

# Rizal Fajar Hariadi

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## 1 Educational background

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- 2011 *Ph.D.* in Applied Physics.  
California Institute of Technology.  
– Ph.D. thesis advisors: Erik Winfree, co-advised by Bernard Yurke.
- 2003 *B.S.* in Physics  
*B.S.* in Biochemistry.  
Washington State University.  
– Undergraduate thesis advisors: J. Thomas Dickinson.

## 2 Academic/professional experience

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- 2016– *Assistant Professor*  
Department of Physics  
Biodesign Institute  
Arizona State University  
**Other ASU affiliations:**  
– Biodesign Center for Molecular Design and Biomimetics  
– Center for Biological Physics  
– *Graduate faculty*, School of Molecular Sciences  
– *Graduate faculty*, School of Biological and Health Systems Engineering  
– *Affiliate faculty*, Biodesign Center for Molecular Evolution  
– *Affiliate faculty member*, The Biomimicry Center  
– Global Security Initiative
- 2015–2016 *Wyss Institute Postdoctoral Fellow* (PI: Peng Yin)  
Wyss Institute for Biologically-Inspired Engineering  
Harvard University
- 2011–2015 *Postdoctoral Research Fellow* (PI: Sivaraj Sivaramakrishnan)  
Department of Cell and Developmental Biology  
University of Michigan

## 3 Awards

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### 📌 Since employment at ASU

- 2018 NIH Director's New Innovator Award (*with a perfect Impact Score of 10*).
- 2018 Arizona Biomedical Research Commission New Investigator Award.

### 📌 Before employment at ASU

- 2002 *Top 3*, LeRoy Apker Award, American Physics Society.  
The highest prize offered in the United States for an undergraduate thesis in physics
- 2002 *Honorable mentions*, All-American College Academic Team, USA Today.

## 4 Publications

Total: 25 publications including 3 in preparation.

### Since employment at ASU

– Summary: 8 publications including 3 in preparation.

– ASU mentees are underlined.

- In preparation*     F. Djutanta, R. Kha, B. Yurke, and **R. F. Hariadi**, “Producing cell-like structures from oil films residing on ocean water by raindrop impact”.
- In preparation*     R. M. Shetty, S. Brady, E. Le, F. Djutanta, P. W. K. Rothmund, **R. F. Hariadi\***, and A. Gopinath\*, “Facile, cleanroom-free fabrication of single molecule nanoarrays”.  
\*authors supervised equally.
- In preparation*     R. Rezvani\*, B. Horne\*, F. Djutanta, D. Showkeir, and **R. F. Hariadi**, “Low-cost LEGO-based sucrose gradient mixer for purification of DNA-origami nanostructures”.  
\*authors contributed equally.
- 2019     L. Green, H. K. K. Subramanian, V. Mardanlou, J. Kim, **R. F. Hariadi**, and E. Franco, “Autonomous dynamic control of DNA nanostructure self-assembly”, **Nature Chemistry**, 11, 510–520
- 2019     I. Sgouralis, S. Madaan, F. Djutanta, R. Kha, **R. F. Hariadi**, and S. Pressé, “A Bayesian Nonparametric Approach to Single Molecule FRET”, **J. Phys Chem B.**, 123(3), 675-688.
- 2016     V. Mardanlou, L.N. Green, Hari K. K. Subramanian, **R. F. Hariadi**, J. Kim, and E. Franco, “A coarse-grained model of DNA nanotube population growth”, **International Conference on DNA-Based Computers**, 135–147.
- 2016     **R. F. Hariadi\***, A. Appukutty\*, and S. Sivaramakrishnan, “Engineering circular gliding of actin filaments along myosin-patterned DNA nanotube rings to study long-term actin-myosin behaviors”. **ACS Nano**, 10(9), 8281–8288.  
\*authors contributed equally.
- 2016     R. F. Sommese, **R. F. Hariadi**, M. J.Tyska, M. A. Titus, S. Sivaramakrishnan, “Precise patterning proteins on DNA nanostructures using a GFP-Nanobody”. **Protein Science**, 25(11), 2089–2094.

### Before employment at ASU

– Summary: 17 publications.

- 2015     **R. F. Hariadi**, E. Winfree, and B. Yurke, “Determining hydrodynamic forces in bursting bubbles using DNA nanotube mechanics”, **PNAS**, 2015, 112, E6086–E6095.
- 2015     V. Verma, L. Mallik, **R. F. Hariadi**, S. Sivaramakrishnan, G. Skiniotis, A. P. Joglekar, “Maximizing protein hybridization efficiency on multisite DNA origami scaffolds using protein dimerization”, **PLoS One**, 2015 10(9): e0137125.
- 2015     **R. F. Hariadi\***, R. F. Sommese\*, A. Adhikari, R. Taylor, S. Sutton, J. Spudich, and S. Sivaramakrishnan, “Mechanical coordination in motor ensembles revealed using engineered artificial myosin filaments”, **Nature Nanotechnology**, 2015, 10, 696–700. \*authors contributed equally.
- 2015     **R. F. Hariadi**, R. F. Sommese, and S. Sivaramakrishnan, “Tuning myosin-driven transport on cellular actin networks”, **eLIFE**, 2015, 4, e05472.
- 2015     Y. H. Tee, T. Shemesh, V. Thiagarajan, **R. F. Hariadi**, K. L. Anderson, C. Page, N. Volkmann, D. Hanein, S. Sivaramakrishnan, M. Kozlov, and A. Bershadsky, “Cellular chirality arising from the self-organization of the actin cytoskeleton”, **Nature Cell Biology**, 2015, 4(17), 445–457.
- 2015     **R. F. Hariadi**, B. Yurke, and E. Winfree, “Thermodynamics and kinetics of DNA nanotube polymerization from single-filament meArizona State Universityments”. **Chemical Science**, 2015, 6, 2252–2267.
- 2014     **R. F. Hariadi**, M. Cale, and S. Sivaramakrishnan, “Myosin lever arm directs the emergence of collective movement patterns”, **PNAS**, 2014, 1111, 4091–4096.

- 2013 D. Y. Zhang\*, **R. F. Hariadi\***, H. M. T. Choi, and E. Winfree. "Integrating DNA strand displacement circuitry with DNA tile self-assembly", **Nature Communications**, 2013, 4, 1965. \* *authors contributed equally*.
- 2012 C. G. Evans, **R. F. Hariadi**, and E. Winfree, "Direct atomic force microscopy observation of DNA tile crystal growth at the single-molecule level", **JACS**, 2012, 134, 10485–10492.
- 2010 **R. F. Hariadi** and B. Yurke, "Extensional-flow-induced scission of DNA nanotubes in laminar flow", **Physical Review E**, 2010, 82, 046307.
- 2008 P. Yin, **R. F. Hariadi**, S. Sahu, H. M. T. Choi, S. H. Park, T. H. LaBean, and J. H. Reif, "Programming DNA tube circumference", **Science**, 2008, 321, 824–826.
- 2007 K. Fujibayashi, **R. F. Hariadi**, S. H. Park, E. Winfree, and S. Murata, "Toward reliable algorithmic self-assembly of DNA tiles: a fixed-width cellular automaton pattern", **Nano Letters**, 2008, 8, 1791–1797.
- 2002 **R. F. Hariadi**, S. C. Langford, and J.T. Dickinson, "Controlling nanometer-scale crystal growth on a model biomaterial with a scanning force microscope", **Langmuir**, 2002, 18, Issue 21, 7773–7776.
- 2000 J. T. Dickinson, **R. F. Hariadi**, and S. C. Langford, "Mechanical detachment of nanometer particles strongly adhering to a substrate: an application of corrosive tribology", *Journal of Adhesion*, 74, 373–390.
- 1999 J. T. Dickinson, **R. F. Hariadi**, and S. C. Langford, "Nanometer scale investigations of chemical mechanical polishing mechanisms using scanning force microscopy," **Ceramics Transactions**, 102, 213–232.
- 1999 J.T. Dickinson, **R. F. Hariadi**, L. Scudiero, and S. C. Langford, "A scanning force microscope study of detachment of nanometer-sized particles from glass surfaces", **Tribology Letters**, 7, 113–119.
- 1999 **R. F. Hariadi**, S. C. Langford, and J.T. Dickinson, "Scanning force microscope observations of particle detachment from substrates: The role of water vapor in tribological debonding", **Journal of Applied Physics**, 1999, 86, 4885–489.

## 5 Patent applications and Invention Disclosures

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### Since employment at ASU

- 2020 "Transmembrane nanosensor arrays for rapid, ultra-sensitive and specific digital quantification of internal micro-RNA content of intact exosomes."  
*Co-inventors:* Hao Yan, Swarup Dey (Arizona State University).  
U.S. provisional US patent application number 62/977,454, *filed on 02/17/2020*.
- 2017 "Modular, self-assembled, single nucleic acid and protein arrays for sensitive and non-Poisson digital diagnostics."  
*Co-inventors:* Rishabh Shetty (Arizona State University),  
Ashwin Gopinath (MIT), Paul Rothmund (California Institute of Technology).  
U.S. Provisional Patent Application No. 62/593,687, *filed on 12/01/2017*.  
Converted to a full application on *on 11/30/2018*.
- 2017 "Treatments using aggregation of target particles".  
*Co-inventor:* Carter Swanson (formerly at University of Michigan, now at Sigma).  
AzTE Invention ID: D17-130.  
AzTE Technology ID: M17-161L.

### Before employment at ASU

- 2008 "DNA structures self-assembled from single stranded DNA tiles: Chains, ribbons, and tubes",  
*Co-inventors:* Peng Yin, Rizal F. Hariadi (California Institute of Technology),  
Sudheer Sahu, Thomas H. LaBean, and John H. Reif (Duke University).  
U.S. Provisional patent, *filed on March 24<sup>th</sup>, 2008*.

## 6 Talks

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### Since employment at ASU

#### Outside ASU

Upcoming

[Virtual conference due to COVID-19 outbreak](#) Foundations Of Nanoscience: Self-assembled Architectures And Devices (FNANO20), Utah.

01/19–24/2020

GRC: Origins of Life, Galveston, TX.

05/22/2019

North Carolina State University, Department of Physics.

05/19–22/2019

Nature conference on Engineering Biology for Medicine.

09/11/2018

University of Notre Dame, Department of Aerospace and Mechanical Engineering.

05/05/2018

2018 BioPhest, University of Arizona

12/05/2017

Massachusetts Institute of Technology, Modern Optics and Spectroscopy seminar.

04/10/2017

2017 Foundation of Nanoscience (FNANO), Snowbird, Utah.

#### At ASU

01/18/2019

2019 Regional Academic Collaboration Conference (ReACT) on Bio Security

11/06/2018

Chalk talk at Center for Biological Physics.

02/05/2018

Chalk talk at Biodesign Institute.

03/31/2017

School of Biological and Health Systems Engineering.

02/02/2017

Department of Physics.

### Before employment at ASU

– 01/2013–06/2016.

02/25/2016

Department of Mechanical Engineering, Johns Hopkins University.

01/21/2016

Department of Physics, Washington University.

01/14/2016

Department of Physiology and Biophysics, University of Washington.

12/16/2015

Department of Physics, Arizona State University.

12/13/2015

2015 American Society for Cell Biology (ASCB) Annual Meeting, San Diego.

12/03/2015

Department of Physics and Brandeis Materials Research Science and Engineering Center, Brandeis.

08/18/2015

DNA21 Conference–21<sup>st</sup> International Conference on DNA Computing and Molecular Programming, Cambridge, MA.

12/10/2014

2014 ASCB Annual Meeting, Philadelphia.

04/17/2014

2014 Foundation of Nanoscience, Snowbird, Utah.

08/07/2013

Mechanobiology Institute, National University of Singapore.

08/05/2013

Munich DNA Node, München, Germany.

08/05/2013

Department of Physics, Ludwig-Maximilians-Universität, München, Germany.

## 7 Posters

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### Since employment at ASU

Upcoming

[Virtual conference due to COVID-19 outbreak](#) Foundations Of Nanoscience: Self-assembled Architectures And Devices (FNANO20), Utah.

05/18–20/2010

[Virtual conference due to COVID-19 outbreak](#) System Chemistry 2020 – Life-like emergent behavior in complex molecules and ensembles

02/26/2020	5 <sup>th</sup> Annual ABRC-Flinn Research Conference, Phoenix AZ.
02/13–16/2020	AAAS Annual Meeting, Seattle WA.
01/19–24/2020	GRC: Origins of Life, Galveston, TX.
03/30/2019	Biophest, Arizona State University.
03/22/2019	FUSION 2019, Biodesign Retreat, Arizona State University.
10/08/2018	Statistical Physics in Biology: A workshop in honor of Ken Dill, Arizona State University.
05/05/2018	Biophest, University of Arizona.
04/13/2018	FUSION 2018, Biodesign Retreat, Arizona State University.
09/25/2017	DNA23–23 <sup>rd</sup> International Conference on DNA Computing and Molecular Programming, University of Texas, Austin, TX.
04/22/2017	Biophest, Department of Physics, Arizona State University.
04/07/2017	FUSION 2017, Biodesign Retreat, Arizona State University.
03/03/2017	2017 Arizona Imaging and Microanalysis Society Conference, Arizona State University.
02/11–15/2017	61 <sup>st</sup> Annual Meeting, Biophysical Society.

## 8 Active collaborators (*alphabetical order*)




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Ashwin Gopinath	Massachusetts Institute of Technology.
Jeremy Mills	Arizona State University.
Manu Prakash	Stanford University.
Steve Pressé	Arizona State University.
Paul W. K. Rothmund	California Institute of Technology.
Sivaraj Sivaramakrishnan	University of Minnesota
Petr Šulc	Arizona State University.
Wade Van Horn	Arizona State University.
Hao Yan	Arizona State University.
Bernard Yurke	Boise State University.





## 9 Mentorship

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### Since employment at ASU

Postdocs	 Daisuke Inoue ..... 10/2018–04/2019
	– now an Assistant Professor in the Department of Human Science at Kyushu University, Japan.
	 Tunjung Mahatmanto ..... 11/2016–6/2018
	– now a Lecturer at Universitas Brawijaya, Indonesia.
Visiting postdoc	 Adi Wibowo ..... Summer–Fall 2017
	– now a Lecturer at Universitas Diponegoro, Indonesia

Graduate students ( <i>chronological order</i> )	 Rishabh Manoj Shetty <span>SBHSE Merit Award</span> ..... 01/2017–07/2019 – now a postdoc at MIT and Caltech
	 Franky Djutanta ..... 02/2017– <b>present</b>
	 Swarup Dey (co-advised with Hao Yan (50%)) ..... Summer 2017– <b>present</b>
	 Devika Kishnan ..... Fall 2018– <b>present</b>
	 Swechchha Pradhan <span>SBHSE Merit Award</span> ..... Spring 2020– <b>present</b>
Undergraduate students ( <i>alphabetical order</i> )	 Michelle Anthony ( <i>now an M.D. student at U of Arizona</i> ) ..... Spring 2018
	 Nabil Atlassy ..... Fall 2017–Spring 2018
	 Shane Bachtel ..... Spring 2018
	 Indrajit Badvaram ( <i>now a Ph.D. student at Johns Hopkins</i> ) ..... Summer 2017–Summer 2018
	 Alonzo Beatty ..... Summer 2019– <b>present</b>
Undergraduate students ( <i>alphabetical order</i> )	 Samantha Borges–Eckert ..... Fall 2019– <b>present</b>
	 Sarah Brady ..... –Summer 2019
	 Alexander DaSilva <span>Barrett fellow at CLAS</span> ..... Summer 2018
	 Dustin Foote ..... Summer 2018–Spring 2019
	 Chase Hanson ..... Spring–Summer 2018
	 Gabrielle Hirneise ..... Summer 2018–Spring 2019
	 Jun Skyler Hong ( <i>will be a dental student in Fall 2020</i> ) ..... Spring–Fall 2019
	 Rachael Kha ..... –Summer 2019
	 Maeve Kennedy <span>Flinn scholar</span> <span>Goldwater scholar</span> ..... Summer 2018–Summer 2019
	 Joyce Kuang ..... Summer–Fall 2018
	 Eric Le <span>TW Lewis scholar</span> ..... – <b>present</b>
	 Aidan McGirr <span>Flinn scholar</span> ..... Fall 2018–Spring 2019
	 Kenna McRae ..... Spring 2018
	 Sritharini Radhakrishnan ..... Fall 2019– <b>present</b>
	 Christopher Ramirez ..... Summer 2018–Spring 2019
	 Robert Rezvani ..... Summer 2018–Spring 2019
	 Shuchi Sharma ..... Summer 2018
	 Sabrina Suhartono ( <i>now a programmer at Revature</i> ) ..... Fall 2017–Spring 2019
	 Tal Sneh <span>Goldwater scholar</span> ..... Summer 2018– <b>present</b>
	 Evangeline Taylor–Hermes <span>Flinn scholar</span> ..... Summer 2018
	 Bryan Ugaz ..... May 2018–Spring 2019
	 Justin Wilson ..... Fall 2019– <b>present</b>
	 Alexander Yurowkin ..... Spring 2018
 Irene Zhang ..... Fall 2018– <b>present</b>	
High school students	Through ASU SCENE ( <i>Science and Engineering Experience</i> ) program  Adrian Kwiatkowski (Red Mountain High School, now at University of Chicago) ..... Fall 2018–Spring 2019
Summer / Skyping  students ( <i>alphabetical order</i> )	 Gaby Almira (then at Osaka University)   Mo Awanah (then at Göttingen University)  Isyatul Azizah (then at Universitas Brawijaya, now at Heidelberg University)  Emilio Bachtiar (then at Johns Hopkins University, now at Duke University)  Anshuman Bakshi (then at UC Berkeley)

-  Fania Feby Ramadhani (Institut Teknologi Bandung)
-  Jason Santosa (then at Georgia Institute of Technology)
-  Isadonna Fortune Tenggangu (Surya University)
-  Gde Bimananda Mahardika Wisna (then at Institut Teknologi Bandung, now at UCSD)

## Before employment at ASU

2012–2017	 Leopold Green	then at University of California, Riverside. now a postdoc at California Institute of Technology.
2015–2016	 Alexander Auer	then at Wyss Institute at Harvard. now at Ludwig-Maximilians-Universität, Germany.
2013–2016	 Abhinav Appukutty	University of Michigan.
2014–2016	 Neerja Garikipati	then at Huron High School, Ann Arbor. now at University of Pittsburgh.
2012–2014	 Mario Cale	then at University of Michigan. now an M.D. student at UCLA.
Fall 2013	 James Song	University of Michigan.
2011–2012	 Terrence Tigney	then at University of Michigan, now at Ludwig-Maximilians-Universität, Germany
Summer 2007	 Yudhistira Virgus	then at Institut Teknologi Bandung, Indonesia. now a software engineer at Google.

## 10 Mentored Trainee's Honors and Awards

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### Since employment at ASU

Spring 2020	Tal Sneh	Goldwater Scholarship.
Spring 2020	Swarup Dey	ASU SMS Innovation award.
Spring 2020	Tal Sneh	Physics scholarship.
Spring 2020	Tal Sneh	One of the winners of the 2020 AAAS Student E-Poster Competition.
Spring 2020	Franky Djutanta	Travel award, International Conference on Engineering Synthetic Cells and Organelles.
Spring 2020	Franky Djutanta	Gordon Research Seminar: Origins of Life Registration Grant.
Spring 2020	Tal Sneh	AAAS Travel Grant.
Fall 2019	Tal Sneh	NSF Center for Engineering MechanoBiology Travel Grant.
Spring 2019	Aidan McGirr	<i>National finalist</i> , Truman Fellow.
Spring 2019	Swarup Dey	The College Graduate Excellence Award.
Spring 2019	Chase Hanson	Wally Stoelzel scholarship.
Spring 2019	Chase Hanson	Department of Physics scholarship.
Spring 2019	Daisuke Inoue	Kazato Research Encouragement Prize.
Spring 2019	Dustin Foote	Fulton Grand Challenge Scholars Program.
Spring 2019	Maeve Kennedy	Goldwater Scholar.
Spring 2019	Tal Sneh	<i>ASU nominee</i> for Goldwater scholarship.
Spring 2019	Tal Sneh	2019 Fusion Best Poster Award.
Fall 2018	Swarup Dey	Mechbio Conference 2018 Travel Award.
Spring 2018	Rishabh Shetty	ASU SBHSE Merit Award.
Summer 2017	Alexander da Silva	Barrett Fellow at CLAS.

## Before employment at ASU

Summer 2015      Abhinav Appukutty      Best poster, DNA 21 – 21<sup>st</sup> International Conference on DNA Computing and Molecular Programming.

## 11 Teaching

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### Since employment at ASU

Fall 2017–2019      PHY 472: “Advanced Biophysics Laboratory”  
–*New course developed at ASU.*

Spring 2018–2020      PHY 252: “Physics III”

Fall 2016      PHY 598: “Biomolecular and Cellular Mechanics”  
–*New course developed at ASU.*

### Before employment at ASU

Winter 2006      BE/APh161, “Physical Biology of the Cell”  
California Institute of Technology.  
*Teaching assistant, Course Instructor: Rob Phillips.*

## 12 Teaching workshop

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### Since employment at ASU

07/13/2020      Webinar speaker: Active learning in Physics on campus and at home.

11/17–20/2016      Fall 2017 New Faculty Workshop. Organized by American Association of Physics Teachers (AAPT), the American Physical Society (APS), and the American Astronomical Society (AAS), College Park, MD.

## 13 Disciplinary service

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### Since employment at ASU

*Ad hoc* referees      Nature, Science, Angewandte Chemie, Accounts of Chemical Research, Nano Letters, Scientific Reports, Journal of the American Chemical Society, Langmuir, Trends in Analytical Chemistry, Nature Nanotechnology, 24<sup>th</sup> International Conference on DNA Computing and Molecular Programming.

2019      *Proposal reviewer*, Human Frontier Science Program

2019–      *Guest editor*, Journal of Visualized Experiments (JoVE) on Methods in structural and dynamic DNA nanotechnology.

2018      NSF SemiSynBio review panel (SemiSynBio NSF 17-557).

2017–present      *Program committee*, International Conference on DNA Computing and Molecular Programming.

2017      *Organizing committee*, Biophest.

## 14 University-level service

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### Since employment at ASU



2019–present	Search committee for a faculty in the Department of Physics and Biodesign Center for Mechanisms of Evolution.
2018–2019	Search committee for a faculty in the Department of Physics with emphasis in Experimental Biophysics. – Search outcome: Douglas Sheppard
2016–2017	Search committee for a faculty in the School of Molecular Sciences and Biodesign Center for Molecular Design and Biomimetics with emphasis in Computational Physical Chemistry. – Search outcome: Petr Šulc

## 15 College and department-level service

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### Since employment at ASU

2018–2019	Exam committee, Department of Physics.
2018–2020	General studies committee, Department of Physics.
2018	Organizing committee, Biodesign Center for Molecular Design and Biomimetics symposium.
2017–2018	Exam committee, Department of Physics.
2016–2017	Exam committee, Department of Physics.

## 16 Community service and outreach

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### Since employment at ASU

2016–	Science-inspired cartoon with 2 graphic illustrators, Sapto Cahyono and Daisuke Inoue
02/23/2019	ASU Open Door 2019
01/30/2019	Biotechnology course, ASU Preparatory Academy.
08/03–09/2018	2018 Asian Science Camp. <i>Steering committee (chair) &amp; Speaker.</i> <i>Attended by &gt;250 students from 25 countries.</i>
08/07/2018	Science outreach at Eben Haezar Catholic high school, Manado, Indonesia. <i>Speaker</i> alongside Ron Vale (University of California San Francisco).
05/11/2018	Career Day, Arizona Cultural Academy, <i>Speaker.</i>
02/23/2018	Arizona State University Open Door 2018.
10/21/2017	Future Physics Sun Devil, Department of Physics, Arizona State University.
02/24/2017	Arizona State University Night of the Open Door 2017.
2017	BIOMOD, an annual biomolecular design competition for students. <i>Judge.</i>

### Before employment at ASU

2014	College 101, University of Michigan, <i>Instructor.</i>
09/22/2013	Webinar: How to apply to graduate schools in the US, <i>Speaker</i>
03/16–17/2012	Bridging International Cooperation between Indonesia and America, Washington, DC, <i>Conference Chair.</i>
07/16/2011	National Seminar of Science and Technology, Aceh, Indonesia, <i>Invited speaker.</i>
2011	Science outreach at Universitas Negeri Medan, Indonesia, <i>Speaker.</i>
2009	Science outreach at Satya Wacana Christian University, <i>Speaker.</i>
2009	Science outreach at Paramadina University, <i>Speaker</i>
2008	2008 Asian Science Camp, Bali, Indonesia, <i>Invited speaker.</i>

2008

Science outreach at Tugasku elementary school, Jakarta, Indonesia, *Speaker*.

## 17 Entrepreneurship

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### Before employment at ASU

2014–2015

ImmunoRodeo. *Co-founder*, alongside Carter Swanson.

– *Semi finalist* (~70 semi finalists, out of >600 proposals) in OneStart Competition

– In 2014, OneStart was the world's largest life sciences and healthcare startup accelerator program.

– Mentored by Michelle Browner (then at Johnson and Johnson Innovation)

## 18 Past support

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### Internal funding

05/2019

Global Security Initiative (GSI), Arizona State University

PI: Rizal F. Hariadi

\$ 50,000

(i) Purchase of an FPLC and (ii) 2-month support for a visiting scholar.

### Trainee funding

FY 2018

Kazato Research Foundation

¥ 2,000,000 (or equivalent to ~ \$ 19,000)

PI: Daisuke Inoue (postdoc)

*Design of microtubule structure by DNA origami.*

## 19 Current support

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### External funding

09/30/2018–06/30/2023

1DP2AI144247–01

NIH (National Institutes of Health) Director's New Innovator Award

\$ 2,353,661

PI: Rizal F. Hariadi

*Nanoscale reconstruction of mechanical systems involved in disease pathogenesis.*

04/01/2018–03/31/2021

ADHS17-00007401

Arizona Biomedical Research Commission (ABRC)

\$ 225,000

PI: Rizal F. Hariadi

*An ultra-sensitive and low-cost diagnostic for valley fever.*