

Daniar Heri Kurniawan

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Research Interests: Distributed System and Cloud Computing.

EDUCATION

- 2018 - Present **The University of Chicago**, Chicago, IL, USA
Pursuing **Ph.D.** in the field of Systems
- 2012 - 2017 **Institut Teknologi Bandung**, Bandung, Indonesia
Bachelor in Computer Science, graduated with **cum laude** and GPA 3.54 out of 4.00

PUBLICATIONS

- "E2E: Embracing User Heterogeneity to Improve Quality of Experience on the Web"** Xu Zhang, Siddhartha Sen, [Daniar H. Kurniawan](#), Haryadi S. Gunawi, Junchen Jiang, *ACM SIGCOMM'19 in Beijing, China*, August 2019.
- "FlyMC: Highly Scalable Testing of Complex Interleavings in Distributed Systems"** Jeffrey F. Lukman, Huan Ke, Cesar A. Stuardo, Riza O. Suminto, [Daniar H. Kurniawan](#), Dikaimin Simon, Satria Priambada, Chen Tian, Feng Ye, Tanakorn Leesatapornwongsa, Aarti Gupta, Shan Lu, Haryadi S. Gunawi, *14th edition of EuroSys 2019 (EuroSys'19) in Dresden, Germany*, March 2019.
- "Sci-Learn: A Novel E-Learning Platform Based on Gamification and Social Media Approach"** [Daniar H. Kurniawan](#) and Yani Widayani, *International Conference on Electrical Engineering and Informatics (ICEEI'17) in Langkawi, Malaysia*, November 2017.
- "PBSE: A Robust Path-Based Speculative Execution for Degraded-Network Tail Tolerance in Data-Parallel Frameworks"** Riza O. Suminto, Cesar A. Stuardo, Alexandra Clark, Huan Ke, Tanakorn Leesatapornwongsa, Bo Fu, [Daniar H. Kurniawan](#), Vincentius Martin, Uma Maheswara Rao G., and Haryadi S. Gunawi, *ACM Symposium on Cloud Computing (SoCC'17) in Santa Clara, CA, USA*, September 2017.
- "Double Chaining Algorithm: A Secure Symmetric-key Encryption Algorithm"** [Daniar H. Kurniawan](#) and Rinaldi Munir, *International Conference on Advanced Informatics: Concepts, Theory and Application (ICAICTA'16) in Penang, Malaysia*, August 2016.
- "Development of Multi Agent for Test of Recommendation Functions on Social Learning Platform"** Shinobu Hasegawa and [Daniar H. Kurniawan](#), *The Institute of Electronics, Information and Communication Engineers (IEICE'16) in Nagano, Japan*, May 2016.
- "A New String Matching Algorithm Based on Logical Indexing"** [Daniar H. Kurniawan](#) and Rinaldi Munir, *International Conference on Electrical Engineering and Informatics (ICEEI'15) in Bali, Indonesia*, August 2015.

POSTER

- "PBSE: A Robust Path-Based Speculative Execution for Degraded-Network Tail Tolerance in Data-Parallel Frameworks"** Riza O. Suminto, Cesar Stuardo, Alexandra Clark, Huan Ke, Tanakorn Leesatapornwongsa, Bo Fu, [Daniar H. Kurniawan](#), Vincentius Martin, and Haryadi S. Gunawi, *The 8th ACM Symposium on Cloud Computing (SoCC'17) in Santa Clara, CA, USA*, September 2017.
- "PBSE: Path-Based Speculative Execution for Robust Tail Tolerance in Data-Parallel Systems"** Riza O. Suminto, Cesar Stuardo, Alexandra Clark, Huan Ke, Bo Fu, Tanakorn Leesatapornwongsa, Vincentius Martin, [Daniar H. Kurniawan](#), Haryadi S. Gunawi, *The 12th USENIX Symposium on Operating Systems Design and Implementation (OSDI'16) in Savannah, GA, USA*, November 2016.
- "SCK: Scale-Checking and Debugging Scalability Bugs on One Machine"** Tanakorn Leesatapornwongsa, Cesar Stuardo, Huan Ke, Jeffrey F. Lukman, Riza O. Suminto, [Daniar H. Kurniawan](#), and Haryadi S. Gunawi, *The 12th USENIX Symposium on Operating Systems Design and Implementation (OSDI'16) in Savannah, GA, USA*, November 2016.
- "Distributed Message Broker and NoSQL Database Technology for E-Learning Platform"** [Daniar H. Kurniawan](#), *Toyohashi University of Technology (TUT) International Student Program in Toyohashi, Aichi, Japan*, November 2016.

TALKS

- Nov 2017 **“Sci-Learn: A Novel E-Learning Platform Based on Gamification and Social Media Approach”** at *International Conference on Electrical Engineering and Informatics (ICEEI)* in Langkawi, Malaysia.
- Aug 2017 **“Developing Augmented Reality 3D Model of Ab Barak Landslide on Microsoft Hololens”** at The European Organization for Nuclear Research (*CERN*) *Openlab Summer Student Lightning Talks* in Meyrin, Switzerland.
- Aug 2016 **“Double Chaining Algorithm: A Secure Symmetric-Key Encryption Algorithm”** at *International Conference on Advanced Informatics: Concepts, Theory and Application (ICAICTA)* in Penang, Malaysia.
- Aug 2015 **“A New String Matching Algorithm Based on Logical Indexing”** at *International Conference on Electrical Engineering and Informatics (ICEEI)* in Bali, Indonesia.

EXPERIENCES

- Sep 2015 - Present | **Garuda Ilmu Komputer (GIK) Lab**
Research Student – Supervised by Systems Faculty of the University of Chicago
- Research areas of this group are cloud computing and distributed systems. This Lab is a remote research mentorship in collaboration with systems group at UChicago.
 - Focus on studying bugs at cloud computing and distributed systems such as Hadoop and Spark.
 - Having weekly report and assignment that teach me to stay productive even under pressure.
- Jul 2017 - Sep 2017 | **IT-CDA Group, CERN Openlab Summer Student Program**
[Internship] Research Student - Geneva, Swiss
- CERN Openlab and the IT-CDA Group in collaboration with UNOSAT are investigating novel technologies for facilitating satellite maps navigation and comparisons using VR.
 - There were only 37 international students selected among 1580 applicants from all around the world.
 - I developed an animated 3D model of Ab-Barak landslide on Microsoft Hololens.
- Nov 2016 (10 Days) | **Computer Science Laboratories, Toyohashi University of Technology**
ITB's representative at TUT International Student Program 2016 - Toyohashi, Japan
- TUT is among an elite group of 22 universities selected for the Japanese government funded program (the program for promoting enhancement of research universities).
 - I shared my experience and my research plan that tailored to TUT's research activity.
 - I got an offer to do the research at TUT as part of Master Degree Research Program.
- Dec 2015 - Feb 2016 | **Hasegawa Laboratory, Japan Advanced Institute of Science and Technology**
[Internship] Research Student - Ishikawa, Japan
- We were developing Sci-Learn, e-Learning platform, and also the multi agent system to simulate user's behavior and evaluate the new feature of Sci-Learn. (<https://sci-learn.com>).
 - Sci-Learn is developed for scalability purpose.
 - The general idea of Sci-Learn is to combine Social Network (Facebook, LinkedIn, Google+) with gamification to increase learners' engagement.
- Sep 2015 - Nov 2015 | **Multibook Development Team, TD&Company Limited**
[Internship] Software Engineer - Tokyo, Japan
- The main businesses of this company are SAP consulting service, global helpdesk service, system service, and management service. There are seven overseas branches including Singapore, Netherland, and Germany.
 - Evaluating the database architecture and running software testing for its new ERP System, Multibook.
 - Implementing authentication module in Spring Framework controller and Angular JS controller that will be used at more than 50 modules.
- Jun 2015 - Jul 2015 | **Global Digital Prima (GDP) Venture Inc.**
[Internship] Software Engineer - Jakarta, Indonesia
- GDP Venture is one of the leading strategic investor located in Jakarta. They invest in early and growing stages of new Tech companies such as Kaskus and Blibli.
 - Reduced 98% query time and 50% query time respectively by migrating databases to Amazon Redshift and by optimizing the query for data retrieval.

COMPETITIONS & AWARDS

3 rd Place	I participated in CERN's annual hackathon (Webfest 2017) by developing ParticleDart. ParticleDart is an AR apps built on the top of Microsoft Hololens which aims to impart an intuition about the types and the behaviors of particles using a new technology.	2017
1 st Place	FoodsFaculty.com aims to facilitate the growing popularity of local brands, thus giving them a larger portion of market share. We won \$7000 in IBM-STEI competition.	2015

I declare the details stated to be true and complete.
(CV updated on 20th May 2019)