# CURRICULUM VITAE


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|---|---|---|
| Name | : | Wahyuniarsih Sutrisno |
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| Birth Place & Date | : | Surabaya, June 12, 1990 |
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## EDUCATION

**Ph.D.** — **Institut Teknologi Sepuluh Nopember** — 2017
Dissertation: Predictive Model of Crack in Reinforced Concrete Induced by Non-Uniform Reinforcement Corrosion due to Chloride Infiltration Considering Wetting and Drying Cycle
Supervisor: Prof. Priyo Suprobo, Dr. Endah Wahyuni, Dr. Data Iranata

**MS** — **Institut Teknologi Sepuluh Nopember** — 2014
Thesis: Finite Element Model to Analyze Behavior of RC Slabs Exposed to Fire
Supervisor: Dr. Endah Wahyuni

**BS** — **Institut Teknologi Sepuluh Nopember** — 2012
Thesis: Study of Fire Resistance Design of Reinforced Concrete Element According with ACI 216R-89
Supervisor: Dr. Endah Wahyuni, Dr. Pujo Aji

**Visiting** — **Kumamoto University Japan** — 2016
Research: Microstructural Investigation of Reinforced Concrete Exposed to Marine Environment
Supervisor: Prof. Mitsuhiro Shigeishi

## CURRENT FULL TIME POSITION

**Lecturer**
Department of Civil Engineering – Institut Teknologi Sepuluh Nopember
ITS Campus, Keputih Sukolilo

## RESEARCH OVERVIEW

**Research Interest**

- Corrosion induced cracking in reinforced concrete
- The durability of reinforced concrete structure
- Concrete materials
- Reinforced Concrete Structure

**Scopus ID** **:** 57193142511 (H-Index: 2; Citation: 6)

**Orchid ID** **:** http://orcid.org/0000-0002-1973-5037

**Google Scholar ID** **:** Wahyuniarsih Sutrisno (H-Index: 2; Citation: 11)

**Professional Reg.** **:** American Concrete Institute

**Current Research Project**

- Development of Integrated Durability Assessment System for Reinforced Concrete Infrastructure exposed to Marine Environment
- Improving the Durability Performance of Marine Infrastructure using the Engineered Cementitious Composite
- Development of Ecofriendly Integrated Structural Health Monitoring System for Detecting Corrosion in Marine Structures.

## EMPLOYMENT AND PROFESSIONAL EXPERIENCES

**Lecturer, Department of Civil Engineering ITS** 2019- present

**Research Associate, Concrete Laboratory ITS** 2017-2018

**Technical Team**
Revision of Indonesian Standard (SNI) 2847:2013 "Building Code Requirements for Structural Concrete" 2018

**Teaching Assistant at Institut Teknologi Sepuluh Nopember** 2013-2018
Mechanics of Materials, Statically Determinate Structures, Reinforced Concrete Element Design.

**Tutor and Grader at Institut Teknologi Sepuluh Nopember** 2010-2018
Applied Engineering Mechanics, Indeterminate Static Structures, Mechanics of Materials.

**Concrete and Structural Engineer (Freelance)** 2014-2018
Basic Design of Joyoboyo Bridge
Re-Design of PT. PLN Madiun Building
Assessment of hanger and support boiler PT PJB PLTU Paiton

**Research Assistant for Laboratory Based Innovative Grant** 2017
Adhesive Connection for Cold-Formed Lightweight Steel Structures.

**Research Assistant for EPI UNET Research Grant** 2016
Vulnerability Assessment for Reinforced concrete After Earthquake.

**Lecturer at Universitas Pembangunan Nasional Jatim** 2015-2016
Reinforced Concrete Element Design, Concrete and Building Structures.

**Research Assistant for Excellent Higher Education Research Grant** 2013
Robustness Optimization of Adhesively Cold Formed Steel Bonded Structures.

**Research Assistant for Excellent Higher Education Research Grant** 2013-2015
Effect of Snap Loading Cable to Dynamic Response of Submerged Floating Tunnel Structure Subjected to Hydrodynamic Load.

**Research Assistant for Strategic National Research Grant** 2013-2015
Vulnerability Assessment for Reinforced concrete After Earthquake.

**PT. DIPA PUSAKA BALI** 2012
Estimator

## ENGINEERING PROJECT

**2020**

1. Rapid Assessment and Survey of Home Construction Quality of BSPS Recipients East Java Region Batch 2
2. Assessment and Strengthening Project of Jetty Structure of Nilam, Mirah, Jamrud and Kalimas Terminals Perak Surabaya
3. Assessment of Main Office Building of PT. Pertamina (Persero) Jakarta

**2019**

1. Rapid Assessment and Survey of Home Construction Quality of BSPS Recipients East Java Region Batch 2

2. Survey and Structural Analysis of Pedestrian Bridge (JPO) Ahmad Yani Surabaya
3. Assessment of Spec CT and Radiology Room RSUD Dr. Soetomo Surabaya
4. Structural Feasibility Assessment of Airlangga University Syariah Tower Building Project
5. Assessment of Warehouse Building of PT PLN Persero UP 3 Mojokerto
6. Assessment of Warehouse Building of PT PLN Persero ULP Mojoagung Jombang
7. Assessment of Jagir Bridge Wonokromo Surabaya

**2018**

1. Assessment of hanger and support boiler PT PJB PLTU Paiton

## PUBLICATIONS

### *Books*

Suswanto, B, Rafael, J.W.M, **Sutrisno, W**., *Sistem Struktur Eccentrically Braced Frame-Teori Dasar dan Analisis Elemen Hingga*, Surabaya: ITS Press (ISBN: 978-602-5542-28-2), 2018.

Wahyuni, E., **Sutrisno, W**., *Metode Elemen Hingga dengan Penerapan Analisa Temperatur pada Beton Bertulang*, Surabaya: ITS Press (ISBN: 978-602-0917-51-1), 2016.

Suprobo P., **Sutrisno W**., *LCDE: A Book Is To Honor The 80th Birthday Of Professor Wiratman Wangsadinata, "Corrosion Induced Cracking of Reinforced Concrete Exposed To Marine Environment - State Of The Art"*, WiTness Press (ISBN: 978-602-72044-0-9), 2015.

### *Journal Publications*

**Sutrisno, W.,** Suprobo, P., Wahyuni, E., & Iranata, D. *Microstructural Investigation of Reinforced Concrete Exposed to Cyclic Wetting and Drying*, International Journal on Advanced Science, Engineering And Information Technology, ISSN 20188-5334 Volume 8, Number 2, 2018 pp. 411-417.(DOI: http://dx.doi.org/10.18517/ijaseit.8.2.4313)

Wahyuni,E., Iranata, D., Suswanto, B., Nurcahyo, C.B., **Sutrisno, W**. *Assessment Of Vulnerable Buildings due to Earthquake Loading Using Rapid Visual Screening Smartphone Application*, International Journal on Advanced Science, Engineering And Information Technology, ISSN 20188-5334 Volume 8, Number 2, 2018 pp. 567-572. (DOI: http://dx.doi.org/10.18517/ijaseit.8.2.4336)

**Sutrisno, W.,** Hartana, I.K., Suprobo, P., Wahyuni, E., & Iranata, D. *Cracking Process Of Reinforced Concrete Induced By Non-Uniform Reinforcement Corrosion.* Journal Teknologi (Science and Engineering), Volume 79, Number 3, 2017, pp. 1-6. (DOI: https://doi.org/10.11113/jt.v79.5370)

**Sutrisno, W.,** Hartana, I.K., Suprobo, P., Wahyuni, E., & Iranata, D. *Analysis of Corrosion Induced Crack in Reinforced Concrete with Smeared Crack Approach.* International Journal of Applied Engineering Research ISSN 0973-4562, Volume 11, Number 19, 2016, pp. 9970-9974.

**Sutrisno, W.,** Suprobo, P., Wahyuni, E., & Iranata, D., *The Experimental Test of Chloride Penetration in Reinforced Concrete Subjected to Wetting and Drying Cycle.* Applied Mechanics and Materials ISSN: 1662-7482. Vol. 851, 2016, pp 846-851. (DOI: https://doi.org/10.4028/www.scientific.net/AMM.851.846)

**Sutrisno, W.,** Wahyuni, E., 2016. *Simplification of Numerical Model to Analyze the Uniformly Heated one Way Reinforced Concrete Slabs Exposed by Fire.* International Journal of Engineering and Innovative Technology ISSN 9001:2008, Volume 4, Issue 6. 2014, pp. 197-201.

***Conference Papers***

**Sutrisno, W**., Suprobo, P., Wahyuni, E., & Iranata, D., *Investigation of Non-Uniform Rust Distribution and Its Effect to Corrosion Induced Cracking in Reinforced Concrete*, EACEF, 2017, Seoul- South Korea.

**Sutrisno, W**., Hartana, I.K., Suprobo, P., Wahyuni, E., & Iranata, D., *Numerical Simulation of Concrete Cracking Induced By Non-uniform Reinforcement Corrosion*, 2016, EASEC-14, Ho Chi Minh City-Vietnam.

**Sutrisno, W**., Suprobo, P., Wahyuni., E., & Iranata., D. *The Experimental Test Of Corrosion Induced Cracking In Reinforced Concrete Using Accelerated Method*. International Conference on Civil Engineering. Makassar-Indonesia (MICCE), 2015, Makassar-Indonesia.

Hartana, I.K., **Sutrisno, W**., Suprobo, P., *Concrete Crack Modeling Due To Non-uniform Corrosion Using Smeared Approach*, ISEC 8, 2015, Sydney-Australia.

**Sutrisno, W**., Suprobo, P., Wahyuni, E., & Iranata, D, *Damage Process of Reinforced Concrete Structures Induced By Reinforcement Corrosion*, CONCERN ITB, 2014, Bandung-Indonesia.

**Sutrisno, W**., Wahyuni, E., *Simplification Model Based On Finite Element Program to Analyze Behavior of Reinforced Concrete One Way Slabs Exposed To Fire*, ACF 6 Conference, 2014, Seoul-South Korea.

**Sutrisno, W**., Suprobo, P., Wahyuni, E., & Iranata, D, *Pemodelan Dengan Program Berbasis Elemen Hingga Dalam Analisa Perilaku Pelat Beton Bertulang Ketika Terkena Api*, Seminar Nasional Teknil Sipil, 2014, Surabaya-Indonesia.

**Sutrisno, W**., Suprobo, P., Wahyuni, E., & Iranata, D, *Evaluation Fire Resistance of Reinforced Concrete Slabs Using Analytical Solution and Numerical Modeling*, SIBE Conference, 2014, Bandung-Indonesia.

## ONGOING PUBLICATIONS

**Sutrisno, W**., Suprobo, P., Wahyuni, E., & Iranata, D, *Experimental Investigation and Predictive Model of Non-Uniform Rust Distribution for Partially Submerged Reinforced Concrete.* (Submitted to Construction and Building Material Journal)

**Sutrisno, W**., Alrasyid, H, *Structural Performance Investigation of Ship Lift Hoist Pile Structure Exposed to Tropical Marine Environment.* (Submitted to Case Studies in Construction Materials Journals)

## RESEARCH GRANT

**ITS Local Grants** 2019
Investigation of Marine Exposure to Drying Shrinkage and Corrosion Induced Cracking of ECC Concrete

**ITS Innovation Grants** 2019
Development of Bendable Concrete Product using Sustainable Low Carbon Material

**National PMDSU Research Grant** 2014-2016
Predictive Model of Crack in Reinforced Concrete Induced by Non-Uniform Reinforcement Corrosion Due To Chloride Infiltration Considering Wetting and Drying Cycle

**LPDP Thesis Research Grant** 2013
Finite Element Model to Analyze Behavior of RC Slabs Exposed to Fire

## INTERNATIONAL RESEARCH COLLABORATION AND JOINT PUBLICATION

**Taiheiyo Cement Cooperation Japan** 2017-Present
Prediction of Reinforced Concrete Element Behavior Exposed to Aggressive Environment using The RFID Corrosion Sensing System (On going)

**Kumamoto University and Department of Civil Infrastructure Engineering** 2018
Joint Publication on the Performance of PVA Fiber Reinforced Alkali-Activated Mortar (Published)

**Heriot-Watt University** 2018
Improving the Durability Performance of Marine Infrastructure using the Engineered Cementitious Composite (Part of on Going Research in ITS)

## AWARD

**Best Paper Award** 2016
ICAMSME Conference

**12 Best Idea** 2010
Holcim Innovation Hunt

**First Place Award** 2007
Regional Scientific Paper Competition Faculty of Economics Udayana University

**First Place Award** 2007
National APBN Competition - Indonesian Department of Finance

**Second Place Award** 2007
Scientific Paper Competition Faculty of Agriculture Technology Udayana University

## SCHOLARSHIP

**PMDSU Scholarship (Ph.D)** 2013-2017

**Sandwich-like Scholarship (Ph.D)** September 2016-December 2016

**Fresh Graduate Scholarship (M.S)** 2012-2013

**Excellence Scholarship (B.S)** 2008-2012