

THE INTERNATIONAL CONFERENCE ON DISASTER MITIGATION AND MANAGEMENT

Online From Andalas University
Padang, Indonesia
30 September-01 October 2021

ICDMM 2021

Website: <http://psb.lppm.unand.ac.id/icdmm2021>
E-mail: icdmm@eng.unand.ac.id

ICDMM
2021
Online/Virtual Conference

Day 1: Thursday, September 30th, 2021 (all times in Indonesia Western Time / GMT+7:00)

Time	Activity	Speaker / PIC
08.00-09.00	Conference preparation. Participants join the online Conference platform (Zoom Meeting).	Committee
09.00-09.35	<i>Opening Ceremony</i>	
09.00-09.05	Indonesian Anthem: Indonesia Raya	Committee
09.05-09.15	Performing the Minangkabau Traditional Dance	Committee
09.15-09.20	Report from the Conference Chair	Prof. Dr. Eng. Fauzan
09.20-09.25	Welcome speech by the Governor of West Sumatera	Mahyeldi Ansharullah, S.P.
09.25-09.30	Welcome speech by the Rector of Universitas Andalas	Prof. Dr. Yuliandri
09.30-10.00	Conference Opening and Keynote Speech by the Head of National Agency for Disaster Management (BNPB)	Letjen Ganip Warsito (Head of BNPB, Indonesia)
09.30-12.00	<i>Plenary Session-I (Moderator : Dr. Eng. Febrin Anas Ismail)</i>	
10.00-10.30	●Keynote Speech 1	Prof. Louis Comfort (University of Pittsburgh, United States of America)
10.30-11.00	●Keynote Speech 2	Prof. Junji Kiyono (Kyoto University, Japan)
11.00-11.30	●Keynote Speech 3	Prof. I Wayan Sengara (Bandung Institute of Technology, Indonesia)
11.30-12.00	●Keynote Speech 4	Prof. Margaret Carroll Bell (Newcastle University, United Kingdom)
12.05-13.00	<i>Break</i>	
13.00-14.30	<i>Parallel Session 1: Paper Presentation</i>	
14.30-15.00	<i>Break</i>	
15.00-16.30	<i>Parallel Session 2: Paper Presentation</i>	
Zoom Meeting : https://us02web.zoom.us/j/86814255501?pwd=MHRUeFhPeHNLZ0txOUdBskFpbG93UT09 Meeting ID: 868 1425 5501 Passcode: ICDMM2021		

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ICDMM
2021
Online/Virtual Conference

Day 2: Friday, October 01st 2021 (all times in Indonesia Western Time / GMT+7:00)

Time	Activity	Speaker / PIC
08.00-09.00	Conference preparation. Participants join the online Conference platform (Zoom Meeting).	Committee
09.00-11.00	<i>Plenary Session-II (Moderator : Taufika Ophiyandri, Ph.D)</i>	
09.00-09.30	●Keynote Speech 5	Prof. Ahmad Safuan (University of Technology, Malaysia)
09.30-10.00	●Keynote Speech 6	Prof. Faisal Fathani (Gajah Mada University, Indonesia)
10.00-10.30	●Keynote Speech 7	Prof. Abdul Hakam (Andalas University, Indonesia)
10.30-11.00	●Keynote Speech 8	Dr. S.Saravanan (National Institute of Technology Tiruchirappalli, India)
11.00-14.00	<i>Break</i>	
14.00-15.30	<i>Parallel Session 3: Paper Presentation</i>	
15.30-16.00	<i>Break</i>	
16.00-17.00	<i>Special Session: Retrofitting of Non-Engineering Building (Dr. Teddy Boen, Hiroshi Imai, Lenny, Sarah E. Suryanto, and Dr. Eng. Febrin Anas Ismail)</i>	
17.00-17.15	Announcement of Best Presenter	Committee
17.15-17.30	Closing remark from the Head of Centre of Research and Community Services of Universitas Andalas	Dr.Ing-. Uyung Gatot S. Dinata
Zoom Meeting : https://us02web.zoom.us/j/86814255501?pwd=MHRUeFhPeHNLZ0txOUdBskFpbG93UT09 Meeting ID: 868 1425 5501 Passcode: ICDMM2021		

PARALLEL SESSION SCHEDULE

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : TRANSPORTATION AND LOGISTIC
ROOM : BREAKOUT ROOM 1
TIME : 13.00-14.30 WIB
SESSION CHAIR : YOSSYAFRA, Ph.D

INVITED SPEAKER : ELSA EKA PUTRI, Ph.D
TITLE : OPTIMIZING THE COMPARISON OF SAND AND CEMENT ON FOAM MORTAR

No.	PAPER CODE	TITLE	PAGE
1	1417	A study on the use of public transportation during the Covid-19 pandemic	94
2	2079	Implementation Empowering Communities in Small scale Railway Projects during Pandemi Covid 19 in West Sumatra	120
3	339	Overview of Road Performance on the Tsunami Evacuation road during the n-Covid19 pandemic	124
4	349	Assessment of Tsunami Evacuation Road Performance	125
5	2089	Motorists Movement Behaviour Analysis When Crossing An Unsignalised Intersection based on Image Captured by a Drone	151
6	719	Determination Of Flood Shelter And Evacuation Route In A Flooded Area In Rumbai Subdistrict, Pekanbaru	127
7	2819	Study Analysis Of Aslide Vulnerability In The Sub-District Of Lembah Gumanti, Solok Regency (Jalan Lubuk Selasih – Surian)	169
8	2849	The Impact Of The Pandemic On The Performance Of Public Transport Services (Case Study: Public Transportation In Padang)	171
9	2839	The Traffic Flow Characteristics Analysis Of The Tsunami Evacuation Road (Case Study: Thamrin Road Segment, Padang City)	172

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : LESSON LEARNT IN DISASTER MANAGEMENT
ROOM : BREAKOUT ROOM 2
TIME : 13.00-14.30 WIB
SESSION CHAIR : Dr. Eng. PRIMA YANE

INVITED SPEAKER : Dr. MUHAMMAD FARID
TITLE : APPLICATION OF EARTHQUAKE HAZARD MITIGATION IN
BENGKULU CITY SPATIAL PLAN USING SHEAR STRAIN
INDICATOR

No.	PAPER CODE	TITLE	PAGE
1	177	Local Wisdom Of Coastal Communities In Mitigating Earthquake Disaster Risk Reduction	77
2	217	The Preparedness of School Community in Facing Tsunami Disaster in Lhokseumawe City	78
3	2837	Establishing tsunami hazard zone in Pasir Jambak sub-district, in Padang, Indonesia	103
4	3137	"Monster VIPs": Disaster preparedness training for children with in tellectual disabilities	104
5	7017	The Concept of an Early Warning System for The Use of Nuclear Technology in Indonesia	79
6	1429	The Framing Of Decision Making Support Systems On Increasing Community Resilience In Disaster Risk Reduction Efforts: A Conceptual Approach	137
7	729	Comparative Analysis on Digital Surface Model of Urban Area from Sentinel-1 SAR Interferometry and Aerial Photogrammetry for Disaster Mitigation Plan	128
8	5169	Strategies For Strenhgtening Economy Of Smallholder Farmer Households After The 2018 Earthquakes Through Developing Agribusiness Of Vegetable And Seasonalfruits In Upland Of North Lombok West Nusa Tenggara	150

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : ENHANCING FRAMEWORK FOR DISASTER
PREPAREDNESS
ROOM : BREAKOUT ROOM 3
TIME : 13.00-14.30 WIB
SESSION CHAIR : YOSRITZAL, Ph.D

INVITED SPEAKER : MARLON ERA, Ph.D
TITLE : VERTICAL AND HORIZONTAL ACCOUNTABILITY AMONG
STAKEHOLDERS IN DISASTER PREPAREDNESS AND
RESPONSE OF TWO HIGHLY URBANIZED CITIES IN METRO
MANILA, PHILIPPINES

No.	PAPER CODE	TITLE	PAGE
1	7037	Enhancing Pandemic Resilience: Planning and Institutional Resilience, a Learning Model for Indonesia	81
2	1919	Implementation of Public Works and Housing Minister Instruction No. 02/IN/M/2020 in small scale irrigation projects during Covid 19 Pandemic in Padang and Padang Pariaman Districts	164
3	7117	Pentahelix Synergy Natural and Non Natural Disaster Management in Pidie Jaya District Aceh Province to Support National Security	89
4	7057	The Impacts of the Policies Implementation to Handle the Covid-19 Pandemic in the Field of Employment	83
5	5199	A Juridical Review Of Disaster Management Policy In Asean And The Correlation With The Domestic Management System Of Disaster In Indonesia	155
6	1819	Disasters and accidents resulting use of 3D coordination technology in civil engineering industry	161
7	2219	Modeling Of Coastal Area Management Based On Climate Change Adaptation In Bengkulu City	165

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : TSUNAMI AND SEISMIC ENGINEERING
ROOM : BREAKOUT ROOM 4
TIME : 13.00-14.30 WIB
SESSION CHAIR : MASRILAYANTI, Ph.D

INVITED SPEAKER : Prof. ERICK MAS
TITLE : DEVELOPING TSUNAMI DISASTER MITIGATION
TECHNOLOGIES FOR REAL- AND QUASI-REAL-TIME
RESPONSE

No.	PAPER CODE	TITLE	PAGE
1	7077	Potential Earthquake and Tsunami Disaster in Sulawesi (Lesson Learned Earthquake South West)	85
2	7107	Monitoring and Analysis of Seismic Data During the 2018 Sunda Strait Tsunami	88
3	713	Determination of Tsunami Run-up and Golden Time in the Megathrust Subduction Zone of the Sunda Strait Segment	90
4	7067	Model System Dynamics Potential Impact of Disasters Due to The Re-Period of the October 25, 2010 Earthquake in the Mentawai Islands	84
5	128	Accelerating Information of Tsunami Disaster Using Early Warning System (EWS) Devices: Smart Solution for Communication, Navigation and Surveillance Due To Tidal Sea Level	107
6	1579	State of the Art of Seismic Risk and Loss Assessment in Structures	142
7	929	Design Of Local Earthquake Disaster Detection Telemetry System Based On Web Server And Sms Gateway	130
8	1649	The Analysis of Urban Flood Using Synthetic Unit Hydrograph (SUH) and Its Mitigation Along Way Halim River (Case Study on Seroja Street, Tanjung Senang Distric)	158

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : GEOTECHNICAL ENGINEERING
ROOM : BREAKOUT ROOM 5
TIME : 13.00-14.30 WIB
SESSION CHAIR : Dr. ANDRIANI

INVITED SPEAKER : RUSNARDI RAHMAT PUTRA, ST, MT, Ph.D.Eng
TITLE : OBTAINED SOIL CHARACTERISTIC FROM
MICROTREMOR RESULT AND SEISMIC INTENSITY
FOR PADANG CITY, INDONESIA

No.	PAPER CODE	TITLE	PAGE
1	2039	Practical Applications of Potential Liquefaction Method Based On Grain Size and Relative Density	116
2	3118	Soil Classification at Muaro Baru Beach of Padang City Using CPT Data	117
3	818	Optimizing a modified triaxial testing for small strain zone using local displacement transducers and bender element for cement treated soft soil	113
4	2718	Effect of load on the shape of the slip surface and the velocity of the landslide on a mixture of clay sand	115
5	147	Fluid Behaviour Analysis in the Process of Liquefaction Using Korinofaction Device	74
6	1829	Liquefaction Potential Of Ubh Area Based On Grain Size And Relative Density	162
7	529	Changes in land cover to reduce erosion and peak discharge of sub-watershed of Danau Limau Manis	126

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : STRUCTURAL ENGINEERING
ROOM : BREAKOUT ROOM 1
TIME : 15.00-16.30 WIB
SESSION CHAIR : SABRIL HARIS, Ph.D

INVITED SPEAKER : ERWIN LIM, S.T., M.S., Ph.D
TITLE : PERFORMANCE BASED EVALUATION OF AN EXISTING
CONTINUOUS REINFORCED CONCRETE BRIDGE

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2	1717	Metal Cracks Detection Based On Circular Patch Microstrip Antenna	96
3	1419	Seismic Assessment toward Multi-Story Building of Steel Special Moment Frame by Considering the Setback Irregularities	136
4	5109	Analysis of Exterior Reinforced Concrete Beam	145
5	939	Comparative Study Of Sni 1726:2012 And Sni 1726:2019 Guidelines For Response Spectrum 2d Method (Study Case: Gkt Ii Building Of Bengkalis State Polytechnic)	131
6	1229	The Capacity Analysis Of Efficient Wide Flange Steel Profile As Beam Elements	133
7	1329	Assessment of Building Structure Block D of RS BMC Padang	134

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : LESSON LEARNT IN DISASTER MANAGEMENT
ROOM : BREAKOUT ROOM 2
TIME : 15.00-16.30 WIB
SESSION CHAIR : BENNY HIDAYAT, Ph.D

INVITED SPEAKER : Dr. Eng. JUNAIDI
TITLE : ANALYSIS OF PADANG CITY COMMUNITY
PREPAREDNESS TO FACE THE EARTHQUAKE AND
TSUNAMI DISASTER

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2	158	A Literature Review: Model of Disaster Risk Reduction for Decision Support System	110
3	3147	Post Disaster Reconstruction Responsive Gender In West Sumatra	104
4	148	Role of Media in Disaster Preparedness: Some Case Studies from Calamity Prone Odisha	109
5	2317	Analysis Of Capacity Communtiy Level In Various Potential Disasters At Dinoyo And Sukun Sub-District, Malang City	97
6	1599	Disaster Mitigation Local Wisdom In The Tradition Of The Minangkabau Community	144
7	1629	Empowering community through creative economy as a disaster risk reduction strategy in Indonesia.	156

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : GEOTECHNICAL ENGINEERING
ROOM : BREAKOUT ROOM 3
TIME : 15.00-16.30 WIB
SESSION CHAIR : RUSNARDI RAHMAT PUTRA, ST, MT, Ph.D.Eng

INVITED SPEAKER : Dr. ADRIN TOHARI, M.Eng
TITLE : UNDERSTANDING OF SUBSURFACE CONDITIONS
CONTROLLING FLOW LIQUEFACTION OCCURRENCE
DURING THE 2018 PALU EARTHQUAKE BASED ON
RESISTIVITY PROFILES

No.	PAPER CODE	TITLE	PAGE
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2	2129	Spatial Model of Land Subsidence Mitigation at Lowland Area.	121
3	2916	Hydraulic conductivity and calcium carbonate content of biocemented heavy-metal contaminated mine waste soil	68
4	2119	Analysis of Landslide Potential Due to Changes of Land Use/ Land-Cover at The Kuranji Watershed, Padang Using Normalized Difference Built-Up Index (NDBI)	152
5	919	Dynamic testing of sands from liquefied and non-liquefied areas in Palu	129
6	1339	Physical Changes Of Low Quality Of Clay Bricks Due To Sandy-Soil Mixture Under Combustion Performance	135
7	1519	Implementation of Earthquake Mitigation at the Engineering Faculty, University of Mataram	138

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : ENHANCING FRAMEWORK FOR DISASTER
PREPAREDNESS
ROOM : BREAKOUT ROOM 4
TIME : 15.00-16.30 WIB
SESSION CHAIR : ZULPRIANTO, Ph.D

INVITED SPEAKER : Ir. HARKUNTI PERTIWI RAHAYU, Ph.D
TITLE : SENSITIZING SOCIAL AND ECONOMIC VULNERABILITY
TOWARD PANDEMIC PREPAREDNESS AND DISASTER
RISK REDUCTION FOR AGGLOMERATION CITY

No.	PAPER CODE	TITLE	PAGE
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2	3016	Governing Sustainable Tourism in Time of COVID-19 Disaster: Empirical Evidence from Bintan, Kepulauan Riau	69
3	2216	Designing Blood Supply Policy Using Simulation Approach	66
4	7127	Comparison of Air Pollutant Standard Index Before and During the Covid-19 Pandemic in DKI Jakarta	90
5	2717	Risk Analysis of Production Process for Food SMEs using FMEA Method : A Case Study	100
6	1549	Implementation Of Non-Linear Controller On Photovoltaic Maximum Power Point Tracker For Energy Storage Equipment Charger	139
7	5209	Analysis of The Wind Power Potential as Electricity Power Used in Safety Sign Lights on Limestone Mining Hauling Roads	156
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THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : COVID 19 DISASTER
ROOM : BREAKOUT ROOM 5
TIME : 15.00-16.30 WIB
SESSION CHAIR : YENNY NARNY, Ph.D

INVITED SPEAKER : Laksamana Madya TNI Prof. Dr. Ir. AMARULLA
OCTAVIAN, ST., M.Sc., DESD

TITLE : COVID-19 THREAT PROJECTION AND ITS
INFLUENCE TOWARD NATIONAL DEFENSE
SYSTEM

No.	PAPER CODE	TITLE	PAGE
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2	7087	Balla Ewako: Community Response To The Covid-19 Pandemic Based On Local Wisdom	86
3	7097	The Covid-19 Pandemic in the Perspective of Indonesia's National Security	87
4	1317	Capabilities of the City Government in Combating Covid-19 in the City of Padang	94
5	2416	Factors associated with COVID-19 test willingness in Indonesia: Tele-survey study after 'new normal' policy in risk groups	67
6	1589	The Government Regulations On Covid-19 Pandemics In Indonesia: Implementation And Challenges	143
7	329	Managing Construction Project During The Covid-19 Pandemic : A Contractor Adaptation	123
8	138	Strengthening Social Capital of Urban Community During COVID-19 Disaster	108

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : **COVID 19 DISASTER**
ROOM : **BREAKOUT ROOM 1**
TIME : **14.00-15.30 WIB**
SESSION CHAIR : **dr HUSNA YETTI, Ph.D**

INVITED SPEAKER : **DEFRIMAN JAFRI, Ph.D**
TITLE : **THE IMPACT MODEL OF SOCIAL RESTRICTION POLICIES AND NEW HABIT ADAPTATION TO COMMUNITY MOBILITY PATTERNS IN RESPONDING AND CONTROL COVID-19 PANDEMIC IN INDONESIA**

No.	PAPER CODE	TITLE	PAGE
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2	7157	Positive Impacts Among The Negative Impacts Of The Covid-19 Pandemic For Community Life	92
3	1617	Forecast of COVID-19 Cemetery Land Needs with System Dynamics Modeling	95
4	2817	Covid-19 Pandemic Conditions: The Role of Sustainable Environment in Intentions to Give Zakat, Infaq, and Sadaqah	101
5	5179	Identification of the Causes of Cost Overrun in Construction Projects Affected by the Covid19 Pandemic	153
6	187	Health Management of College Student During the Covid-19 Pandemic	78
7	1639	Analysis of the Readiness of the Ropanasuri Special Surgery Hospital in Facing Covid-19	158
8	5129	Analysis Of Problems, Causes And Efforts To Resolve Problems In The Service Of Covid-19 Patients At The Army Hospital In Padang City	146
9	137	Collaborative Governance Model in Covid-19 Pandemic Mitigation: a temporary unconditional cash transfer program	73

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : TSUNAMI AND SEISMIC ENGINEERING
ROOM : BREAKOUT ROOM 2
TIME : 14.00-15.30 WIB
SESSION CHAIR : JATI SUNARYATI, Ph.D

INVITED SPEAKER : BAI YAN BING, Ph.D
TITLE :

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2	117	Mapping Seismic Exposure of Building based Surface Peak Ground Acceleration: Initial Seismic Risk Assessment in Bandung Basin, West Java	71
3	2029	Effect of Tsunami Loads on The Elementary School Building 23/24 Padang, Indonesia	118
4	1115	Overview of 1990s Deadly Tsunamis in Indonesia	66
5	1359	Geomagnetic Anomaly Associated With Fukushima Earthquake On February 11th 2021	136
6	5189	Comparing the evacuation speed through a Ramp and a Stair in a tsunami evacuation drill in Padang.	154
7	519	Distributed Sensor for Earthquake Identification System to Activate Tsunami Shelter Finding System	126
8	2319	Readiness Analysis Of Public Buildings In Padang City For Tsunami Temporary Evacuation Shelter	167
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FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : WATER AND RESOURCES ENGINEERING
ROOM : BREAKOUT ROOM 3
TIME : 14.00-15.30 WIB
SESSION CHAIR : Dr. Eng. JUNAIDI

INVITED SPEAKER : EKO PRADJOKO, S.T., M.Sc.
TITLE : FLOOD DISCHARGE ANALYSIS OF BRANG ODE RIVER AS
A DISASTER MITIGATION EFFORT IN KALIMANGO
VILLAGE

No.	PAPER CODE	TITLE	PAGE
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2	318	The Effect Of Land Uses Change On Infiltration Capacity And Surface Runoff At Latung Sub Watershed, Padang City Indonesia	111
3	418	The Effects of River Normalization on Flood Risk	113
4	157	Designing conduit sabo dam series as a debris flow protection structure	75
5	1559	Variations in the placement of gabions in downstream of the weir's pond against base scouring pattern	140
6	5229	Study of the effects of Check Dam Construction on the Limau Manih River using GIS	99
7	1569	Suspended sediment transport rate map for disaster mitigation in the uppercourse of Jangkok River	141
8	1719	Analyses of Flood Discharges in Cimadur River Basin, Banten Province	160

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : ENHANCING FRAMEWORK FOR DISASTER
PREPAREDNESS
ROOM : BREAKOUT ROOM 4
TIME : 14.00-15.30 WIB
SESSION CHAIR : ELSA EKA PUTRI, Ph.D

INVITED SPEAKER : YENNY NARNY, Ph.D
TITLE : COLLECTIVE MEMORIES OF THE SIROMBU COMMUNITY,
IN THE DISTRICT OF SIROMBU, WEST NIAS REGENCY ON
THE EARTHQUAKE AND TSUNAMI IN 2005 AND 2006

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2	328	Removal of Nitrate using Modified Pumice as Adsorbent for Reducing Groundwater Pollution	112
3	319	The Concept Of Determining The Participation Of Village Business Entities (Bumdes/Bumkel) In The Integration System Of State-Owned Business Entities In Managing The Kampar River Flow Region	122
4	2829	The Effectiveness Of The Non-Free Plastic Bag Policy To Reduce Plastic Waste In The Community Of Padang	98
5	167	Forms of Government Collaboration at the Local Level in Handling the Covid-19 Disaster	76
6	7047	Socio-Economic Resilience of Pidie Jaya to Against Disaster In The Terms of National Security	82
7	1839	Spatial Assessment And Health Impact Of Atmospheric Pollution In Makassar Indonesia	163
8	7027	Improving Food Security Through Urban Farming Workshop for Disaster Risk Reduction: Evidence from Jogoyudan Village, Yogyakarta as a Resilient City	80

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : STRUCTURAL ENGINEERING
ROOM : BREAKOUT ROOM 5
TIME : 14.00-15.30 WIB
SESSION CHAIR : Prof. RENDY THAMRIN

INVITED SPEAKER : Dr. Eng. YUKIHIRO MATSUMOTO
TITLE : DEVELOPMENT OF NEW FUNCTIONAL SEISMIC BRACE
USING PARTIALLY FIBRED CARBON FIBRE REINFORCED
POLYMER

No.	PAPER CODE	TITLE	PAGE
1	5119	Stability analysis of Concrete Block retaining wall based on a scaled laboratory test model	145
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3	5149	Seismic Performance of Reinforced Concrete Structure under High Intensity Earthquake Load with Performance Based Plastic Design (PBPD) Method	148
4	5159	Analysis The Effect of Various Support Distance to The Bond-Strength of Plain Anchor Bolt in Concrete	149
5	5219	Numerical Study of Perforated Steel Plate Shear Wall under Static Monotonic Load	166
6	1219	The Comparative Study Of Analyzing The T-Shaped And Square Shaped Concrete Columns	133
7	1659	Finite Element Modeling of Pull-out Test of Deformed Steel Rebar Embedded in Well-Confined Concrete under Monotonic Loading	159

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INVITED SPEAKER : MARLON ERA, Ph.D
TITLE : VERTICAL AND HORIZONTAL ACCOUNTABILITY AMONG
STAKEHOLDERS IN DISASTER PREPAREDNESS AND
RESPONSE OF TWO HIGHLY URBANIZED CITIES IN METRO
MANILA, PHILIPPINES

No.	PAPER CODE	TITLE	PAGE
1	7037	Enhancing Pandemic Resilience: Planning and Institutional Resilience, a Learning Model for Indonesia	81
2	1919	Implementation of Public Works and Housing Minister Instruction No. 02/IN/M/2020 in small scale irrigation projects during Covid 19 Pandemic in Padang and Padang Pariaman Districts	164
3	7117	Pentahelix Synergy Natural and Non Natural Disaster Management in Pidie Jaya District Aceh Province to Support National Security	89
4	7057	The Impacts of the Policies Implementation to Handle the Covid-19 Pandemic in the Field of Employment	83
5	5199	A Juridical Review Of Disaster Management Policy In Asean And The Correlation With The Domestic Management System Of Disaster In Indonesia	155
6	1819	Disasters and accidents resulting use of 3D coordination technology in civil engineering industry	161
7	2219	Modeling Of Coastal Area Management Based On Climate Change Adaptation In Bengkulu City	165

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : TSUNAMI AND SEISMIC ENGINEERING
ROOM : BREAKOUT ROOM 4
TIME : 13.00-14.30 WIB
SESSION CHAIR : MASRILAYANTI, Ph.D

INVITED SPEAKER : Prof. ERICK MAS
TITLE : DEVELOPING TSUNAMI DISASTER MITIGATION
TECHNOLOGIES FOR REAL- AND QUASI-REAL-TIME
RESPONSE

No.	PAPER CODE	TITLE	PAGE
1	7077	Potential Earthquake and Tsunami Disaster in Sulawesi (Lesson Learned Earthquake South West)	85
2	7107	Monitoring and Analysis of Seismic Data During the 2018 Sunda Strait Tsunami	88
3	713	Determination of Tsunami Run-up and Golden Time in the Megathrust Subduction Zone of the Sunda Strait Segment	90
4	7067	Model System Dynamics Potential Impact of Disasters Due to The Re-Period of the October 25, 2010 Earthquake in the Mentawai Islands	84
5	128	Accelerating Information of Tsunami Disaster Using Early Warning System (EWS) Devices: Smart Solution for Communication, Navigation and Surveillance Due To Tidal Sea Level	107
6	1579	State of the Art of Seismic Risk and Loss Assessment in Structures	142
7	929	Design Of Local Earthquake Disaster Detection Telemetry System Based On Web Server And Sms Gateway	130
8	1649	The Analysis of Urban Flood Using Synthetic Unit Hydrograph (SUH) and Its Mitigation Along Way Halim River (Case Study on Seroja Street, Tanjung Senang Distric)	158

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THE ICDMM 2021 : GEOTECHNICAL ENGINEERING
ROOM : BREAKOUT ROOM 5
TIME : 13.00-14.30 WIB
SESSION CHAIR : Dr. ANDRIANI

INVITED SPEAKER : RUSNARDI RAHMAT PUTRA, ST, MT, Ph.D.Eng
TITLE : OBTAINED SOIL CHARACTERISTIC FROM
MICROTREMOR RESULT AND SEISMIC INTENSITY
FOR PADANG CITY, INDONESIA

No.	PAPER CODE	TITLE	PAGE
1	2039	Practical Applications of Potential Liquefaction Method Based On Grain Size and Relative Density	116
2	3118	Soil Classification at Muaro Baru Beach of Padang City Using CPT Data	117
3	818	Optimizing a modified triaxial testing for small strain zone using local displacement transducers and bender element for cement treated soft soil	113
4	2718	Effect of load on the shape of the slip surface and the velocity of the landslide on a mixture of clay sand	115
5	147	Fluid Behaviour Analysis in the Process of Liquefaction Using Korinofaction Device	74
6	1829	Liquefaction Potential Of Ubh Area Based On Grain Size And Relative Density	162
7	529	Changes in land cover to reduce erosion and peak discharge of sub-watershed of Danau Limau Manis	126

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : STRUCTURAL ENGINEERING
ROOM : BREAKOUT ROOM 1
TIME : 15.00-16.30 WIB
SESSION CHAIR : SABRIL HARIS, Ph.D

INVITED SPEAKER : ERWIN LIM, S.T., M.S., Ph.D
TITLE : PERFORMANCE BASED EVALUATION OF AN EXISTING
CONTINUOUS REINFORCED CONCRETE BRIDGE

No.	PAPER CODE	TITLE	PAGE
1	2019	Assessment and Retrofitting of Nursing Faculty Building of Andalas University, Indonesia	117
2	1717	Metal Cracks Detection Based On Circular Patch Microstrip Antenna	96
3	1419	Seismic Assessment toward Multi-Story Building of Steel Special Moment Frame by Considering the Setback Irregularities	136
4	5109	Analysis of Exterior Reinforced Concrete Beam	145
5	939	Comparative Study Of Sni 1726:2012 And Sni 1726:2019 Guidelines For Response Spectrum 2d Method (Study Case: Gkt Ii Building Of Bengkalis State Polytechnic)	131
6	1229	The Capacity Analysis Of Efficient Wide Flange Steel Profile As Beam Elements	133
7	1329	Assessment of Building Structure Block D of RS BMC Padang	134

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THE ICDMM 2021 : LESSON LEARNT IN DISASTER MANAGEMENT
ROOM : BREAKOUT ROOM 2
TIME : 15.00-16.30 WIB
SESSION CHAIR : BENNY HIDAYAT, Ph.D

INVITED SPEAKER : Dr. Eng. JUNAIDI
TITLE : ANALYSIS OF PADANG CITY COMMUNITY
PREPAREDNESS TO FACE THE EARTHQUAKE AND
TSUNAMI DISASTER

No.	PAPER CODE	TITLE	PAGE
1	7167	Lesson Learn Earthquake Disaster in Pidie Jaya Aceh in 2016 To Realize a Disaster Resistent Community	93
2	158	A Literature Review: Model of Disaster Risk Reduction for Decision Support System	110
3	3147	Post Disaster Reconstruction Responsive Gender In West Sumatra	104
4	148	Role of Media in Disaster Preparedness: Some Case Studies from Calamity Prone Odisha	109
5	2317	Analysis Of Capacity Communtiy Level In Various Potential Disasters At Dinoyo And Sukun Sub-District, Malang City	97
6	1599	Disaster Mitigation Local Wisdom In The Tradition Of The Minangkabau Community	144
7	1629	Empowering community through creative economy as a disaster risk reduction strategy in Indonesia.	156

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THE ICDMM 2021 : GEOTECHNICAL ENGINEERING
ROOM : BREAKOUT ROOM 3
TIME : 15.00-16.30 WIB
SESSION CHAIR : RUSNARDI RAHMAT PUTRA, ST, MT, Ph.D.Eng

INVITED SPEAKER : Dr. ADRIN TOHARI, M.Eng
TITLE : UNDERSTANDING OF SUBSURFACE CONDITIONS
CONTROLLING FLOW LIQUEFACTION OCCURRENCE
DURING THE 2018 PALU EARTHQUAKE BASED ON
RESISTIVITY PROFILES

No.	PAPER CODE	TITLE	PAGE
1	2059	Planning of the foundation a three-story building constructed on liquefaction potential area in Air Tawar Estuary of Padang City	119
2	2129	Spatial Model of Land Subsidence Mitigation at Lowland Area.	121
3	2916	Hydraulic conductivity and calcium carbonate content of biocemented heavy-metal contaminated mine waste soil	68
4	2119	Analysis of Landslide Potential Due to Changes of Land Use/ Land-Cover at The Kuranji Watershed, Padang Using Normalized Difference Built-Up Index (NDBI)	152
5	919	Dynamic testing of sands from liquefied and non-liquefied areas in Palu	129
6	1339	Physical Changes Of Low Quality Of Clay Bricks Due To Sandy-Soil Mixture Under Combustion Performance	135
7	1519	Implementation of Earthquake Mitigation at the Engineering Faculty, University of Mataram	138

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THE ICDMM 2021 : **ENHANCING FRAMEWORK FOR DISASTER PREPAREDNESS**
ROOM : **BREAKOUT ROOM 4**
TIME : **15.00-16.30 WIB**
SESSION CHAIR : **ZULPRIANTO, Ph.D**

INVITED SPEAKER : **Ir. HARKUNTI PERTIWI RAHAYU, Ph.D**
TITLE : **SENSITIZING SOCIAL AND ECONOMIC VULNERABILITY TOWARD PANDEMIC PREPAREDNESS AND DISASTER RISK REDUCTION FOR AGGLOMERATION CITY**

No.	PAPER CODE	TITLE	PAGE
1	118	Managing Policies for Stunting Prevention During The Covid-19 Disaster: The Case of West Sumatra Province	106
2	3016	Governing Sustainable Tourism in Time of COVID-19 Disaster: Empirical Evidence from Bintan, Kepulauan Riau	69
3	2216	Designing Blood Supply Policy Using Simulation Approach	66
4	7127	Comparison of Air Pollutant Standard Index Before and During the Covid-19 Pandemic in DKI Jakarta	90
5	2717	Risk Analysis of Production Process for Food SMEs using FMEA Method : A Case Study	100
6	1549	Implementation Of Non-Linear Controller On Photovoltaic Maximum Power Point Tracker For Energy Storage Equipment Charger	139
7	5209	Analysis of The Wind Power Potential as Electricity Power Used in Safety Sign Lights on Limestone Mining Hauling Roads	156
8	1139	Evaluation of Reproductive Health Program during Disaster in Solok Selatan Regency, West Sumatera Province	132
9	279	Impacts Of Covid-19 Pandemic In West Sumatra Province	168

THURSDAY, September 30th 2021 (Conference Day 1)

THE ICDMM 2021 : COVID 19 DISASTER
ROOM : BREAKOUT ROOM 5
TIME : 15.00-16.30 WIB
SESSION CHAIR : YENNY NARNY, Ph.D

INVITED SPEAKER : Laksamana Madya TNI Prof. Dr. Ir. AMARULLA
OCTAVIAN, ST., M.Sc., DESD

TITLE : COVID-19 THREAT PROJECTION AND ITS
INFLUENCE TOWARD NATIONAL DEFENSE
SYSTEM

No.	PAPER CODE	TITLE	PAGE
1	3026	The performance of implementation movement restrictions during Covid-19 pandemic in West Sumatera and its impact	70
2	7087	Balla Ewako: Community Response To The Covid-19 Pandemic Based On Local Wisdom	86
3	7097	The Covid-19 Pandemic in the Perspective of Indonesia's National Security	87
4	1317	Capabilities of the City Government in Combating Covid-19 in the City of Padang	94
5	2416	Factors associated with COVID-19 test willingness in Indonesia: Tele-survey study after 'new normal' policy in risk groups	67
6	1589	The Government Regulations On Covid-19 Pandemics In Indonesia: Implementation And Challenges	143
7	329	Managing Construction Project During The Covid-19 Pandemic : A Contractor Adaptation	123
8	138	Strengthening Social Capital of Urban Community During COVID-19 Disaster	108

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : COVID 19 DISASTER
ROOM : BREAKOUT ROOM 1
TIME : 14.00-15.30 WIB
SESSION CHAIR : dr HUSNA YETTI, Ph.D

INVITED SPEAKER : DEFRIMAN JAFRI, Ph.D
TITLE : THE IMPACT MODEL OF SOCIAL RESTRICTION POLICIES
AND NEW HABIT ADAPTATION TO COMMUNITY
MOBILITY PATTERNS IN RESPONDING AND CONTROL
COVID-19 PANDEMIC IN INDONESIA

No.	PAPER CODE	TITLE	PAGE
1	7147	Natural Disasters and Covid-19: Health Worker Preparedness and Response	91
2	7157	Positive Impacts Among The Negative Impacts Of The Covid-19 Pandemic For Community Life	92
3	1617	Forecast of COVID-19 Cemetery Land Needs with System Dynamics Modeling	95
4	2817	Covid-19 Pandemic Conditions: The Role of Sustainable Environment in Intentions to Give Zakat, Infaq, and Sadaqah	101
5	5179	Identification of the Causes of Cost Overrun in Construction Projects Affected by the Covid19 Pandemic	153
6	187	Health Management of College Student During the Covid-19 Pandemic	78
7	1639	Analysis of the Readiness of the Ropanasuri Special Surgery Hospital in Facing Covid-19	158
8	5129	Analysis Of Problems, Causes And Efforts To Resolve Problems In The Service Of Covid-19 Patients At The Army Hospital In Padang City	146
9	137	Collaborative Governance Model in Covid-19 Pandemic Mitigation: a temporary unconditional cash transfer program	73

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : TSUNAMI AND SEISMIC ENGINEERING
ROOM : BREAKOUT ROOM 2
TIME : 14.00-15.30 WIB
SESSION CHAIR : JATI SUNARYATI, Ph.D

INVITED SPEAKER : BAI YAN BING, Ph.D
TITLE :

No.	PAPER CODE	TITLE	PAGE
1	127	Seismic Hazard on West Bandung District Using Non-Linear Earthquake Response Analysis	72
2	117	Mapping Seismic Exposure of Building based Surface Peak Ground Acceleration: Initial Seismic Risk Assessment in Bandung Basin, West Java	71
3	2029	Effect of Tsunami Loads on The Elementary School Building 23/24 Padang, Indonesia	118
4	1115	Overview of 1990s Deadly Tsunamis in Indonesia	66
5	1359	Geomagnetic Anomaly Associated With Fukushima Earthquake On February 11th 2021	136
6	5189	Comparing the evacuation speed through a Ramp and a Stair in a tsunami evacuation drill in Padang.	154
7	519	Distributed Sensor for Earthquake Identification System to Activate Tsunami Shelter Finding System	126
8	2319	Readiness Analysis Of Public Buildings In Padang City For Tsunami Temporary Evacuation Shelter	167
9	1939	The Earthquake Of 1926 In Padang Panjang West Sumatra	165

FRIDAY, October 01st 2021 (Conference Day 2)

THE ICDMM 2021 : WATER AND RESOURCES ENGINEERING
ROOM : BREAKOUT ROOM 3
TIME : 14.00-15.30 WIB
SESSION CHAIR : Dr. Eng. JUNAIDI

INVITED SPEAKER : EKO PRADJOKO, S.T., M.Sc.
TITLE : FLOOD DISCHARGE ANALYSIS OF BRANG ODE RIVER AS
A DISASTER MITIGATION EFFORT IN KALIMANGO
VILLAGE

No.	PAPER CODE	TITLE	PAGE
1	2827	Optimization Of Land Use To Reduce Surface Flows And Erosion In Kuranji Watershed	102
2	318	The Effect Of Land Uses Change On Infiltration Capacity And Surface Runoff At Latung Sub Watershed, Padang City Indonesia	111
3	418	The Effects of River Normalization on Flood Risk	113
4	157	Designing conduit sabo dam series as a debris flow protection structure	75
5	1559	Variations in the placement of gabions in downstream of the weir's pond against base scouring pattern	140
6	5229	Study of the effects of Check Dam Construction on the Limau Manih River using GIS	99
7	1569	Suspended sediment transport rate map for disaster mitigation in the uppercourse of Jangkok River	141
8	1719	Analyses of Flood Discharges in Cimadur River Basin, Banten Province	160

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THE ICDMM 2021 : ENHANCING FRAMEWORK FOR DISASTER
PREPAREDNESS
ROOM : BREAKOUT ROOM 4
TIME : 14.00-15.30 WIB
SESSION CHAIR : ELSA EKA PUTRI, Ph.D
YENNY NARNY, Ph.D
INVITED SPEAKER : COLLECTIVE MEMORIES OF THE SIROMBU COMMUNITY,
TITLE : IN THE DISTRICT OF SIROMBU, WEST NIAS REGENCY ON
THE EARTHQUAKE AND TSUNAMI IN 2005 AND 2006

No.	PAPER CODE	TITLE	PAGE
1	828	Modeling SO ² Degassing of the 1990-1992 Unrest in Merapi Volcano Using Telemetric Monitoring Data	114
2	328	Removal of Nitrate using Modified Pumice as Adsorbent for Reducing Groundwater Pollution	112
3	319	The Concept Of Determining The Participation Of Village Business Entities In The Integration System Of State-Owned Business Entities In Managing The Kampar River Flow Region	122
4	2829	The Effectiveness Of The Non-Free Plastic Bag Policy To Reduce Plastic Waste In The Community Of Padang	98
5	167	Forms of Government Collaboration at the Local Level in Handling the Covid-19 Disaster	76
6	7047	Socio-Economic Resilience of Pidie Jaya to Against Disaster In The Terms of National Security	82
7	1839	Spatial Assessment And Health Impact Of Atmospheric Pollution In Makassar Indonesia	163
8	7027	Improving Food Security Through Urban Farming Workshop for Disaster Risk Reduction: Evidence from Jogoyudan Village, Yogyakarta as a Resilient	80
9	5169	Strategies For Strenhgtening Economy Of Smallholder Farmer Households After The 2018 Earthquakes Through Developing Agribusiness Of Vegetable And Seasonalfruits In Upland Of North Lombok West Nusa Tenggara	150

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THE ICDMM 2021 : STRUCTURAL ENGINEERING
ROOM : BREAKOUT ROOM 5
TIME : 14.00-15.30 WIB
SESSION CHAIR : Prof. RENDY THAMRIN

INVITED SPEAKER : Dr. Eng. YUKIHIRO MATSUMOTO
TITLE : DEVELOPMENT OF NEW FUNCTIONAL SEISMIC BRACE
USING PARTIALLY FIBRED CARBON FIBRE REINFORCED
POLYMER

No.	PAPER CODE	TITLE	PAGE
1	5119	Stability analysis of Concrete Block retaining wall based on a scaled laboratory test model	145
2	5139	Flexural Capacity of RC Beams Strengthened with Near Surface Mounted Steel Bars	147
3	5149	Seismic Performance of Reinforced Concrete Structure under High Intensity Earthquake Load with Performance Based Plastic Design (PBPD) Method	148
4	5159	Analysis The Effect of Various Support Distance to The Bond-Strength of Plain Anchor Bolt in Concrete	149
5	5219	Numerical Study of Perforated Steel Plate Shear Wall under Static Monotonic Load	166
6	1219	The Comparative Study Of Analyzing The T-Shaped And Square Shaped Concrete Columns	133
7	1659	Finite Element Modeling of Pull-out Test of Deformed Steel Rebar Embedded in Well-Confined Concrete under Monotonic Loading	159