



LEMBAGA PENELITIAN DAN
PENGABDIAN KEPADA MASYARAKAT
UNIVERSITAS COKROAMINOTO PALOPO

ICREAST

*The 1st Internasional Conference of
Research on Education, Applied Science,
Science, and Technology*

Strengthening Innovative Research in Education, Science, Technology and their applications in a Disruptive Era

ABSTRACT BOOK

Palopo, Sulawesi Selatan
December **21-22, 2020**



www.icreast.uncp.ac.id
Email : icreast@uncp.ac.id

Preface

Welcome to the first International Conference of Research on Education, Applied Science, Science, and Technology (1st ICREAST) 2020.

We are now facing difficult situation. The COVID-19 gave impact all aspect in our live including education and research. University and School must be closed and do remote work from home. Some event must be postponed and cancelled. But on the other hand, online platform allow us to do our best on disseminating our research by virtual conference.

Universitas Cokroaminoto Palopo has a vision to become a university that excels at the national level in producing and developing science, and technology in 2030 is one of the best higher education in South Sulawesi. This vision leads our University to makes strengthening innovative research as hot topic in international conference.

The first International Conference of Research on Education, Applied Science, Science, and Technology (1st ICREAST) 2020 is an international scientific meeting held by Lembaga Penelitian dan Pengabdian Kepada Masyarakat Universitas Cokroaminoto Palopo University. The main theme of this conference is "Strengthening Innovative Research in Education, Science, Technology and their applications in a Disruptive Era"

The 1st ICREAST is a virtual conference and held to facilitate the researchers in Education, Applied Science, Science and Technology to disseminate their research. UNCP has Faculty of Education, Faculty of Science, Faculty of Agriculture, and Faculty of Computer Engineering, so through 1st ICREAST, we hope we can enhance our research and initiate research collaboration with all speakers and participants.

We successfully gather one Keynote Speaker, five invited speakers and 109 contributed speakers from Canada, Japan, Aussie, UK, Malaysia, and USA. We appreciate your contribution in 1st ICREAST and hopefully all of you can enjoy the presentations and discussion.

Palopo, 21st December 2020

Irwan Ramli, Ph. D.
on behalf of 1st ICREAST committe

Organizing committee

Advisory board:

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lin Dwi Aristy Putri, SKM., M. Kes.

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Musliadi, S. Pd., M. Pd
Muhammad Naim, S. P., M. P.

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Contents

Preface	2
Organizing committee	3
Presentation Guide	7
Timetable	8
Zoom Meeting ID	10
Parallel Session Timetable	11
List of Abstracts – Talks	22
Keynote Speaker-Prof. Dr. Tatag Y.E.S.	23
Invited Speaker 1-Prof. Dr. I. Watanabe	24
Invited Speaker 2-Hyunkyoung Yoon, Ph. D	25
Invited Speaker 3-Assoc. Prof. Arief Gusnanto	26
Invited Speaker 4-Prof. Bunyamin Tar'an, Ph. D	27
Invited Speaker 5-Assoc. Prof. Rini Amekliawati, Ph.D.	28
Contributed Speaker ED-01 M. Nurh Hakim	29
Contributed Speaker ED-02 Rosmala Yanti	30
Contributed Speaker ED-03 Suparman	31
Contributed Speaker ED-04 Darmawati	32
Contributed Speaker ED-05 Tsamratul'aeni	33
Contributed Speaker ED-06 Marlia Mukmin	34
Contributed Speaker ED-07 Marlina Bakri	35
Contributed Speaker ED-08 Rahim Ruspa	36
Contributed Speaker ED-09 Kartini	37
Contributed Speaker ED-10 Andriani	38
Contributed Speaker ED-11 Arny Irhani Asmin	39
Contributed Speaker ED-12 Nanda Saputra	40
Contributed Speaker ED-13 Fibry Indira Lisanty	41
Contributed Speaker ED-14 Opik Dwi Indah	42
Contributed Speaker ED-15 Adya Shaleha	43
Contributed Speaker ED-16 Edi Wahyono	44
Contributed Speaker ED-17 Hemini	45
Contributed Speaker ED-18 Rahmawati Upa	46
Contributed Speaker ED-19 Nirwana	47
Contributed Speaker ED-20 Musliadi	48
Contributed Speaker ED-21 Reski Yusrini Islamiyah Yunus	49
Contributed Speaker ED-22 Sri Damayanti	50
Contributed Speaker ED-23 Rustan S	51
Contributed Speaker ED-24 Nisraeni Nisra	52

Contributed Speaker ED-25 Nina Prihartiwi	53
Contributed Speaker ED-26 Windi Setiawan	54
Contributed Speaker ED-27 Ahmad Wachidul Kohari	55
Contributed Speaker ED-28 Ahmad Hatip	56
Contributed Speaker ED-29 Siti Khabibah	57
Contributed Speaker ED-30 Rio Fabrika	58
Contributed Speaker ED-31 Anik Anekawati	59
Contributed Speaker ED-32 Ary Herlina K	60
Contributed Speaker ED-33 Nilam Permatasari	61
Contributed Speaker ED-34 Muhammad Muzaini	62
Contributed Speaker ED-35 Ika Kurniasari	63
Contributed Speaker ED-36 Nur Wahidin Ashari	64
Contributed Speaker ED-37 Patmaniar	65
Contributed Speaker ED-38 Shindy	66
Contributed Speaker ED-39 Fahrul Basir	67
Contributed Speaker ED-40 Muhammad Ikram	68
Contributed Speaker ED-41 Akramunnisa	69
Contributed Speaker ED-42 Sadrack Luden Pagiling	70
Contributed Speaker ED-43 Abdul Zahir	71
Contributed Speaker ED-44 Ambiyar	72
Contributed Speaker ED-45 Sunardin	73
Contributed Speaker ED-46 Unika Upa	74
Contributed Speaker ED-47 Sunarni Yassa	75
Contributed Speaker ED-48 Supriadi	76
Contributed Speaker ED-49 Irnin Agustina D. A	77
Contributed Speaker ED-50 Rahmawati	78
Contributed Speaker ED-51 Dinar Maftukh	79
Contributed Speaker ED-52 Samsir	80
Contributed Speaker ED-53 Khoiro Mahbubah	81
Contributed Speaker ED-54 Muhammad Habibulloh	82
Contributed Speaker ED-55 Fitrah Al Ansory	83
Contributed Speaker ED-56 Fitrah Al Anshori	84
Contributed Speaker ED-57 Ridha Yulyani Wardi	85
Contributed Speaker ED-58 Agus Yulianto	86
Contributed Speaker ED-59 Safwan Kasma	87
Contributed Speaker ED-60 Ulfi Faizah	88
Contributed Speaker ED-61 Bhakti Yoga Budi	89
Contributed Speaker ED-62 Tiurida Intika	90
Contributed Speaker ED-63 A. Andriani Asra	91
Contributed Speaker ED-64 Muhammad Fajri	92
Contributed Speaker ED-65 Rusdiana Junaid	93
Contributed Speaker ED-66 Abdullah Syukur	94
Contributed Speaker ED-67 Nuur Insan Tangkelangi	95
Contributed Speaker ED-68 Muhammad Hasby	96
Contributed Speaker TI-01 Aswadul F. S. R	97
Contributed Speaker TI-02 Syafriadi	98
Contributed Speaker TI-03 Halimah Tus S	99
Contributed Speaker TI-04 Ronal W	100

Contributed Speaker TI-05 Andi Rosman	101
Contributed Speaker TI-06 Firna Romayani	102
Contributed Speaker TI-07 Alfhian Makmur	103
Contributed Speaker TI-08 Rosmiati	104
Contributed Speaker TI-09 Fajar Novriansyah	105
Contributed Speaker TI-10 Fitrah S	106
Contributed Speaker TI-11 Siaulhak	107
Contributed Speaker TI-12 Vicky bin Djusmin	108
Contributed Speaker TI-13 M. Idham R	109
Contributed Speaker TI-14 Rusmala	110
Contributed Speaker TI-15 Dianradika P	111
Contributed Speaker TI-16 Nirsal	112
Contributed Speaker AG-01 Gita Srihidayati	113
Contributed Speaker AG-02 Suaedi	114
Contributed Speaker AG-03 Andi Safitri S	115
Contributed Speaker AG-04 I Nyoman Arnama	116
Contributed Speaker AG-05 Mutmainnah	117
Contributed Speaker AG-06 Erni Firdamayanti	118
Contributed Speaker AG-07 Muhammad Naim	119
Contributed Speaker SC-01 Iin Karmila Putri	120
Contributed Speaker SC-02 Vita Ratnasari	121
Contributed Speaker SC-03 Yuliani	122
Contributed Speaker SC-04 Rahmat Hidayat	123
Contributed Speaker SC-05 Marwan Syam	124
Contributed Speaker SC-06 Aryadi Nurfaalq	125
Contributed Speaker SC-07 Irmayani	126
Contributed Speaker SC-08 Nurasia	127
Contributed Speaker SC-09 Arwansyah	128
Contributed Speaker SC-10 Muhammmad Nur Alam	129
Contributed Speaker SC-11 Ulfah Zakiyah	130
Contributed Speaker SC-12 Sukarti	131
Contributed Speaker SC-13 Danar	132
Contributed Speaker SC-14 Ilmiati Illing	133
Contributed Speaker SC-15 Witono Hardi	134
Contributed Speaker SC-16 Irwan Ramli	135
Contributed Speaker SC-17 Rahma Manrulu	136
Contributed Speaker SC-18 Selviani Basri Fitri Jusmi	137
Contributed Speaker SC-19 Nyoman S	138
Contributed Speaker SC-20 Pauline D S	139
Contributed Speaker SC-21 Sunarti Cambaba	140
Contributed Speaker SC-22 Suhaeni	141
Contributed Speaker SC-23 Abdul Rais	142
Contributed Speaker SC-24 Dian Ayuning Tyas	143
Contributed Speaker SC-25 Besse Helmi M	144
Contributed Speaker SC-26 Nurmalasari	145

Presentation Guide

The plenary session is divided into keynote and Invited talk. We encourage to all participants to join in this session. The time for Keynote and Invited talk are 60 minutes and 40 minutes, respectively. The microphone of participants will be muted by the host during the talk and participant can give questions and comments in discussion session by directly ask to the speaker or via chat.

Parallel Session will be conducted by virtual using zoom meeting break room. Every break room is guided by a moderator and consist of 6-10 Presenter and unlimited for participant.

The time allocation for Each Presenter in the Parallel Session is 10 minutes of effective presentation time. One article can only be presented by a presenter, the co-authors who can be registered as non-presenters are allowed to give comments in the discussion sessions. Due to the limited time, please prepare presentation 7-10 slides. For all presenter please see your allocation time and prepare your slide in your PC/ Laptop. The Moderator will give you right to share your screen just before your allocation time

During the parallel session, Please switch OFF your mic except for the presenter and moderators. The participant who want to ask questions or comment are allowed in the discussion session. Questions and responses can be submitted in person or via chat.

The moderator has the full control to turn off the all microphone of presenter and audience. The committee can unilaterally expel participants who act outside of scientific ethics.

Timetable

All shown is GMT+8 (Makassar time)

Monday, 21st of December 2020

Time	Agenda	Title	Moderator
08:30-09:00	Opening Ceremony	1. Opening by MC 2. National Anthem of Indonesia 3. Report From Chairperson 4. Welcome Speech from Rector of UNCP 5. Closing Opening Ceremony	Ulfah Zakiyah Hamdani, S. Pd., M. Sc
09:00-09:45	Keynote Talk: Prof. Dr. Tatag Yuli Eko Siswanto, M.Pd	The Covid-19 Pandemic as a momentum developing innovative research in disruptive era: A case study on mathematical problem posing	Dr. Rusdiana Junaid, M. Hum, M. A.
09:45-10:00	BREAK		
10:00-10:30	Invited Talk: Prof. Dr. Isao Watanabe	Computational Investigations for Material Sciences	Irwan Ramli, Ph. D
10:30-11:00	Invited Talk: Hyunkyung Yoon, Ph. D	Teachers' Meanings for Function Notation in the United States and South Korea	Dr. Muhammad Ikram, M. Pd
11:00-12:00	Parallel Session 1		
12:00-13:00	BREAK		
13:00-13:30	Invited Talk: Assoc. Prof. Arief Gusnanto	Big Data Analytics in the Era of Industry 4.0	Dr. Rahmat Hidayat, M. Si
13:30-14:50	Parallel Session 2		

Tuesday, 22nd of December 2020

Time	Agenda	Title	Moderator
09:00-09:30	Keynote Talk: Prof. Bunyamin Tar'an, Ph.D.	Plant Breeding in the 21st Century: Challenges and Opportunities	Pauline Destinugrainy, S. Si., M. Sc.
10:00-10:30	Keynote Talk: Assoc. Prof. Rini Amekliawati, Ph.D.	Robotics Technology and Automation in Agriculture: Research Activities of Robotics and Automation Group - The University of Adelaide	Arwansyah, Ph. D.
10:00-10:10	BREAK		
10:10-12:00	Parallel Session 3		
12:00-13:00	BREAK		
13:00-14:20	Parallel Session 4		
14:20-14:40	Closing Ceremony	1. Opening by MC 2. Closing Remark Chairperson 3. Closng Speech from Head of LPPM 4. Closing by MC	Ulfah Zakiyah Hamdani, S. Pd., M. Sc

Zoom Meeting ID

Meeting ID : 555 472 3576
Passcode : palopouncp
url : <https://zoom.us/j/5554723576?pwd=ZkgwSlcCdGptMUh5SWpuK1orM1o4Zz09>

Note for parallel session after joining the Zoom meeting room:

1. For presenter, please join by using your presentation Code-name

example: SC-05-Irwan Ramli

Please join to your room 5 minutes before your presentation time.

2. For participants, please join to the room in which presenter you want to attend.
3. Please use the **newest** version of zoom.
4. If you have difficulties, Please visit <https://support.zoom.us/hc/en-us/articles/115005769646-Participating-in-breakout-rooms>.

Parallel Session Timetable

Parallel Session I (21st of December 2020, 11:00-12:00)

ROOM 1

Moderator : Tsamratul' aeni

No	Time	Code	Presenter	Title
1	11:00-11:10			Preparation
2	11:10-11:20	ED-01	M. Nur Hakim	Reading Literacy: How Do Students Understand Reading Texts During Online Learning?
3	11:00-11:30	ED-02	Rosmalah Yanti	Description of Speaking Skills Through the Reading of Poets in Indonesian Learning of Elementary School
4	11:30-11:40	ED-03	Suparman	Maccera Tasi Defense Through Documentary Films
5	11:40-12:50	ED-04	Darmawati	The Use of Student Dictionary in Academic Speaking Learning
6	11:50-12:00	ED-05	Tsamratul' aeni	Interpretation and Speaking Ability

ROOM 2

Moderator : Marlina bakri

No	Time	Code	Presenter	Title
1	11:00-11:10			Preparation
2	11:10-11:20	ED-06	Marlia Muklim	The Effectiveness of the Picture and Picture Model on Writing Short Stories for Students at SMA Negeri 5 Luwu Utara
3	11:00-11:30	ED-07	Marlina Bakri	Use of Youtube as a Learning Media for Writing Poetry
4	11:30-11:40	ED-08	Rahim Ruspa	The relationship between students reading habits and the ability to write descriptions In Indonesian Language Education Study Program Universitas Cokroaminoto Palopo
5	11:40-12:50	ED-09	Kartini Kartini	Teacher Perception Toward the Implementation of 2013 Curriculum at SMPN 2 Palopo
6	11:50-12:00	ED-10	Andriani	Improved Learning To Write History Text Using Powtoon Media

ROOM 3

Moderator : Ulfah Zakiyah Hamdani, S.Pd., M.Sc.

No	Time	Code	Presenter	Title
1	11:00-11:10			Preparation
2	11:10-11:20	TI-01	Aswadul Fitri Saiful Rahman	Home Securty System Based on Raspberry PI and Telegram Application
3	11:00-11:30	TI-02	Syafriadi	Application of Web Server Based Network Monitoring System Using Cacti And The Dude Server at Cokroaminoto University Server Palopo
4	11:30-11:40	TI-03	Halimah Tus Sadiah	Usability Testing on the Android-based KMS (Knowledge Management System) of Medicines Application for Pregnant and Breastfeeding Women Using the RTA Method
5	11:40-12:50	TI-04	Ronal Watrianthos	Implementation learning vector quantization using neural network for classification of ear, nose, and throat disease
6	11:50-12:00	TI-05	Andi Rosman N	Design of Website Based Seaweed Water Salinity Monitoring

ROOM 4

Moderator : Rahmat Hidayat

No	Time	Code	Presenter	Title
1	11:00-11:10			Preparation
2	11:10-11:20	SC-01	Iin Karmila Putri Andi Jumardi	Markov Chain Model in Short-Run Wind Power Forecasting
3	11:00-11:30	SC-02	Vita Ratnasari	Simulation Study: CV, GCV and UBR Methods on Nonparametric Regression Mixed Estimator Spline Truncated and Gaussian Kernel
4	11:30-11:40	SC-03	Yuliani Yuliani	Stability Analysis of the Dynamic Model of the Spread of Dengue Hemorrhagic Fever in Palopo City with Linearity
5	11:40-12:50	SC-04	Rahmat Hidayat	Analysis of Mortality Rates in Indonesia using The Spline Approach
6	11:50-12:00	SC-05	Marwan Sam	Analyzing of the Factors of Lungs Cancer Cause into Patients of Batara Guru Belopa Hospital by Using Analysis Principal Method and Rotation Factor

Parallel Session 2 (21st of December 2020, 13:30-14:50)

ROOM 1

Moderator : Reski Yusrini Islamiah Yunus

No	Time	Code	Presenter	Title
1	13:30-13:40			Preparation
2	13:40-13:50	ED-11	Arny Irhani Asmin	EFL Students' Mistakes in the TOEFL Reading Section
3	13:50-14:00	ED-12	Nanda Saputra	Use Of Video Scribe Learning Media To Improve Character- Based Short Story Writing Skills
4	14:00-14:10	ED-13	Fibri Indira Lisanty	Teacher Strategies In Teaching Vocabulary At SMP Kristen Rante Damai
5	14:10-14:20	ED-14	Opik Dwi Indah	Students' Perception on the Use of Integrated Computer Assisted Media (ICAM) in Learning
6	14:20-14:30	ED-15	Adya Shaleha	Transcript Based Lesson Analysis as a Way of Improving Teaching-Learning Process in Palopo: From the Perspective of Educational Practitioners
7	14:30-14:40	ED-16	Edi Wahyono	Exploring Students' Needs Of English For Information Technology
8	14:40-14:50	ED-17	Hermi	The Students' Learning Style in Cokroaminoto University of Palopo

ROOM 2

Moderator : Rahmawati Upa

No	Time	Code	Presenter	Title
1	13:30-13:40			Preparation
2	13:40-13:50	ED-18	Rahmawati Upa	The Correlation between the Students' Habits in Listening English Song and Their Pronunciation
3	13:50-14:00	ED-19	Nirwana	Ability to Write Scientific Writing for Informatics Students of Cokroaminoto University of Palopo
4	14:00-14:10	ED-20	Musliadi	The Use of Edmodo as a Firtual Learning in Teaching Listening at the Sixth Semester of Cokroaminoto Palopo University
5	14:10-14:20	ED-21	Reski Yusrini I Y	Students' Perception in Learning English Through Edmodo as a Social Learning Platform
6	14:20-14:30	ED-22	Sri Damayanti	
7	14:30-14:40	ED-23	Rustan S	PBL: A 21 Century Teaching and Learning Paradigm Reform
8	14:40-14:50	ED-24	Nisraeni	Developing the Instrument of Statistical Literacy in College Student: A conceptual Review

ROOM 3

Moderator : Muhammad Hasby

No	Time	Code	Presenter	Title
1	13:30-13:40			Preparation
2	13:40-13:50	TI-06	Firna Romayani	The Design of Smart trash Can be using an SMS Gateway in the Informatics Program Based on the Arduino Microcontroller
3	13:50-14:00	TI-07	Alfhian Makmur	Development Of Student Supervision System In Smp Negeri 2 Palopo City
4	14:00-14:10	TI-08	Rosmiati	Logic Gate Simulation Learning Module Design by Using Electronic Workbench (EWB)
5	14:10-14:20	TI-09	Fajar Novriansyah Yasir	Analysis of the Effect of Information Technology Utilization as a Student Learning Media in the Covid-19 Era (Case Study: FTKOM UNCP)
6	14:20-14:30	TI-10	Fitrah Susilawati	UI/UX Design for Mobile Flea Market Application Using Design Thinking Method
7	14:30-14:40	ED-67	Nuur Insan Tangkelangi	English for Informatics students: A need analysis
8	14:40-14:50	ED-68	Muhammad Hasby	The EFL Students' thought Toward Online Classes

ROOM 4

Moderator : Nurasia

No	Time	Code	Presenter	Title
1	13:30-13:40			Preparation
2	13:40-13:50	SC-06	Aryadi Nurfalaq	Geomagnetic application for subsurface rocks identification in the Lagaligo Stadium Complex of Palopo City
3	13:50-14:00	SC-07	Irmayani	Application of CART Algorithm for Socio-Economic Classification
4	14:00-14:10	SC-08	Nurasia	Activated Carbon Absorption of Sago Fiber Waste (Metroxylon Sago) Activated by Koh to Iodin
5	14:10-14:20	SC-09	Arwansyah	Theoretical Study of Protein-Protein Interactions by All-Atom Molecular Dynamics Simulation
6	14:20-14:30	SC-10	Muhammad Nur Alam	Synthesis of Bioplastics based on Sago Pulp Starch/Bentonite Clay
7	14:30-14:40	SC-11	Ulfah Zakiyah Hamdani	Study of the water adsorption of cocoa pod husks (Theobroma cacao L)
8	14:40-14:50	SC-12	Sukarti	Analysis of Alkaloid Compound The Ethanol Extract of Akar Bulu (Merremia Vitifolia) Leaves Using UV-VIS Spectrofotmetry Methode

ROOM 5

Moderator : Muhammad Naim

No	Time	Code	Presenter	Title
1	13:30-13:40			Preparation
2	13:40-13:50	AG-01	Gita Srihidayati	Formulation And Organoleptic Tests Of Katsuwonus Pelamis Skipjack Tuna Fish Otak-Otak With Various Concentrations Of Stabiling Flour
3	13:50-14:00	AG-02	Suaedi	Selection and Correlations of Character Agronomy of Onion (<i>Allium cepa</i> L.) Var. Bima in Salinity and Drought Condition In Vivo
4	14:00-14:10	AG-03	Andi Safitri Sacita	Effect of Fertilization Dosage on Attack Level of Black Pod Disease on Cocoa
5	14:10-14:20	AG-04	I Nyoman Arnama	Respon To Giving Bokashi Planting Media Cocoa Fruit Leather For Tomato Plant Production (<i>Lycopersicum Esculentum</i> Mill)
6	14:20-14:30	AG-05	Mutmainnah	The Effect of Chicken Manure on Growth and Yield of Cucumber (<i>Cucumis sativus</i> L.)
7	14:30-14:40	AG-06	Erni Firdamayanti	Formulation and Orgaleptic Test of the making Powdered Broth Malaja Fish extract (<i>Siganus Canalicalatus</i>)
8	14:40-14:50	AG-07	Muhammad Naim	Effectiveness of MKM Fertilizer And Bean Sprouts Extract on the Growth And Production of Tomato (<i>Lycopersicum Esculentum</i> Mill.)

Parallel Session 3 (22nd of December 2020, 10:20-12:00)

ROOM 1

Moderator : Rio Fabrika P

No	Time	Code	Presenter	Title
1	10:10-10:20	ED-25	Nina Prihartiwi	Students' Conjecture in Solving the Number of Next Covid-19 Case Based on Academic Achievement
2	10:20-10:30	ED-26	Windi Setiawan	Mathematical Learning Design in the Pandemic Time COVID-19
3	10:30-10:40	ED-27	Ahmad Wachidul Kohar	Features of Teaching Supplements Designed to Help Primary Teachers Reduce Their Misconceptions in Mathematics
4	10:40-10:50	ED-28	Ahmad Hatip	Online Collaborative Problem Base Learning in Mathematics
5	10:50-11:00	ED-29	Siti Khabibah	Development of Higher Order Thinking Skills (Hots) Problems for Junior High School Student's Based on Phenomenon Covid- 19
6	11:00-11:10	ED-30	Rio Fabrika Pasanda	Framework For Establishing Mathematical Connections At Conic Materials
7	11:10-11:20	ED-31	Anik Anekawati	Structural Equation Modeling Multigroup of Science Process Skills and Cognitive in PjBL Integrated STEAM Learning
8	11:20-11:30	ED-32	Ary Herlina Kurniati	Description Of Reasoning Ability And Mathematics Communication In Solving Problems In Mathematical Logic Course
9	11:30-11:40	ED-33	Nilam Permatasari Munir	Implementation of Learning Media based on understanding the concept and cri...
10	11:40-11:50	ED-34	Muhammad Muzaini	Analysing Student's Concept Understanding in Solving Number Pattern Questions in Junior High School
11	11:50-12:00	ED-35	Ika Kurniasari	Development of stem-based mathematics teaching materials for microteaching

ROOM 2

Moderator : Nur Wahidin Ashari

No	Time	Code	Presenter	Title
1	10:10-10:20	ED-36	Nur Wahidin Ashari	How students survive: Online learning during the covid-19 period
2	10:20-10:30	ED-37	Patmaniar	Literature Study of Pirie & Kieren's Mathematical Understanding Growth Theory
3	10:30-10:40	ED-38	Fahrul Basir	Analysis of Students' Mathematical Reasoning Ability on Algebra Structure Course
4	10:40-10:50	ED-39	Sindy Ekawati	Profile of students' mathematical initial knowledge on Basic Calculus Course

5	10:50-11:00	ED-40	Muhammad Ikram	Pre-university students' mathematical reasoning when sketching the original graph
6	11:00-11:10	ED-41	Akramunnisa	Analysis of Ability in Solving Mathematics Problem Considered from Prior Ability of High Mathematics and Cognitive Style of Field Dependent
7	11:10-11:20	ED-42	Sadrack Luden Pagiling	Lower secondary school teachers' representation in teaching and solving the mathematical problem
8	11:20-11:30	ED-43	Abdul Zahir	Analysis of Student Learning Outcomes in Computer Security Courses
9	11:30-11:40	ED-44	Ambiyar	Implementation of Web Based Learning Method Model Based on Multimedia to Make Easy for Students Understand Lessons
10	11:40-11:50	ED-45	Sunardin	Description of Student's Learning Motivation Used the Ice Breaking Giving Strategy in Thematic Learning
11	11:50-12:00	ED-46	Unika Upa	The Correlation between the Students' Habits in Listening English Song and Their Pronunciation Ability

ROOM 3

Moderator : lin Dwi Aristy Putri

No	Time	Code	Presenter	Title
1	10:20-10:30	SC-13	Danar	Synthesis and characterization of 3,4,5-trihidroksibenzoic acid intercalated Mg/Al-LDH hybrid by coprecipitation using a T- type microchannel reactor
2	10:30-10:40	SC-14	Ilmiati Illing	Identification of Secondary Metabolite Compounds of Pecut Kuda (<i>Stachytarpheta jamaicensis</i> L) Flower Stalk using GC- MS
3	10:40-10:50	SC-15	Witono Hardi	Modification of Thin Aluminum Tube Profile to Improve the Performance of Impact Energy Absorption
4	10:50-11:00	SC-16	Irwan Ramli	Identification of mineral and element in Slag Nickel from PT. Vale Sorowako
5	11:00-11:10	SC-17	Rahma Manrulu	Goelectrycal for Seawater Intrusion Layer identification as a Detection of aquifer layers in Palopo
6	11:10-11:20	SC-18	Selviani Basri	Identification of Subsurface Structures of Benteng Village, Malangke District Using the Schlumberger Configuration Geoelectric Method
7	11:20-11:30	SC-19	Nyoman Sugiarta	Off-grid photovoltaic system design for a chest freezer

8	11:30-11:40	SC-20	Pauline Destinugrainy Kasi	Inventory of edible and poisonous macro fungi in sago bark waste.
9	11:40-11:50	SC-21	Sunarti Cambaba	Characteristics of Stomata of Red Shoot Leaves (<i>Syzgium oleana</i>) Based on D...
10	11:50-12:00	SC-22	Suhaeni	Activity Test of Java Bark (<i>Lamnea coromanadelica</i>) Extract Against the Growth of <i>Staphylococcus aureus</i>

ROOM 4

Moderator : Besse Helmi Mustawinar

No	Time	Code	Presenter	Title
1	10:20-10:30	TI-11	Siaulhak Siaulhak	Web Traffic Network Monitoring Information System with Routers OS API Tools and PHP Class at the Luwu Timur Communication and Information Agency
2	10:30-10:40	TI-12	Vicky Bin Djusmin	Analysis of Local Government Website's Province of South Sulawesi as a Public Information Media Service
3	10:40-10:50	TI-13	Muhammad Idham Rusdi	Augmented Reality Based Learning Media Application In Elementary School Grade 1 Thematic Books
4	10:50-11:00	TI-14	Rusmala Rusmala	Designing a monitoring application for the informatics study program of the engineering faculty of Cokroaminoto University Palopo
5	11:00-11:10	TI-15	Dianradika Prasti	Implementation Nodemcu to Control Household Electrical Device
6	11:10-11:20	TI-16	Nirsal Frabowo Praselia	Form Design of Software of Learning Result Report At Smk Negeri 9 Luwu
7	11:20-11:30	SC-23	Abdul Rais	Inventory of Resistant Water Plants to Water Pollution in Wara Selatan, Palopo City
8	11:30-11:40	SC-24	Dian Ayuning Tyas	Biological and chemical properties of <i>Zingiber cassumunar</i> Roxb. : a review
9	11:40-11:50	SC-25	Besse Helmi Mustawinar	Prediction of Positive Covid-19 Patients Using Fuzzy Time Series Cheng in South Sulawesi
10	11:50-12:00	SC-26	Nurmalasari S	Polypropylene (PP) Pyrolysis Uses Ni and NiMo Catalysts Supported in Mesoporous Silica

Parallel Session 4 (22nd of December 2020, 13:00-14:00)

ROOM 1

Moderator : Musliadi

No	Time	Code	Presenter	Title
1	13:30-13:40			
2	13:40-13:50	ED-47	Sunarni Yassa	Siving Values Character in Bugis Phrases, "Macca Na Malempu", Warani Na Magegetteng " (Local Wisdom)
3	13:50-14:00	ED-48	Supriadi	Examining Islamic Education Policies in Indonesia
4	14:00-14:10	ED-49	Irnin Agustina Dwi Astuti	Development of physics pocket books on fluid materials as teaching materials for students to learn independently
5	14:10-14:20	ED-50	Rahmawati	Using the rasch model to analyze validity and reliability of items of electrical four tier test (EFoTiT)
6	14:20-14:30	ED-51	Dinar Maftukh Fajar	Inexpensive portable handheld Van de Graff generator for demonstrating static electricity

ROOM 2

Moderator : Fahrul Basir

No	Time	Code	Presenter	Title
1	13:30-13:40			
2	13:40-13:50	ED-52	Samsir	Implementation of TVET Philosophy in the Form of Interactive Multimedia-Based Learning Media
3	13:50-14:00	ED-53	Khoiro Mahbubah	Investigating Pre-Service Science Teachers' Critical Thinking on Floating, Drifting and Sinking Concept
4	14:00-14:10	ED-54	Muhammad Habibulloh	Need Analysis of Development Student Worksheet Based on Virtual Laboratory as Support Online Learning During Covid- 19 Pandemic
5	14:10-14:20	ED-55	Fitrah al anshori	Learning Interest And Learning Outcome: The Case Of Eleventh-Grade Students In SMA Negeri 1 Palopo
6	14:20-14:30	ED-56	Fitrah Al anshori	Online Learning Effectiveness Using Youtube Learning Media During Pandemic

ROOM 3

Moderator : Salwah

No	Time	Code	Presenter	Title
1	13:30-13:40			
2	13:40-13:50	ED-57	Ridha Yulyani Wardi	The Effect of The Application of The Power of Two Learning Model on Environmental Pollution
3	13:50-14:00	ED-58	Agus Yulianto	Effectiveness of Micro Hydro Power Plant (MHPP) Module Trainer As A Learning Media for Maintenance of Turbin Cross Flow and Generator
4	14:00-14:10	ED-59	Safwan Kasma	Interactive Multimedia Development of Microsoft Excel Learning on Application Software Courses with Adobe Flash CS6
5	14:10-14:20	ED-60	Ulfi Faizah	Development of Stem-Based Mathematics Teaching Materials for Microteaching
6	14:20-14:30	ED-61	Bhakti Yoga Budi	Digital Comic Based Demonstation Method as a Learning Media in Density Concept

ROOM 4

Moderator : Abdullah Syukur

No	Time	Code	Presenter	Title
1	13:30-13:40			
2	13:40-13:50	ED-62	Tiurida Intika	Application of ETNOSPEM (Pempek Ethnoscience) Teaching Materials to Improve Science Process Skills of Elementary School Students
3	13:50-14:00	ED-63	A. Andriani Asra	Improved Learning To Write History Text Using Powtoon Media
4	14:00-14:10	ED-64	Muhammad Fajri	STEM Education through Zoom Meeting to Optimize Mathematical Thinking in Elementary Schools
5	14:10-14:20	ED-65	Rusdiana Junaid	Students' Perception on Online Learning: the Impact of Covid-19
6	14:20-14:30	ED-66	Abdullah Syukur	Hypnotic Language Patterns in Teaching English

Inexpensive portable handheld Van de Graff generator for demonstrating static electricity

Dinar Maftukh Fajar^{1*}

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Abstract. One device that is commonly used to demonstrate electrostatic phenomena is the Van de Graaff generator. However, this device is found to be expensive, relatively large in size, not easy to move, and not available in many school laboratories. This paper will describe the development of an inexpensive portable handheld Van de Graff generator created by employing second and easily available materials in the local market. This device basically works by collecting charges from two materials that rub against each other. The combination of chosen materials listed in the Triboelectric series as well as the direction of motor rotation determines the type of charge on the generator. The developed product was successfully tested by charge conduction experiment and charge type test either through a simple Coulomb experiment or by using an electrostatic polarity detector.





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This certificate is presented to
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for successfully presenting a research paper entitled:

“Inexpensive portable handheld Van de Graff generator for demonstrating static electricity”

In The 1st International Conference of Research on Education, Applied Science, Science and Technology (ICREAST 2020). Held on 21-22 December 2020 in Palopo, Indonesia.
Organized by Institute of Research and Community Service (LPPM)
Universitas Cokroaminoto Palopo.

Dr. Muhammad Ilyas, M.Pd.
Head of the LPPM

Irwan Ramli, Ph.D.
The ICREAST 2020 Chairman