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Ir. Rahmi Karolina, S.T, M.T, IPM, born in Medan on March 18, 1982, currently serves as Head of the Technical Implementation Unit of the USU Integrated Research Laboratory and one of the lecturers at the Department of Civil Engineering, Faculty of Engineering, USU and also works as an Associate Engineer. She obtained her Bachelor of Civil Engineering in 2005 and Master of Civil Engineering in 2008 and is currently continuing her doctoral education at Universitas Sumatera Utara.

Publications

2023

Jurnal nasional

Panel products made of oil palm trunk bagasse (OPTB) and MMA (Methyl methacrylate)-styrofoam binder

RAHMI KAROLINA , ARIF NURYAWAN , IWAN RISNASARI

2019

Jurnal internasional

Leaf disease classification using advanced SVM algorithm

RAHMI KAROLINA

2024

Book chapter internasional

Study on Compressive Strength of Geopolymer Mortar Based on Fly Ash and GGBFS with Various Molar Variations

RAHMI KAROLINA

2024

Jurnal internasional bereputasi

Application of Pervious Concrete Principles on U-Ditch Covers in Overcoming Puddles

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2020

Jurnal internasional

Effect of shape of test specimen on the shear strength of bamboo from eastern region of sumatera uta

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2019

Jurnal internasional

Development of interlock bricks with eruption ash of mount sinabung as one of its constituent materi

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2020

Jurnal internasional

The analysis of tensile strength and elasticity in slag concrete with curing variations at 90 days a

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2020

Jurnal internasional

Effect of various curing on high strength concrete using slag cement

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2020

Jurnal internasional

Effect of various commercial of Na_2SiO_3 on compressive strength of Fly ash-bas

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2020

Jurnal internasional

Compressive and tensile strength of bamboo species

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2024

Jurnal internasional bereputasi

The Application of Super Absorbent Polymer in Self-Healing Mortar: The Effect on Mechanical Properties

AGUSTINA ARI MURTI BUDI HASTUTI , PUPUT RISDANARENI , RAHMI KAROLINA , KHADIJAH , B SRI UMNIATI , IRFAN MUSTAFA , Muhammad Mustafa Al Bakri Abdullah

2017

Jurnal internasional

APPLICATION OF OIL PALM EMPTY FRUIT BUNCH FIBERS IN STRENGTH IMPROVEMENT AS A FIBER REINFORCED CONCRETE

RAHMI KAROLINA

2020

Jurnal internasional

The analysis of tensile strength and elasticity in slag concrete with curing variations at 90 days age

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2022

Prosiding seminar internasional

Design of room capacity measurement and body temperature detection based on atmega328 microcontroller

LUKMAN HAKIM , RAHMI KAROLINA , AZHARI

2014

Jurnal internasional

dkk. 2014. The Use of Volcanic Ash of Mount Sinabung Eruption as the Subtitution of fine Agregate in Making Batako (Massproduced Brick)

RAHMI KAROLINA

2024

Jurnal internasional bereputasi

Ecological Aspects in Urban Streetscape Design Based on Users' Preferences Towards Green City

RAHMI KAROLINA

2020

Jurnal internasional

The effect of rice straw fiber addition as sound silencer and its effect to concrete mechanical prop

RAHMI KAROLINA

2020

Jurnal internasional

Effect of shape of test specimen on the shear strength of bamboo from eastern region of sumatera utara

RAHMI KAROLINA

2023

Prosiding seminar internasional

Synthesis and characterization of nanocellulose from durian (*Durio zibethinus*) peel waste

ERNI MISRAN , RAHMI KAROLINA , ZIKRI NOER , AGUNG PRATAMA

2022

Prosiding seminar internasional

Effect of volcanic ash as partial replacement of groundgranulated blast-furnace slag based alkaline activated mortar

RAHMI KAROLINA , ING JOHANNES TARIGAN

2019

Jurnal internasional

Analysis of Post-Combustion Concrete Study with the Addition of Superplasticizer

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2020

Jurnal internasional

Geopolymer Concrete Made From Volcanic Ash of Mount Sinabung

RAHMI KAROLINA

2014

Jurnal internasional

The Use of Volcanic Ash of Mount Sinabung Eruption as thr Subtitution of fine Agregate in Making Batako (Massproduced Brick)

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2020

Jurnal internasional bereputasi

The effect of borax solution as preservative to the mechanical properties of bamboo

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2024

Prosiding seminar internasional

Sustainable Streetscape Design Based on Functional Aspects Case Study: Medan City, Indonesia

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2019

Jurnal internasional

The Effect of Clamshell Ash Substitution to the Mechanical Properties of Concrete

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2023

Prosiding seminar internasional

Physical and mechanical properties of commercial fish feed with addition of fish scales and starch

ADRIAN HILMAN , AZHARI , RAHMI KAROLINA

2018

Jurnal internasional

The Effect of Admixture Type F and Silica Fume on High Early Strength Self Compacting Concrete

RAHMI KAROLINA

2019

Jurnal nasional

EXPANSION OF THE READING SPACE BUILDING TO IMPROVE THE QUALITY OF EDUCATION FOR COMMUNITY CHILDREN BELAWAN NELAYAN

RAHMI KAROLINA

2024

Jurnal internasional bereputasi

Physico-chemical and structural characterization of mixed natural polymer hydrogels under simulated gastrointestinal fluid

AGUSTINA ARI MURTI BUDI HASTUTI , KHADIJAH , PUPUT RISDANARENI , RAHMI KAROLINA , IRFAN MUSTAFA

2014

Jurnal internasional

The Use of Volcanic Ash of Mount Sinabung Eruption as the Substitution of Fine Aggregate in Makin Batako (Mass-Produced Brick)

RAHMI KAROLINA

2020

Jurnal internasional

Effect of various commercial of Na₂SiO₃ on compressive strength of Fly ash-based alkaline activated mortar

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2020

Jurnal internasional

Shear behavior of interlocking masonry brick wall portal with the substitution of Mount Sinabung vol

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2020

Jurnal internasional

Crack Patterns Analysis on Structural Beam with Slag Cement

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2025

Jurnal internasional bereputasi

pH responsive natural-based hydrogel: Application in bacteria-based self-healing mortar

AGUSTINA ARI MURTI BUDI HASTUTI , PUPUT RISDANARENI , KHADIJAH , RAHMI KAROLINA , IRFAN MUSTAFA , STEFANUS ADI KRISTIAWAN , MUHAMMAD FATKURROHMAN TONTOWI , Andri Kusbiantoro

2024

Jurnal internasional bereputasi

THE APPLICATION OF SUPER ABSORBENT POLYMER IN SELF-HEALING MORTAR: THE EFFECT ON MECHANICAL PROPERTIES

PUPUT RISDANARENI , KHADIJAH , RAHMI KAROLINA , AGUSTINA ARI MURTI BUDI HASTUTI , M.M.A.B. Abdullah , B SRI UMNIATI , IRFAN MUSTAFA

2020

Jurnal internasional

Analysis of mechanical and physical behaviour of post-burn concrete

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2022

Jurnal internasional bereputasi

Synthesis of Volcanic Ash-based Geopolymer Mortar Designed by the Taguchi Method

ING JOHANNES TARIGAN , RAHMI KAROLINA

2020

Jurnal internasional

Shear behavior of interlocking masonry brick wall portal with the substitution of Mount Sinabung volcanic ash against pushover static load

RAHMI KAROLINA

2018

Jurnal internasional

Development of Interlock Bricks with Eruption Ash of Mount Sinabung as One of Its Constituent Materials

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2020

Jurnal internasional

Comparison of The Effect of Steel Slag Usage As a Fine Aggregate Against Compressive Strength And Flexure on Reinforced Concrete With Normal Concrete (Experimental Study)

RAHMI KAROLINA

2022

Buku referensi

Karakterisasi Termal Material Menggunakan Differential Scanning Calorimetry

AZHARI , RAHMI KAROLINA

2020

Jurnal internasional

The effect of rice straw fiber addition as sound silencer and its effect to concrete mechanical properties

RAHMI KAROLINA

2023

Prosiding seminar internasional

Compressive strength of geopolymer concrete from volcanic ash calcination

ING JOHANNES TARIGAN , RAHMI KAROLINA

2020

Jurnal internasional

Integrated systems of major drainage and minor drainage towards low impact development

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2020

Jurnal internasional

Modified strength of materials and energy approach to determine effective properties of piezoelectri

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Researches

2022

Pemanfaatan Nanokristalin Abu Vulkanik (NKAV) Gunung Sinabung dalam Konstruksi Hijau Sebagai Bahan Baku Beton Tanpa Semen

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2025

Investigasi Terhadap Komposit yang Terbentuk dari Crumb Rubber-ECC dengan Kerikil-Aspal Porus Berbasis Styrofoam dan Crumb Rubber Berdasarkan Uji Tekan dan Lentur

RAHMI KAROLINA

2013

Penelitian Hibah Bersaing

Pengembangan Genteng Beton Ringan Sebagai Alternatif Penutup Atap

SYAHRIZAL , RAHMI KAROLINA

2022

Studi Penggunaan Ph Responsive Hydrogel Sebagai Material Pelindung Bakteri Dalam Pembuatan Beton Self-Healing

KHADIJAH , AGUSTINA ARI MURTI BUDI HASTUTI , PUPUT RISDANARENI , RAHMI KAROLINA

2013

Penelitian Hibah Bersaing

Pengembangan Peredam Leleh Baja (Steel Yielding Damper) Sebagai Anti Gempa Jenis

YURISMAN , DANIEL , RAHMI KAROLINA

2022

Studi Penggunaan Ph Responsive Hydrogel Sebagai Material Pelindung Bakteri dalam Pembuatan Beton Self-Healing

KHADIJAH , PUPUT RISDANARENI , RAHMI KAROLINA

2022

Ecoprinting pada Kain Rami, Pengujian Kualitasnya dan Aplikasinya untuk Produk Sustainable Fashion dan Home Decor, Serta Impactnya Terhadap Lingkungan

RAHMI KAROLINA

2022

Penelitian Kerjasama Antar Perguruan Tinggi

Studi Penggunaan PH Responsive Hydrogel Sebagai Material Pelindung Bakteri dalam Pembuatan Beton SELF-HEALING

RAHMI KAROLINA

2018

Beton Geopolimer Berbahan Dasar Abu Erupsi Gunung Sinabung

SYAHRIZAL , RAHMI KAROLINA

Community Services

2023

Ipteks Bagi Masyarakat

Tutprial dan Workshop Program 5S/5R Untuk Tempat Kerja

M. SABRI , IKHWANSYAH ISRANURI , ADE IRWAN , BUSTAMI SYAM , MARAGHI MUTTAQIN , RAHMI KAROLINA

2023

tutorial dan workshop program 5S/5R untuk tempat kerja

M. SABRI , IKHWANSYAH ISRANURI , ADE IRWAN , BUSTAMI SYAM , MARAGHI MUTTAQIN , RAHMI KAROLINA

2021

PENGUJIAN SOIL INVESTIGASI PEMBANGUNAN LIFT PADA GEDUNG BKS PPS (AVROS) SEBAGAI PENGEMBANGAN MUSPERIN 2 MEDAN

ING JOHANNES TARIGAN , ISNEN FITRI , RAHMI KAROLINA , HANA FORTUNA SURBAKTI , RAHMAT HIDAYATULLAH , EWINTONI DWI CAHYO TINAMBUNAN , MARTHA OKTAVIA MALAU

2021

PENGUJIAN KEKUATAN STRUKTUR BETON BANGUNAN CAGAR BUDAYA BKS PPS “ (AVROS) MEDAN

ING JOHANNES TARIGAN , ISNEN FITRI , RAHMI KAROLINA , EWINTONI DWI CAHYO TINAMBUNAN , MARTHA OKTAVIA MALAU , HANA FORTUNA SURBAKTI , RAHMAT HIDAYATULLAH

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2020

Hak cipta nasional

Atomic Force Microscope (Afm) Park Xe7 : Teori Dan Aplikasinya

RAHMI KAROLINA

2020

Hak cipta nasional

Karakterisasi Termal Material Menggunakan Differential Scanning Calorimetry (DSC)

AZHARI , RAHMI KAROLINA

2020

Paten nasional

MORTAR GEOPOLIMER BERBAHAN DASAR ABU ERUPSI GUNUNG SINABUNG

ING JOHANNES TARIGAN , RAHMI KAROLINA
