



1st International Conference on Applied Research and Engineering ICARAE2021

26th – 28th November 2021

Detailed Program Schedule as per South African Standard Time



Inaugural Ceremony

Date: 26th November 2021 (Friday) (South African Standard Time)

Time: 09:00 AM (South African Standard Time-SAST) <https://time.is/SAST>

Venue: Cape Peninsula University of Technology, Cape Town, Western Cape,
South Africa

Help Desk link: [Help Desk link](#)

Microsoft Teams Meeting Link: [ICARAE2021 Opening Ceremony link](#)

Program Director: Prof. Fester

Minute-to-Minute Schedule

Delegates to login to platform	08:30 am
Welcome address Dr. V. Msomi ICARAE Coordinator	09:00 am
Opening Remarks Dr. S. Sehgal ICARAE Coordinator	09:05 am
Research at CPUT Dr. M. Paradza Center of Postgraduate Studies Coordinator	09:10 am
Introduction of Keynote Speakers Prof. M. Sheldon Dean of Faculty of Engineering and the Built Environment	09:30 am
Wesgro Presentation Ms. Z. Mtsi Wesgro	09:40 am
Release of Proceedings Dr. K.K. Saxena Assoc. Prof. GLA University	10:00 am
Vote of Thanks Mr. S. Nqabisa HOD Mechanical and Mechatronic Engineering, CPUT	10:05 am
Group Photograph	10:10 am

.....Coffee Break.....

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Date: 26th November 2021			
Keynote Address	Time	Microsoft Teams Meeting Link:	
01	11:00 HRS to 11:45 HRS (SAST)	Keynote Address Session link	
<p>Speaker: Prof. Malik Maaza Professor, iThemba LABS and University of South Africa.</p> <p>Topic: Multifunctional Nanomaterials for Next Generation Green Air-conditioning & Heat Transfer Coolant Smart Technologies</p> <p><i>Host: Dr. Gopi Suresh, Rajahlakshmi Institute of Technology.</i></p>			
Keynote Address	Time		
02	11:45 HRS to 12:30 HRS (SAST)		
<p>Speaker: Prof. Manoj Gupta Associate Professor, National University of Singapore.</p> <p>Topic: Utilizing Light-Weight Magnesium Technology for Reducing Global Carbon Foot Print</p> <p><i>Host: Dr. Shankar Sehgal, Panjab University, India.</i></p>			
Break (30 Min)			
Presentation Session (2 hours)			
Technical Session No.	Time	Microsoft Teams Meeting Link:	
1	13:00 HRS to 15:00 HRS (SAST)	Technical Session 1 link	
<p>Session Chair 1: Dr. Velaphi Msomi, Cape Peninsula University of Technology, South Africa.</p> <p>Session Chair 2: Dr. Ncediwe Ndube-Tsolekile, Cape Peninsula University of Technology, South Africa.</p>			
S. No.	Manuscript ID	Author	Location
1	MSF#01	A.K. Yadav, A. Awasthi, <u>K.K. Saxena</u> , M.K. Agarwal	GLA University, India.
2	MSF#02	<u>S. Dixit</u> , S.S. Padhee	Indian Institute of Technology, India.
3	MSF#03	<u>N. Shukla</u> , P. Chetri, G.A. Ahmed	Tezpur University, India.
4	MATPR-D-21-09879	S.M. Cheyad , A.N. Hilo, <u>T.S. Al-Gasham</u>	University of Wasit, Iraq.

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5	MATPR-D-21-09766R1	A.N. Salah, H. Mehdi, A. Mehmood, A.W. Hashmi, C. Malla, R. Kumar.	Delhi Technological University, India.
6	MATPR-D-21-09418R1	N. Idusuyia, O.O. Ajideb, R. Abuc, O.A Okewoled and O.O. Ibiyemi	University of Ibadan, Nigeria.
7	MSF#04	J.M. Wambua, F.M.Mwema, T.C. Jen, E.T. Akinlabi	Dedan Kimathi University of Technology, Kenya.
8	MSF#05	C. Obara, F.M. Mwema, T.C. Jen	Dedan Kimathi University of Technology, Kenya.
9	MATPR-D-21-09417R1	T.D. Dass, S.R. Gunakala, D.M.G. Comissiong	University of the West Indies, Trinidad and Tobag.
END			

Date: 26th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
2	13:30 HRS to 15:30 HRS (SAST)	Technical Session 2

**Session Chair 1: Dr. Shankar Sehgal, Panjab University, India.
Session Chair 2: Dr. Kuldeep K. Saxena, GLA University, India.**

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-09765R1	M. Prasanth, K. Thyagarajan, K.V. Krishnaiah, <u>N. Ravi</u>	Rajeev Gandhi Memorial College of Engineering & Technology, Nandyal, India.
2	MSF#18	<u>D. Santha Rao</u> , O. Gopala Krishna Murthy	GIET(A), Rajamahendravaram, A.P. India.
3	MATPR-D-21-09562	<u>N.C. Ketwa</u> , V. Msomi	Cape Peninsula University of Technology, Cape Town, South Africa.
4	MATPR-D-21-09951R1	Z.H. Mohsin, A.N. Hilo, <u>T.S. Al-Gasham</u> , S.M. Cheyad	University of Wasit, Iraq.
5	MATPR-D-21-10058R1	A.W. Hashmi, H.S.Mali, A. Meena, I.A. Khilji, M.F. Hashmi, <u>S.N.M. Saffe</u>	Universiti Malaysia Pahang, Pekan, Malaysia.
6	MSF#09	R. Kumar, A. Kumar Roy, <u>K. Kumar</u>	Birla Institute of Technology, Mesra, Ranchi, INDIA
7	MATPR-D-21-10643R1	<u>A. Kehinde</u> , T. Ngonda	Cape Peninsula University of Technology, Cape Town, South Africa.
8	MATPR-D-21-09905R1	<u>K.A. Mohammed</u> , S.A. Abdulridha, E.H. Aljbory, A.H.O. Alkhayatt, R.S. Zbibah, S.K. Rady, S.H. Kizar, S.S. Hariz, M.J. kadhem	Hilla University College, Babylon, Iraq.
9	MATPR-D-21-10752	<u>D. Kumara</u> , U. Pratapa, N. Royb, A.S. Kuara	Jadavpur University, Kolkata, India

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Keynote Address	Time	Microsoft Teams Meeting Link:
03	09:00 HRS to 09:45 HRS (SAST)	Keynote Address link

Speak: Prof. S.C.K. Yuen
Professor, University of Cape Town.
Topic: Changes in Material Characteristics as a Result of Blast Loading

Host: Prof. Modify A. Kaunda, Cape Peninsula of Technology.

Break (15 min)

Presentation Sessions

Technical Session No.	Time	Microsoft Teams Meeting Link:
3	10:00 HRS to 12:00 HRS (SAST)	Technical Session 3

Session Chair 1: Dr. Nitin Sahai, Central University Shilong, India.
Session Chair 2: Dr. Shashi Bahl, I.K. Gujral Panjab Technical University, India.

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-09415R1	K.C. Onyelowe, T. Usungedo	Kampala International University, Kampala, Uganda.
2	MATPR-D-21-09414R1	S. Anas, M. Yunus Khan Mohammad Rafey, K. Faheem	Zakir Husain College of Engineering and Technology (ZHCET), Aligarh Muslim University, India.
3	MSF#06	A. Kumar, A. Kumar Roy, K. Kumar, B.S. Babu	Birla Institute of Technology, Mesra, Ranchi, India.
4	MSF#08	J. Nyika, M.O. Dinka	University of Johannesburg, APK Campus, Johannesburg, South Africa.
5	MATPR-D-21-10059R1	S.N.M. Saffe, A.W. Hashmi, H.S. Mali, A. Meena, I.A. Khilji, M.F. Hashmi	Universiti Malaysia Pahang, Pekan, Malaysia.
6	MATPR-D-21-09116R1	R.A. Panda, P. Pani, B. Choudhury, M.A. Kumar	GIET University, Gunupur, Odisha, India.
7	MATPR-D-21-09115R1	N. Hendeniya, T. Sandanuwana,	University of Moratuwa, Sri

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		D. Attygalle, D.A.S. Amarasinghe, S. Weragoda, B. Ranaweera, K. Ratnayake, M. Lalankab	Lanka.
8	MATPR-D-21-08970R1	M. Sityoshwana, T. Ngonda, M. Kaunda	Cape Peninsula University of Technology, Cape Town, South Africa.
9	MATPR-D-21-09117R1	B. Mehta, D. Subhedar	Chandubhai S. Patel Institute of Technology Charotar University of Science & Technology, Changa, India.

Date: 27th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
4	10:15 HRS to 12:15HRS (SAST)	Technical Session 4

Session Chair 1: Dr. Surendra. S Godara, Rajasthan Technical University, India
Session Chair 2: Prof. Piyush Singhal, GLA University, India

S. No.	Manuscript ID	Author	Location
1	MSF#13	K. Kumar, R. Arora, S. Dixit	K.R. Mangalam University Gurugram, India.
2	MSF#15	S. Rao Gunakala, V. Job, M. Alexander	The University of the West Indies, Mona, Jamaica.
3	MSF#16	S. Nallusamy, R.T. Chander, G.V. Punnarao	Dr. M.G.R. Educational and Research Institute, Chennai, Tamilnadu, India.
4	MATPR-D-21-08660R1	R. Kumar, S. Kumar Verma, M. Singha	GLA University, Mathura, India
5	MATPR-D-21-08642R1	C.S. Belarmin Xavier, A. Abdul Rahim	VIT – University, Vellore, TamilNadu, India.
6	MATPR-D-21-08607R1	S. Paul, Manokamna, A. Kumar, S. Kaur, A. Singh, A. Kumar	Arni University, Indora, (H. P) India.
7	MSF#17	K. Vigneshwaran, N. Venkateshwaran, S. Panneer Selvan, N. Vinoth Babu	Rajalakshmi Engineering College Thandalam, Chennai, Tamilnadu, India.
8	MATPR-D-21-09420	M.O.M. Segaetsho, V. Msomi, V. Moni	Cape Peninsula University of Technology, Cape Town, South Africa.
9	MSF#19	B.O. Malomo, O.K Ajayi, O. T. Ogunbodede, O.O. Olabinjo, O.O. Fadodun, B. Z. Adewole, I.B. Nasirudeen, D.D. Obembe	Obafemi Awolowo University, Ile-Ife.

Lunch Break (15 Min)

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Technical Session No.	Time	Microsoft Teams Meeting Link:
5	10:30 HRS to 12:30 HRS (SAST)	Technical Session 5

Session Chair 1: Dr. Danish Khan, Indus University Karachi, Pakistan
Session Chair 2: Dr Oluwaseun K. Ajayi, Obafemi Awolowo University, Nigeria

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-10060R1	H. Mehdi, A. Mehmood, A. Chinchkar, A.W. Hashmi, C. Malla, P. Mohapatra	Delhi Technological University, New Delhi, India.
2	MATPR-D-21-10530R1	T. Mondal, <u>S.M. Jayadeva</u> , R.Pani, M. Subramanian, P. Ashokkumar, B. Sumana	JSS Academy of Higher Education & Research, Mysuru, Karnataka, India.
3	MATPR-D-21-09538R1	M.Pandey, B. Doloi	Jadavpur University, Kolkata, India
4	MSF#11	O. Muribwathoho, V. Msomi, S. Mabuwa	Cape Peninsula University of Technology, Cape Town, South Africa.
5	MATPR-D-21-10647	S.K. Sharma, K.K. Saxena	GLA University, Mathura, India.
6	MATPR-D-21-10258R1	J.M. Mhalhal, M.A. Alawsi, T.S. Al-Gashama, S.R. Abid	Wasit University, Kut, Iraq.
7	MATPR-D-21-09196R2	H. Singh, V. Kumar, J. Kapoor	Panjabi University Patiala, India.
8	MATPR-D-21-10259R1	A.W. Hashmi, H.S. Mali, A. Meena	Malaviya National Institute of Technology, Jaipur, India.
9	MATPR-D-21-10086R2	A. Rana, P. Vaidya, G. Gupta	Yogananda School of Artificial Intelligence, Computers, and Data Sciences, Shoolini University, HP.

Lunch Break (15 Min)

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Technical Session No.	Time	Microsoft Teams Meeting Link:
6	12:15 HRS to 14:15 HRS (SAST)	Technical Session 6

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Session Chair 1: Dr. Ashok Kumar Bagha, Dr. B. R. Ambedkar National Institute of Technology (NIT), India.
Session Chair 2: Dr. Basanth Kumar K, Vardhaman College of engineering, India.

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-08585R1	<u>N. Singh</u> , R.M. Belokar, R.S. Walia	Panjab Engineering College (Deemed to be University), Chandigarh, India.
2	MATPR-D-21-08450R1	<u>R. Nkhoma</u> , K.A. Annan, C. Siyasiya	Malawi University of Science and Technology, Malawi.
3	MATPR-D-21-09764R1	S.A. Adzor, C.C. Nwaeju, <u>F.O. Edoziuno</u>	Delta State Polytechnic, Ogwashi-uku, Delta State, Nigeria.
4	MSF#22	<u>S.K. Sharma</u> , K.B. Kumar, K.K. Saxena	GLA University, Mathura, UP, India
5	MSF#23	K.S. Priya, K.R. Vijaya Kumar, <u>G. Suresh</u> , R. Ganesamoorthy, R. Ravi, C.M. Meenakshi	Rajalakshmi Institute of Technology, Chennai, India.
6	MSF#26	K.SD. Priya, K.R. Vijaya Kumar, <u>G. Suresh</u> , R. Ganesamoorthy, R. Ravi, C.M. Meenakshi	Rajalakshmi Institute of Technology, Chennai, India.
7	MATPR-D-21-09584R1	<u>M. Oraon</u>	Birla Institute of Technology, Mesra, India
8	MATPR-D-21-09482R1	<u>K.H. Younis</u>	Tishk International University, Erbil, Iraq.
9	MATPR-D-21-09416R1	B. Thakur, <u>G. Gupta</u> , N. Kumar	Yogananda School of AI, Computing and Data Science, Shoolini University, Solan, Himachal Pradesh, India.
Lunch Break (15 Min)			

Date: 27th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
7	12:30 HRS to 14:30 HRS (SAST)	Technical Session 7

Session Chair 1: Dr. Velaphi Msomi, Cape Peninsula University of Technology, South Africa.
Session Chair 2: Dr. Amlana Panda, KIIT Deemed to be University, India.

S. No.	Manuscript ID	Author	Location
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1	MSF#27	A.K. Soni, <u>S.S. Godara</u> , R. Gade, V. Brenia, R. Singh Shekhawat, K.K. Saxena	Rajasthan Technical University Kota, Rajasthan, India.
2	MSF#29	D. Prasad, G.N. Srinivaslu, A. Bharti, <u>N. Kumar</u> , S.M. Azam, K.K. Saxena	Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India
3	MATPR-D-21-08745	<u>D.L. Shanthi</u> , K. Arumugam, V.M.M. Swamy, A. Farithkhan, R. Manikhandam, D. Saravanan	MS Institute of Technology and Management, India
4	MATPR-D-21-09307R1	L. Kumar, <u>N.P. Mandal</u>	National Institute of Technology Patna, Patna, Bihar, India.
5	MATPR-D-21-09198R1	<u>S. Dixit</u> , A. Stefańska	K.R. Mangalam University Gurugram, Haryana, India
6	MATPR-D-21-09197R1	R. Arora, <u>K. Kumar</u>	K.R. Mangalam University Gurugram, Haryana, India
7	MSF#30	K. A. Mohammed, M. M. Hadi, E.H. Hussein, Alaa. S. Al-Kabbi, K.M. Ziadan	Hilla University College, Babylon, Iraq.
8	MSF#31	S. Rao, A. Lakshmikanthan, A.S. Sowmyashree, C. Hegde, A.M. Isloor, <u>V.R. Malik</u> , K.K. Saxena	KLS Gogte Institute of Technology, Belagavi, India; Visvesvaraya Technological University, Belagavi, India.
9	MSF#32	D. Prasad, G.N. Srinivaslu, A. Bharti, <u>N. Kumar</u> , V. Velisala, A.K. Chauhan, K.K. Saxena	Motilal Nehru National Institute of Technology Allahabad, Prayagraj, India.
Lunch Break (15 Min)			

Date: 27th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:	
8	12:45 HRS to 14:45 HRS (SAST)	Technical Session 8	
<p>Session Chair 1: Dr. Tiyamike Ngonda, Cape Peninsula University of Technology, South Africa</p> <p>Session Chair 2: Dr. Cebo L. Ndlangamandla, University of Zululand, South Africa.</p>			
S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-09906R1	K.A. Annan, R. Nkhoma, C. Siyasiya, R. Mostert	University of Pretoria, Pretoria, South Africa.
2	MATPR-D-21-10402R1	R. Kant, <u>W. Al-Agha</u> , W.A. Almorad, M.S. Thakur, N. Umamaheswari	Delhi Technological University, Delhi, India
3	MATPR-D-21-10403R1	<u>H. Tahir</u> , M.S.A. Khan, M.M. Ullah, M. Ali, M. Shakai	NED University of Engineering & Technology, Karachi, Pakistan

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4	MATPR-D-21-10644	G. Kumar, N.P. Mandal	National Institute of Technology Patna, Patna, India
5	MATPR-D-21-10711R1	L. Hadebe, Z. Cele, B. Gumbi	University of KwaZulu-Natal, South Africa
6	MATPR-D-21-10492R1	S.R. Sandeep, S. Ahamad, D. Saxena, K. Srivastava, S. Jaiswal, A. Bora	University of Petroleum and Energy Studies, Dehradun, Uttarakhand, India.
7	MATPR-D-21-10489R1	M. Sangeetha, A. Hoti, R. Bansal, M.F. Hasan, K. Gajjar, K. Srivastava	Mangalotayan University, Aligarh, India
8	MATPR-D-21-10401R1	D.K. Sharma, M. Subramanian, P. Malyadri, B.S. Reddy, M. Sharma, M. Tahreem	Shree Bankey Bihari Dental College, Ghaziabad, India
9	MATPR-D-21-10198R1	R.R. Mishra, A. Panda, A.K. Sahoo, R. Kumara	Kalinga Institute of Industrial Technology, Deemed to be University, Bhubaneswar, Odisha, India
Lunch Break (15 Min)			

Date: 27th November 2021		
Keynote Address	Time	Microsoft Teams Meeting Link:
04	15:00 HRS to 15:45 HRS (SAST)	Keynote Speaker link
Speaker: Prof. B.D. Ngom Professor, Universite Cheikh Anta Diop de Dakar, iThemba LABS and University of South Africa. Topic: Biomass-derived innovative electrodes materials for Energy storage applications Host: Dr. Tiyamike Ngonda, Cape Peninsula University of Technology.		
END		

Date: 28th November 2021		
Keynote Address	Time	Microsoft Teams Meeting Link:
05	09:00 HRS to 09:45 HRS (SAST)	Keynote Address link
Speaker: Prof. Kaushik Kumar Professor, Birla Institute of Technology Topic: Advances in Additive Manufacturing Processes		

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Host: Dr. Ajaya Bharti, Motilal Nehru National Institute of Technology Allahabad.

Break (15 min)

Presentation Sessions (Parallel sessions)

Technical Session No.	Time	Microsoft Teams Meeting Link:
9	10:00 HRS to 12:00 HRS (SAST)	Technical Session 9

Session Chair 1: Prof. AP Singh, Panjab University, India.
Session Chair 2: Dr. Palli Srinivas, Vardhman College of engineering

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-09119R1	J. Nyika, M. Dinka	University of Johannesburg, APK Campus 2006, Johannesburg, South Africa.
2	MATPR-D-21-08824R1	D. Jayakumar, K.S. Kumar	IFET College of Engineering, Villupuram
3	MSF#33	P. Sonia, J.K. Jain, K.K. Saxena	MNIT Jaipur, India
4	MSF#34	S. Ntsondwa, V. Msomi, M. Basitere	Cape Peninsula University of Technology, South Africa
5	MSF#35	P.B. Shetty, J.S. Reddy, A. Lakshmikanthan, Manjunath Patel G.C., V.R. Malik, K.K. Saxena	KLS Gogte Institute of Technology, Belagavi Visvesvaraya Technological University, Belagavi, India.
6	MATPR-D-21-08823R1	P.Kumar, B. Parvathala, A.K. Sharma	VNRVJIET, Hyderabad, India
7	MATPR-D-21-08822R1	D. Saravanan, K.S. Kumar	IFET College of Engineering, Villupuram.
8	MATPR-D-21-08821R1	R. Parthiban, K.S. Kumar	IFET College of Engineering, Villupuram.
9	MATPR-D-21-10531	M.A. Alawsji, J.M. Mhalhal, T.S. Al-Gasham, S.R. Abid	Wasit University, Kut, Iraq.

Lunch Break (15 Min)

Date: 28th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
10	10:15 HRS to 12:15 HRS (SAST)	Technical Session 10

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Session Chair 1: Dr. Deepam Goyal, Chitkara university Institute of Engineering and Technology, India
Session Chair 2: Dr. Nakul Gupta, GLA University, India.

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-10113R1	W.k Thabah, <u>A.K. Singh</u> , R. Bedi	Dr. B R Ambedkar NIT Jalandhar Panjab, India.
2	MATPR-D-21-10529R1	<u>R. Rajendran</u> , B. Singirikonda, Navpreet, N. Jain, M. Naved, Md. K. Mohiddin	CHRIST (deemed to be), University, India.
3	MATPR-D-21-10528R1	S. Ahamad, <u>P. Gupta</u> , P.B. Acharjee, K.P. Kiran, Z. Khan, M.F. Hasan	Ramesh Jha Mahila College, Saharsa, Bihar.
4	MATPR-D-21-10400R1	R. Kant, <u>W. Al-Agha</u> , M.S. Thakur, N. Umamaheswari	Delhi Technological University, Delhi, India.
5	MATPR-D-21-10087	N.F. kadhim, A.A. Ridha, A.N. Jameel, H.N.B. Khalaf, <u>M.Y.A. Mostafa</u>	Ural Federal University, Ekaterinburg, Russia.
6	MATPR-D-21-10397R1	A. Alsabri, <u>F. Tahir</u> , S.G. Al-Ghamdi	Hamad Bin Khalifa University, Qatar Foundation, Doha, Qatar.
7	MATPR-D-21-10404R1	S. Chourasia, Y. Sharma, S.A. Nair, <u>A. Tyagi</u>	SGT University, Haryana, India.
8	MATPR-D-21-10260R1	<u>M. Mosisili</u> , V. Msomi, S. Mabuwa	Cape Peninsula University of Technology, Cape Town, South Africa.
9	MATPR-D-21-09763R1	<u>G.I Janith</u> , H.S Herath, G.L.M. Ariyadasa, K.C. Hewagama, D.A.S. Amarasinghe, D. Attygalle, V.S.C Weragoda.	University of Moratuwa, Sri Lanka.
Lunch Break (15 Min)			

Date: 28th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
11	10:30 HRS to 12:30 HRS (SAST)	<u>Technical Session 11</u>

Session Chair 1: Thubalakhe Masango, Cape Peninsula University of Technology, South Africa.
Session Chair 2: Dr. Ncediwe Ndube-Tsolekile, Cape Peninsula University of Technology, South Africa.

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-08820R1	<u>R. Sathyavani</u> , K.J. Mohan, B. Kalaavathi	Institute Of Road and Transport Technology, Erode.

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2	MATPR-D-21-08819R1	J. Senthil, M. Muthukannan	Kalasalingam Academy of Research and Education
3	MATPR-D-21-08818R1	G. Deepa, <u>Leena Rosalind Mary</u> , A. Karthikeyan, P. Rajalakshmi, K. Hemavathi, M. Dharanisri	Vellore Institute of Technology, Vellore, Tamilnadu, India.
4	MSF#36	R.A. Kareem, <u>S.O. Salawu</u> , O.K. Onanuga, A.B. Disu	Landmark University, Omu-Aran, Nigeria.
5	MSF#38	<u>M. Oraon</u>	Birla Institute of Technology, Mesra.
6	MSF#39	<u>B. Singh</u>	GLA University Mathura, UP India.
7	MATPR-D-21-08744R1	T. <u>Babu</u> , H. Roopa, A.K. Shukla, D.S. David, S. Jayadatta, A.S. Rajesh	St. Joseph's College of Engineering, Chennai.
8	MATPR-D-21-09832R1	<u>Z. Wonci</u> , N. Tsolekile, M.C. Matoetoe	Cape Peninsula University of Technology – Bellville, South Africa.
9	MATPR-D-21-08742R1	M. Chandragowda, C. Gnanavel, D. Saravanan, D.S David, R. Parthiban, A.S. Rajesh	Proudhadeveraya Institute of Technology, Karnataka.
Lunch Break (15 Min)			

Date: 28th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
12	12:15 HRS to 13:45 HRS (SAST)	Technical Session 12

Session Chair 1: Sipokazi Mabuwa, Cape Peninsula University of Technology, South Africa.

Session Chair 2: Dr. Velaphi Msomi, Cape Peninsula University of Technology, South Africa.

S. No.	Manuscript ID	Author	Location
1	MSF#40	<u>A. Patil</u>	VIT University, Chennai, Tamil Nādu, India.
2	MSF#41	N. Venkateshwaran, C. Devanathan, <u>G. Suresh</u> , S. Dhandapani, R. Giri, C.T. Muthiah	Rajalakshmi Institute of Technology, Chennai, India.
3	MSF#42	A.A. Adediran, <u>F.O. Edoziuno</u> , Olanrewaju Seun Adesina1, K.O. Sodeinde, A.B. Ogunkol, G.A. Oyinloye, C.C. Nwaeju, E.T. Akinlabi,	Delta State Polytechnic, Ogwashi-Uku (DSPG), Nigeria.
4	MATPR-D-21-08741R1	<u>O.A. Towojua</u>	Lead City University, Ibadan, Nigeria.

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5	MATPR-D-21-10112R1	S.S Godara, V. Brenia, A.K. Soni, R.S. Shekhawat, K.K. Saxena	Rajasthan Technical University Kota, India
6	MATPR-D-21-09762R1	S. Dixit, P. Singh	K.R. Mangalam University Gurugram-122103, Haryana, India
7	MATPR-D-21-09585R1	A. Alothman	Institute of Science and Technology, Kattankulathur, Chengalpattu Dt, Chennai, Tamil Nadu, India
8	MATPR-D-21-09118R1	P.A. Ayisi, T. Ngonda, K. Kanyarusoke	Cape Peninsula University of Technology, Cape Town, South Africa
9	MATPR-D-21-09907R2	P.V. Chilbule, P.L. Dhole, N.M. Yewale	Government College of Engineering Chandrapur chandrapur, maharashtra India.
Break (15 Min)			
Valedictory Session			

Date: 28th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
13	12:15 HRS to 13:45 HRS (SAST)	Technical Session 13

Session Chair 1: Dr. Atanda Raji, Cape Peninsula University of Technology, South Africa
Session Chair 2: Dr. Ncediwe Ndube-Tsolekile, Cape Peninsula University of Technology, South Africa

S. No.	Manuscript ID	Author	Location
1	MATPR-D-21-09588R1	A. Mahto, <u>M. Oraon</u>	Birla Institute of Technology, Mesra-Ranchi, India.
2	MATPR-D-21-09817R1	K.C. Onyelowe, I.C. Onuoha, & M. Onyia	Okpara University of Agriculture, Umudike, Abia State, Nigeria.
3	MATPR-D-21-10088R1	R.A. Al-Zubaidy, A.N. Hilo	Wasit University, Iraq.
4	MATPR-D-21-09938R1	S.H. Biradar, J.V. Gorabal, <u>G. Gupta</u>	Shoolini University, Solan, Himachal Pradesh, India.
5	MATPR-D-21-10199R1	S. Chourasia, Y. Sharma, <u>A. Tyagi</u>	SGT University, Haryana, India.
6	MATPR-D-21-09761R1	K. Kumar, R. Arora	K.R. Mangalam University Gurugram, Haryana, India.
7	MATPR-D-21-08743R1	T.V.V.P. Kumar, S.N. Mughal, R.G. Deshmukh, S.G. Kumar, Y. Kumar, D.S. David	K G Reddy College of Engineering and Technology, Hyderabad.
8	MATPR-D-21-10712R1	D. Agarwal, M. Dixit, N.K. Dixit, <u>M. Agarwal</u>	IET, Dr. RML Avadh University, Ayodhya, India.

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9	MATPR-D-21-10756	K. Magano, L. Meyers, V. Msomi	Cape Peninsula University of Technology, Cape Town, South Africa.
Break (15 Min)			
Valedictory Session			

Date: 28th November 2021

Technical Session No.	Time	Microsoft Teams Meeting Link:
14	11:15 HRS to 13:45 HRS (SAST)	<u>Technical Session 14</u>

**Session Chair 1: Dr. Shankar Sehgal, Panjab University, India.
Session Chair 2: Dr. Kuldeep K. Saxena, GLA University, India.**

S. No.	Manuscript ID	Author	Paper Title
1	5	M.A. Madhloom, A.H. Ataiwi, J.J. Dawood, <u>K.A. Mohammed</u>	Influence of Cryogenic Treatment on Hardness, Tensile Properties, and Microstructure of Aluminum Alloy AA6061
2	6	J. Kaur, <u>A. Saxena</u> , D. Pandit, D. Sathiaraj, P. Singhal	Lepidium didymium plant extract as eco-friendly corrosion inhibitor for steel in acidic medium
3	7	J. Kaur, <u>A. Saxena</u> , S.S. Godara, K. Satyanarayana, V. Salphale, P. Singhal	Influence of Eco-friendly Corrosion Inhibitor for Steel in Acidic Medium
4	8	B. Kumar, <u>A. Joshi</u> , K.K.S. Mer, L. Prasad, K.K. Saxena	Tensile and Fracture Toughness behavior of Centrifugally Cast Al/Al ₂ O ₃ Functionally Graded Materials
5	9	P. Singh, D.R. Prajapati, <u>S. Sehgal</u>	Filler powder free joining of super duplex stainless steel using selective microwave hybrid heating technique
6	10	R.K. Pal, P. Goyal, <u>S. Sehgal</u>	Thermal Performance Evaluation of Cellulose Fibre as Building Insulation Material
7	11	V. Handa, P. Goyal, <u>S. Sehgal</u>	Application of graphite rods in producing Inconel 625 (UNS N06625) joints through the use of microwave radiation energy
8	12	<u>R. Banerjee</u> , J.B. Srivastava, N. Gupta	Seismic Response of Y-Shape Multi-Storey Building with Optimum Location of Shear Walls
9	13	A.S. Verma, A. Bisht, S. Kant, <u>S. Bahl</u>	Advancement in Additive Manufacturing: A Comprehensive Review of Current Challenges, Materials and their Industrial Applications
10	14	V.K. Sohpal, S. Sehgal, <u>S. Bahl</u> , A.K. Bagha	Experiment Investigations for Enhancing the Thermal and Electrical Performance of Photovoltaic (PV) Modules using Wick Biomaterials

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11	15	<u>R. Goyal</u> , M. Moizuddin, N. Gupta, M. Matsui	Evaluation of External Pressure on the Low-Rise Structures and Surrounding Terrain under the Influence of Translating Tornado
12	16	S. Shelare, P. Belkhode, S. Bahl, H. Kumbhare	Design and Simulation of Hexacopter Drone for Optimization of Payload
13	17	<u>S.S. Godara</u> P.K. Mahato, K.K. Saxena	Micromechanics Based Modeling and Analysis for the Performance of UD Composites
14	18	<u>K.M. Buddaraju</u> , G.R.K. Sastry, S. Kosaraju, K.K. Saxena	Experimental Studies and Mathematical Modelling of Inconel 600 with CVD Coated TiN/TiCN/Al ₂ O ₃ /ZrCN Inserts Under Dry Machining Conditions
15	19	<u>K.M. Buddaraju</u> , G.R.K. Sastry S. Kosaraju	Experimental investigation on machining of Inconel 600 with PVD coated AlTiN Inserts under dry conditions
16	20	<u>Y. Gajalappa</u> , A. Krishnaiah, K.B. Kumar, Eswaranna, K.K. Saxena	Processing map analysis and microstructure studies on Inconel 600 superalloy
17	21	K.S. Pawar, A.K. Bagha, <u>S. Bahl</u> , Shankar Sehgal	Experimental investigation of the dynamic characteristics of a short natural fiber reinforced composite materials
18	22	<u>B. Singh</u> , K.K. Saxena, P. Singhala	Mechanical and Microstructural Evolution of Friction stir welded joint of AA2014 alloys
19	23	Md S. Alam, A. Rahim, <u>S. Bahl</u>	Reattachment length and drag in BFS sudden expansion obstructed fluid flow
20	24	<u>P. Goyal</u> , R. Madan, S. Kumar, S. Sehgal	EDM performance of Cu-W-CNT electrodes on microhardness of H-11 die steel
Break (15 Min)			
Valedictory Session			



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Valedictory Ceremony

Date: 28th November 2021 (Sunday) (South African Standard Time)

Time: 14:00 PM (South African Standard Time) <https://time.is/SAST>

Venue: Cape Peninsula University of Technology, Cape Town, Western Cape, South Africa

Microsoft Teams Meeting Link: [Valedictory Session link](#)

Program Director: Dr. O KAYODE.
(University of Cape Town, South Africa)

Minute-to-Minute Schedule

Delegates Login to Platform	14:00 pm
Welcome Address.....	14:10 pm
Dr. S. Sehgal ICARAE Coordinator	
Declaration of Best Research Papers	14:15 pm
Dr. K.K. Saxena GLA University, Mathura, India	
Best Presentations Awards.....	14:25 pm
Prof. K. Kumar Birla Institute Technology	
Handing of Gifts.....	14:35 pm
Dr. N. Tsolekile & Mrs. S. Mabuwa CPUT, South Africa	
Acknowledgement of Organizing Team.....	14:45 pm
Dr. V. Zungu CPUT, South Africa	
Vote of Thanks	14:55 pm
Dr. V. Msomi. ICARAE Coordinator	
Group Photo	15:00 pm

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