
RADITYA UTAMA, PhD

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PROFILE

Postdoc in quantitative biology at Cold Spring Harbor Laboratory. Experience in cancer genomics/RNA-Seq data analysis. Expertise in bioinformatics, nuclear structure, neutron star, machine learning / Bayesian neural network, & big data analysis / statistics. Fluent programming with R, Python, Fortran, C++, Gnuplot, & Linux. Experience working individually and / or as a team.

EDUCATION

Ph.D - Physics

2016, Florida State University

Topic: "The Study of Nuclear Structure and Neutron Stars with Bayesian Neural Network Approach"

Advisor: [Dr. Jorge Piekarewicz](#), [Dr. Harrison Prosper](#)

M.S - Physics

2013, Florida State University

Topic: "Nuclear Mass Predictions with Global and Local Estimation Methods"

Advisor: [Dr. Jorge Piekarewicz](#)

B.S - Physics

2011, University of Indonesia

Topic: "Gluonic Plasma Dominated Early Universe within Fluid QCD"

Advisor: [Dr. Laksana T. Handoko](#)

COURSES

Summer School on Computational Genomics (CGSI)

2017, UCLA

Summer School on Nuclear Astrophysics by TALENT/JINA

2014, Michigan State University

Talks : 1) Supernova Collisions with Heliosphere

2) Pycnonuclear Accreting Neutron Star

PUBLICATIONS

1) “Validating neural-network refinements of nuclear mass models”

Reference : [Phys. Rev. C 97, 014306 \(2018\)](#)

2) “Refining Mass Formulas for Astrophysical Applications: a Bayesian neural network approach”

***Chosen as The Editor’s Suggestion**

Reference : [Phys. Rev. C 96, 044308 \(2017\)](#)

3) “Nuclear Charge Radii Predictions : A Bayesian Neural Network Approach”

Reference : [J. Phys. G 43 114002 \(2016\)](#)

4) “The Nuclear Physics of Neutron Stars”

Reference : [Acta Phys. Polon. B 47, 659 \(2016\)](#)

5) “Nuclear Mass predictions for the Crustal Composition of Neutron Stars : A Bayesian Neural Network Approach”

***Chosen as The Editor’s Suggestion**

Reference : [Phys. Rev. C 93, 014311 \(2016\)](#)

6) “Equation of State within Gluon Dominated QGP Model in Relativistic Hydrodynamics Approach”

Reference : - [Journal of Physics: Conf. Series 856, 012004 \(2017\)](#)

RESEARCH & TEACHING EXPERIENCE

Postdoctoral Researcher – Quantitative Biology and Cancer Genetics

2016-2019, Cold Spring Harbor Laboratory

Advisor: [Dr. Gurinder Atwal](#)

Research Assistant – Nuclear Physics, Neutron Stars, Machine Learning

2012-2016, Florida State University

Advisor: [Dr. Jorge Piekarewicz](#), [Dr Harrison Prosper](#)

Teaching Assistant – Physics, Astronomy Lab

2011-2014, Florida State University

Research Assistant – Cosmology, Particle Physics

2010-2011, University of Indonesia

Advisor: [Dr. Laksana T. Handoko](#)

COMPUTER & LANGUAGE SKILLS

Programming

R(1 year), Python(2 year), Fortran(4 year), C++(2 year), OpenMP/Parallel (4 year)

Plotting

Gnuplot (4 year), Root (1 year)

Scripting

LaTeX (4 year), Word + Excel + PowerPoint (10 year)

OS

Linux/Unix (2 year), Windows (10 year)

Simulation

Monte-Carlo (4 year), Machine Learning/Bayesian Neural Network (3 year),
Mathematica (2 year)

Languages

English (Fluent), French (DELF A2), Indonesian (Native)

CONFERENCES & SEMINARS

Neural Information Processing Systems (NIPS) Conference

2017, Long Beach

Biology of Cancer Conference at CSHL

2017, Cold Spring Harbor

Poster Session: "Transcriptional Landscape of Stroma Progression in the Breast Tumor Microenvironment"

Stand Up to Cancer (SU2C) Annual Meeting

2017, Princeton-IAS

Talk Session: "Stromal Genetic Signatures in Breast Cancer Development with RNAseq Analysis"

American Physical Society (APS) April Meeting

2015, Baltimore

Session H6.00003: "Nuclear Mass Predictions for Neutron Stars with a Bayesian Neural Network"

Graduate Student Seminar PGSA

2015, Florida State University

Topic : "Nuclear Mass Predictions for Neutron Stars with a Bayesian Neural Network"

Nuclear Physics Seminar

2014, Florida State University

Topic : "Nuclear Mass Predictions for Neutron Stars with a Bayesian Neural Network"

American Physical Society (APS) April Meeting

2014, Savannah

AWARDS & ORGANIZATIONS

Travel Award from Division of Nuclear Physics (DNP)

2015, APS April Meeting, Baltimore

Indonesian Student Association at FSU (ISF)

2015-2016, Founder & First President

REFERENCES

Dr. Gurinder Atwal

Research Advisor, Cold Spring Harbor Laboratory

Email: atwal@cshl.edu

Dr. Jorge Piekarewicz

Major Professor, Florida State University

Email: jpiekarewicz@fsu.edu

Dr. Harrison Prosper

Research Advisor, Florida State University

Email: hbprosper@gmail.com

Dr. Laksana T. Handoko

Major Professor, University of Indonesia and LIPI

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