College, Chalakudy is organizing a two day International $13^{\rm th}~\&~14^{\rm th}$ of December 2019 with the academic Conference on Algebra and Related Topics on support of the Institute of Mathematics Research and Training(IMRT). In this context, we cordially invite you to participate in the Conference.

With warm regards,

Dr. Aravind Krishnan. K., Principal.

 $prakashgn1976@gmail.ocm\ alberantonyt@gmail.com$ Sri Albert Antony. T. Joint Convener & +919447646988Treasurer, Convener (ICART-2019), Head of the Department, Dr. G. N. Prakash +919447975520,

About the College

and managed by the Government of Kerala. Its inception has fulfilled the long cherished aspiration of the people of this semi-urban highland geographical entity. At present the College Panampilly Memorial Government College, Chalakudy, established in 1975 is wholly owned offers five UG and PG programmes. It is named after the late Panampilly Govinda Menon, an illustrious son of Kerala. The College is situated at Potta, 6 Km away from Chalakudy town.

Department at a Glance

The Department of Mathematics started func-In 2012, the Department was upgraded to a Post Graduate Department. tioning in 1998.

Currently, the Department offers graduate workshops. From August 2016 onwards the and post-graduate courses. The Department frequently organises national level seminars/ Department has been conducting a monthly lecture series MATHLET (Mathematical Analysis Through Hearty Lectures by Eminent Teachers) for PG students.

About IMRT

The Institute of Mathematics Research and Training (IMRT) was established in 2015 under the leadership of Dr. K. S. S. Nambooripad (Former Professor and Head, Department of Mathematics, University of Kerala, Thiruvananthapuram). IMRT is aimed at encouraging and promoting facilities for fundamental research in the various branches of Mathematical Sciences including Pure Mathematics, Applied Mthematics, Statistics, Computer Sciences, Information Technology, Theoretical Physics and other related sciences. For more details visit imrt.org.in

About the Conference

matics where significant contributions have been 2019 is in providing an introduction to various Algebra is one of the major areas in Mathemade from India. Being one of the foundational areas in Mathematics it is studied in the context new and emerging areas of research in Algebra and related topics. ICART-2019 intends to bring towards young researchers, teachers, postgraduate prominent senior speakers, and is geared primarily students as well as M.Phil scholars. The talks are dents and budding new researchers. The current trends in international centres of research will also be discussed at the two day conference. We hope mainly focussed to give foundations for PG stuof various applications. The focus of ICART-

this Conference will have a blend between form presentations and somewhat less formal session that are more along the lines of "workshops" for young researchers and students.

The aim of the Conference is to elicit suggestion for research development for aspiring researchers The Conference will be a platform for researcher from India and abroad to come together and exchange views and ideas on the topics o discussion, foster future collaborations and provide opportunity to young researchers in the relevant fields.

Thrust areas of the Conference

Theory of semigroups, Algebras, Group Theory Rings and Semirings, Categories and Groupoids Operator Semigroups, Theory of Languages and Automata, Applications.

Registration

Registration for the conference is mandatory. There is no registration fee. Those who wish to participate and present a paper in the conference are advised to register themselves through icart2019math/) and upload the abstract of their website of the conference (sites.google.com/site/ paper through the easy chair submission system latest by November 20, 2019. The list of selected participants will be published in the website. The Department will provide course kit. Innot Accommodation will be arranged on Pon cost sharing basis for the next pants. For more details plus & snacks to the participants. website or contact the $Con^{te^{\gamma}}$

For further details viel sites.google.com/si/