

ERIKA FILLE TUPAS LEGARA

Complex Systems Research | Data Science | Network Science | Optimization | Operations Research | Urban Complexity Research | Computational Social Science

Erika helped launch and design the curriculum of the first formal data science graduate program in the Philippines. She has a strong academic, research, and innovation background—a research scientist at the leading government think tank in Singapore for 5.5 years and has been a complex systems researcher for 11 years now, since 2006. Prior to her stint in Singapore, she was an Assistant Professor of Physics at the University of the Philippines Diliman. In addition, Erika has a wealth of experience engaging and collaborating with non-academic entities from various businesses, industries, and government agencies, helping them to innovate and adopt data-driven approaches in their systems and processes.



<https://eflegara.github.io>



www.aim.edu



PROGRAM DIRECTOR, July 2017–
MSc in DATA SCIENCE
Asian Institute of Management

ABOITIZ CHAIR IN DATA SCIENCE, May 2019–
**ABOITIZ SCHOOL OF INNOVATION,
TECHNOLOGY, AND ENTREPRENEURSHIP**
Asian Institute of Management

ASSOCIATE PROFESSOR, July 2017–
**ABOITIZ SCHOOL OF INNOVATION,
TECHNOLOGY, AND ENTREPRENEURSHIP**
Asian Institute of Management

**SENIOR SCIENTIST and
DEPUTY DIRECTOR**, July 2017–
**ANALYTICS, COMPUTING, and COMPLEX
SYSTEMS LAB**
Asian Institute of Management

SCIENTIST, May 2012–June 2017
COMPLEX SYSTEMS RESEARCH
Institute of High Performance Computing, A*STAR,
Singapore

RESEARCH FELLOW, Jan 2012–May 2012
COMP. IMMUNOLOGY RESEARCH
Singapore Immunology Network, A*STAR

ASSISTANT PROFESSOR, 2011–2012
National Institute of Physics,
University of the Philippines



THE GENERATION-T LIST
Asia Tatler, 2019

**THE OUTSTANDING YOUNG MEN
(TOYM) HONOREE**
Philippines, 2018

COUNTRY PRIZE WINNER
**UN Big IDEAS Competition for
Sustainable Cities and Urban Dev't**
Singapore, 2016



CURRENT & MOST RECENT PROJECTS
from 2018–2019: 4 Government; 3 Industry; 2 Academic

DEVELOPMENT OF AN AI ROADMAP FOR THE PHILIPPINES
with the **Philippines' Department of Trade and Industry**

Help the government in crafting of the framework for the formulation of an AI roadmap. The project is primarily data-driven and consultative in nature.

**DEVELOPMENT OF A SIMULATION MODEL FOR COMPLEX WATER SUPPLY
SYSTEMS**
with **Manila Water, Co.** and *funded under* **DOST-PCIEERD (CRADLE)**

**PLATFORM FOR ASSESSMENT AND TRACKING OF URBANIZATION-RELATED
OPPORTUNITIES**
with the **Cauayan City Local Government** and the **Isabela State University**, and *funded
under* **DOST-PCIEERD**

TRANSPORT RESEARCH as PRINCIPAL INVESTIGATOR (PI) and Co-PI
with **Singapore's Ministry of Transport** and **Land Transport Authority**

Led a team of scientists at A*STAR working on transportation research; Analyze what-if scenarios; Built and deployed interactive decision-support tools; Developed a resilience index measure for the transport system; Published peer-reviewed international articles (from the new science developed)



PHD in PHYSICS
**MOST OUTSTANDING
COLLEGE OF SCIENCE GRADUATE**

**EXCELLENCE IN
DISSERTATION AWARD**
University of the Philippines, Diliman
2008–2011

**COMPLEX SYSTEMS RESEARCH
Santa Fe Institute SCHOLAR**
Santa Fe Institute, New Mexico, USA
June 2010

MS in PHYSICS
DOST SCHOLAR
University of the Philippines, Diliman
2006–2008

BS in PHYSICS, cum laude
DOST SCHOLAR
University of the Philippines, Diliman
2001–2006



> 20 Journal Publications
> 50 Conference Publications

#1 SCALE CHALLENGE
**IEEE Int'l Scalable Computing
Challenge**
The Netherlands, 2013

BEST PAPER AWARD
**International Conference on
Computational Science**
Cairns, Australia, 2014