

1 Curriculum Vitae



Personal Information

Name Dr. Asdam TAMBUSAY
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Professional Experience

- Jan 2019 – Present **Lecturer and Researcher**
Institute of Technology Sepuluh Nopember
Department of Civil Engineering
- Jan 2016 – Present **Chief Engineer**
PT. ITS Kemitraan
Key Responsibilities:
(1) *Assisting the design of elevated span-by-span segmental bridges.*
(2) *Assisting the design of Cikunir long-span bridges for Light Rail Transit (LRT) in Jakarta using balanced cantilever method.*
(3) *Assisting the review design of long span bridges using balanced cantilever method.*
(4) *Assisting the evaluation of seismic performance of long span bridges using nonlinear static analysis, elsewhere called pushover analysis.*
(5) *Assisting the evaluation of cracked members long span bridges.*
- Sep 2017 – Dec 2018 **Research Assistant / Practicing Engineer**
Institute of Technology Sepuluh Nopember
with Prof. Ir. Priyo Suprobo, MS., PhD
at the *Laboratory of Concrete and Building Materials*
Subject: *“Development of engineered cementitious composite using locally available materials in Indonesia” and “Finite element analysis on shear behavior of reinforced concrete beams and thick slab”*
- Selected Projects:*
(1) *Evaluation of residual strength of reinforced concrete building after exposed to fire.*
(2) *Review design of elevated bridges and underpass as part of KLBM Project in Gresik*
(3) *Evaluation on feasibility of the heritage building in Surabaya*

Feb 2013 – Sep 2013 **Design Engineer**
PT. VSL Indonesia
Key Responsibilities:
(1) *Assisting the evaluation of prestressed system for Tanjung Priok Highway project*
(2) *Assisting the design of prestressed concrete PCI Girder*
(3) *Assisting the design of prestressed concrete members of Podomoro High-storey Building*

Educational Background

2013 – 2014 **Doctorate in Structural Engineering (Dr.)**
Institute of Technology Sepuluh Nopember, Indonesia
Supervised by Prof. Ir. Priyo SUPROBO, MS, PhD
Title: *“Cyclic Behavior of Slab-Column Connections using the Engineered Cementitious Composite”*
Committee Members: “Prof. Iswandi IMRAN (ITB); HANDAYANU (ITS), PhD; and Endah WAHYUNI, PhD (ITS)
Grade Point Average (GPA) 3.97 (out of 4)

2008 - 2012 **Bachelor of Engineering (BEng)**
Hasanuddin University
Major: Civil Engineering
Grade Point Average (GPA) 3.60 (out of 4)

Highlight of Research and Teaching Experience

Starting with my doctoral research, I have been studying and exploiting the potential use of *engineered cementitious composite* (ECC) in structural members ever since, both experimentally and numerically. An international research program was also performed, and several articles and proceedings were published as follows:

International Program Research Fellow at the School of Energy, Geoscience,
Infrastructure and Society, *Heriot-Watt University, Edinburgh,*
United Kingdom

Publications (*the detailed list is presented in the next section*)

International Journals (8) ARPN 2019 : KOMARA, TAMBUSAY, SUTRISNO, and SUPROBO
 IJASEIT 2018 : TAMBUSAY, SURYANTO, and SUPROBO
 JT 2017 : TAMBUSAY, SUPROBO, FAIMUN, and AMIRUDDIN
 IJAER 2017 : TAMBUSAY, SUPROBO, FAIMUN, and AMIRUDDIN
 IJAER 2017 : FAIMUN, TAMBUSAY, and SUPROBO
 CED 2017 : SURYANTO, TAMBUSAY, and SUPROBO
 AMM 2016 : TAMBUSAY, SUPROBO, FAIMUN, and AMIRUDDIN
 ICE 201X : SURYANTO, TAMBUSAY, FOX, and SUPROBO

International Conferences with Proceedings (4)	ICEEDM 2019 : IRAWAN, TAMBUSAY, and SUPROBO MATEC 2018 : NURAINI, TAMBUSAY, and SUPROBO EASEC 2016 : TAMBUSAY, SUPROBO, FAIMUN, and AMIRUDDIN MICCE 2015 : TAMBUSAY, SUPROBO, FAIMUN, and AMIRUDDIN
National Conferences (2)	KNPTS 2015 : TAMBUSAY, SUPROBO, FAIMUN, and AMIRUDDIN KNPTS 2014 : TAMBUSAY, SUPROBO, and FAIMUN

Apart from my research, I have been contributing in teaching undergraduate students at Department of Civil Engineering, Institute of Technology Sepuluh Nopember with the courses related to (1) Engineering Mechanics; (2) Concrete Elements; (3) Design of RC Structures, (4) Earthquake Engineering, etc.

Key Skills

- Competence in *finite element analysis* using computer-aided software such as ABAQUS, ETABS, SAP2000, and Response2000, Midas/Civil, and many more;
- Proficiency in the area of automated damage detection technique using the *digital image correlation*;
- Proficiency in all areas of Microsoft Office, including Excel, Word, PowerPoint, and Visio;
- Familiar with drawing and graphic design software such as AutoCAD, Adobe Photoshop, Lightroom, and Illustrator; and
- Excellent communication skills, both written and verbal

Main Research Interests

- Engineered cementitious composite (known as '*bendable*' concrete)
- Nonlinear mechanics of reinforced concrete and fiber reinforced concrete
- Finite element analysis of reinforced concrete members
- Precast concrete structures
- Digital Image Correlation (DIC) technique

2 Publications

2.1 Peer-Reviewed International Journals

- [1] KOMARA I., TAMBUSAY A., SUTRISNO W., SUPROBO, P. (2019) "Engineered cementitious composite as an innovative durable material: a review", *ARPJ Journal of Engineering and Applied Sciences*, Vol. 14, No. 4, pp. 822-833.
- [2] TAMBUSAY A., SURYANTO B., SUPROBO P. (2018) "Visualization of shear cracks in a reinforced concrete beam using the digital image correlation," *International Journal on Advanced Science, Engineering and Information Technology*, Vol. 8, No.5, pp. 573-578.
- [3] TAMBUSAY A., SUPROBO P., FAIMUN, AMIRUDDIN A. A. (2017) "Finite element analysis of the behavior of slab-column connections using the PVA-ECC material," *Jurnal Teknologi (Science and Engineering)*, Vol. 79, No. 5, pp. 23–32.
- [4] TAMBUSAY A., SUPROBO P., FAIMUN, AMIRUDDIN A. A. (2017) "Finite element modelling of a reinforced concrete slab-column connection under cyclic lateral load," *International Journal of Applied Engineering Research*, ISSN 0973–4562, Vol. 12, No. 9, pp. 1987–1993.
- [5] FAIMUN, TAMBUSAY A., SUPROBO P. (2017) "The influence of gravity shear ratio on the behavior of reinforced concrete slab-column connections with shear reinforcement," *International Journal of Applied Engineering Research*, ISSN 0973–4562, Vol. 12, No. 15, pp. 5067–5072.
- [6] SURYANTO B., TAMBUSAY A., SUPROBO P. (2017) "Crack Mapping on Shear-critical Reinforced Concrete Beams using an Open Source Digital Image Correlation Software," *Civil Engineering Dimension*, Vol. 19, No. 2, pp. 93–98.
- [7] TAMBUSAY A., SUPROBO P., FAIMUN., AMIRUDDIN A. A. (2016) "Finite element prediction of the post-punching behavior of slab-column connections," *Applied Mechanics and Materials*, ISSN: 1662-482, Vol. 851, pp. 714–719.
- [8] SURYANTO B., TAMBUSAY A., FOX J., SUPROBO P. (201X) "Crack mapping on a reinforced concrete beam using digital image correlation," *Proceedings on the Institution of Civil Engineers – Structures and Buildings (under peer-reviewed)*.

2.2 International Conferences with Proceeding

- [9] IRAWAN C., TAMBUSAY A., SUPROBO P. (2019) "Evaluation of the seismic performance of slab on pile bridges using nonlinear static and time history analysis," *Fourth International Conference on Earthquake Engineering and Disaster Mitigation (4th ICEEDM)*, Padang, Indonesia. (under review)
- [10] NURAINI S., TAMBUSAY A., SUPROBO P. (2018) "A comparative study of base isolation devices in light rail transit structure featured with lead rubber bearing and friction pendulum system," *MATEC Web of Conferences*, 195, 02013.
- [11] TAMBUSAY A., SUPROBO P., FAIMUN, AMIRUDDIN A. A. (2016) "Analyses behavior of slab-column connections using ECC material based on finite element approach," *Proceeding of the Fourteenth East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-14)*, Ho Chi Minh City, Vietnam.
- [12] TAMBUSAY A., SUPROBO P., FAIMUN, AMIRUDDIN A. A. (2015) "Experimental study of engineered cementitious composite material for structural application," *Proceeding of Second Makassar International Conference on Civil Engineering (2nd MICCE)*, Makassar, Indonesia.

2.3 National Conferences with Proceeding

- [13] TAMBUSAY A., SUPROBO P., FAIMUN, AMIRUDDIN A. A. (2015) "Studi numerik perilaku hubungan pelat-kolom pada struktur *flat slab* menggunakan beton mutu tinggi," *Prosiding Konferensi Nasional Pascasarjana Teknik Sipil (KNPTS)*, Bandung, Indonesia.
- [14] TAMBUSAY A., SUPROBO P., FAIMUN, (2014) "Studi eksperimental perilaku hubungan pelat-kolom menggunakan drop panel dengan serat PVA-ECC terhadap beban siklis lateral," *Prosiding Konferensi Nasional Pascasarjana Teknik Sipil (KNPTS)*, Bandung, Indonesia.

3 Non-Academic Experience and Achievements

Volunteer Activities

- 2018 **Technical Committee of RSNI 2847:201X “Building Code Requirements for Structural Concrete and Commentary” (drafted largely from ACI 318M-14)**
Ministry of Public Works and Housing of the Republic of Indonesia, and
National Standardization Agency of Indonesia
- 2017 **Organizing Committee of 3rd International Conference on Civil Engineering Research (ICCER)**
Department of Civil Engineering, Institute of Technology Sepuluh Nopember

Organization

- 2018 - Present **Indonesian Society of Civil and Structural Engineers**
Indonesia: Himpunan Ahli Konstruksi Indonesia
Active Member

Achievements

- 2017 **Received a degree of Doctorate in structural engineering with ‘distinction’**
Institute of Technology Sepuluh Nopember
- 2016 **In recognition for second best paper on 3rd International Conference on Advanced Materials, Structures, and Mechanical Engineering**
Incheon National University, South Korea
- 2015 **In recognition for best presenter on 2nd Makassar International Conference on Civil Engineering**
Civil Engineering Department, Hasanuddin University
- 2015 **In recognition for best speaker on Konferensi Nasional Pascasarjana Teknik Sipil**
Civil Engineering Department, Bandung Institute of Technology
- 2014 **In recognition for best speaker on Konferensi Nasional Pascasarjana Teknik Sipil**
Civil Engineering Department, Bandung Institute of Technology
- 2014 **Won 3-year research grants for doctoral research**
Ministry of Research, Technology and Higher Education of the Republic of Indonesia
- 2013 **Awardee of fast-track doctoral program scholarship**
Ministry of Research, Technology and Higher Education of the Republic of Indonesia
- 2012 **Received the first-class degree of Bachelor of Engineering with ‘distinction’**
Hasanuddin University