



**UNIVERSITAS PENDIDIKAN INDONESIA**  
 FACULTY OF MATHEMATICS AND NATURAL SCIENCES EDUCATION  
 DEPARTMENT OF PHYSICS EDUCATION  
 Jalan Dr. Setiabudi 229 Bandung 40154  
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**STAFF HANDBOOK**

Name	Judhistira Aria Utama				
Position	Astronomy & Astrophysics ( <i>Teaching area and designation</i> )				
Academic career	<i>Initial academic appointment</i>	<i>Institution</i>	<i>Year</i>		
	<b>Assistant Professor</b>	<b>Universitas Pendidikan Indonesia</b>	<b>2012</b>		
	<i>Habilitation [German post-doctoral qualification] (Subject)</i>	<i>Institution</i>	<i>Year</i>		
	-	-	-		
	<i>Doctorate (Subject)</i>	<i>Institution</i>	<i>Year</i>		
	<b>Astronomy</b>	<b>Institut Teknologi Bandung</b>	<b>2012-2017</b>		
	<i>Master (Subject)</i>	<i>Institution</i>	<i>Year</i>		
<b>Astronomy</b>	<b>Institut Teknologi Bandung</b>	<b>2004-2006</b>			
<i>Undergraduate degree (subject)</i>	<i>Institution</i>	<i>Year</i>			
<b>Astronomy</b>	<b>Institut Teknologi Bandung</b>	<b>1995-2001</b>			
Employment	<i>Position</i>	<i>Employer</i>	<i>Year</i>		
	<b>Head of Earth and Space Laboratory</b>	<b>Head of Department</b>	<b>2019-2023</b>		
	<b>Lecturer</b>	<b>Dean</b>	<b>2008-Now</b>		
Research and development projects over the last 5 years	<i>Name of project or research focus</i>				
	<i>Period and any other information</i>				
	<i>Partners, if applicable</i>				
	<i>Amount of financing</i>				
	No	Year	Title of Research Project	Financing	
				Sources	Amount (Million Rp)
1	2018 - 2020	Development of Earth and Space Science Electronic Teaching Materials with Multiple Intelligences and Remedies Misconceptions Orientation for Prospective Middle and High School Teachers	Ministry of Research and Technology of the Republic of Indonesia	135 (2020) 94 (2019) 142,9 (2018)	
2	2019 - 2021	Implementation of Sky Quality Meter in Sky Park Development in Kuningan Regent	Ministry of Research and Technology of the Republic of Indonesia	- (2021) - (2020) - (2019)	
3	2019 - 2021	Development of STEM-Based Prototype to Train Students' Creative Thinking Skills in Basic Physics Instrumentation Course to Improve Competency in the Era of Industry Revolution 4.0	Ministry of Research and Technology of the Republic of Indonesia	89 (2021) 75 (2020)	
4	2018 - 2021	Dynamical Evolution of Near-Earth Asteroids Population in the Inner Region of the Solar System using Big Data Analysis	Ministry of Research and Technology of the Republic of Indonesia	87 (2021) 147 (2020) 111 (2019)	



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	5	2017 - 2020	Preparation of Web-Based Earth and Space Sciences Teaching Materials to Accommodate Multiple Intelligences, Improve Concept Mastery and Inculcation Character Values to Students	Ministry of Research and Technology of the Republic of Indonesia	135 (2020) - (2019) - (2018)
Industry collaborations over the last 5 years	<i>Project title</i> <i>Partners</i>				
Patents and proprietary rights	No.	Title		Type	Year
	1	Computer program: WEB-based teaching materials in the subject of the Earth protector with multiple intelligences and character inculcation orientation for junior high school students		Proprietary rights	2019
	2	Computer program: WEB-based teaching materials in the subject of motion and position of celestial bodies with multiple intelligences and the actualization of character values orientation for junior high school students		Proprietary rights	2019
	3	Book: Knowing the Earth (Enrichment book for Junior High School and equivalent)		Proprietary rights	2019
	4	Computer program: WEB application as teaching material with multiple intelligences and character education orientation on global warming topic		Proprietary rights	2019
	5	Book: The Earth Protector (Enrichment Book on Earth and Space Science for Junior High School/equivalent)		Proprietary rights	2017
	6	Visual aids: Daily and annual apparent motion of the Sun		Proprietary rights	2017
	7	Book: Integrated earth and space science that accommodates multiple intelligences with orientation on concepts mastery and character inculcation in the motion of celestial bodies theme		Proprietary rights	2015
Important publications over the last 5 years	<i>Selected recent publications from a total of approx. (give total number): 35 Publications (Scopus &amp; Others Indexed)</i> <i>Author(s)</i> <i>Title</i> <i>Any other information</i> <i>Publisher, place of publication, date of publication or name of periodical, volume, issue, page numbers</i>				
	No	Publication		Author (s)	
	1	Design and validation of six-tier astronomy diagnostic test instruments with Rasch Model analysis, Journal of Physics: Conference Series, 2021, 1806(1), 012028		G P Utari, W Liliawati, <b>J A Utama</b>	



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	2	Application of STEM-based online learning to train creative skills of students in covid-19 pandemic periods, Journal of Physics: Conference Series, 2021, 1806(1), 012039	F Sarnita, A Fitriani , Anhar , <b>J A Utama</b> , I R Suwarma, Widia	
	3	Detection system of solar flare occurrence in PROBA2 SWAP images using seeded region growing and machine learning, Technology Reports of Kansai University, Vol. 6., Issue 7, 2020, p. 3329-3342	M F Muzakki, <b>J A Utama</b> , R Priyatikanto, L S Riza	
		Identifying K-10 Students' Learning Difficulties on Learning Kepler's Law using Worksheet: Is It Worth?, Journal of Physics: Conference Series, 2020, 1467(1), 012051	A H Setyadin, T G S Suryana, S Utari, R Efendi, W Liliawati, <b>J A Utama</b>	
	4	Anomalies of earth surface gravity field (g) during total lunar eclipse (TLE) on January 31 and July 28 2018 using video tracker analysis on pendulum harmonic motion, Journal of Engineering Science and Technology, Vol. 15, No. 2, 2020, p. 1001-1010	M G Nugraha, R G Ariantara, A Nurjanah, H S Nugroho, <b>J A Utama</b> , D Saepuzaman, H Susanti, F N Sholihat, A H Setyadin, K H Kirana	
	5	The automatic detection of near-earth asteroids in co-orbital state with terrestrial planets by implementing motif discovery algorithm, European Alliance for Innovation (EAI): Proceedings of the 7th Mathematics, Science, and Computer Science Education International Seminar (MSCEIS) 2019	<b>J A Utama</b> , LS Riza, M N Fazanadi, T Hidayat	
	6	The new hilaal visibility criterion for tropical region, Journal of Physics: Conference Series, 2019, 1280(2), 022073	<b>J A Utama</b> , F M Simatupang, Amsor	
	7	Parallel exponential smoothing using the bootstrap method in R for forecasting asteroid's orbital elements, Pertanika Journal of Science & Technology, Vol. 26, No. 1, 2018, p. 441-462	L S Riza, <b>J A Utama</b> , S M Putra, F M Simatupang, E P Nugroho	
	8	The orbital evolution of asteroid 367943 duende (2012 da14) uner yarkovsky effect influence and its implications for collision with the earth, Journal of Engineering Science and Technology, special issue on AASEC'2016, 2017, p. 42-52	<b>J A Utama</b> , T Hidayat, U Fauzi	
Activities in specialist bodies over the last 5 years	<b>Organization</b>		<b>Role</b>	<b>Periods</b>
	National Astronomy Education Coordinators (NAECs) for Indonesia at International Astronomical Union (IAU)		National Coordinator	2020 - Now
	Indonesia Astronomical Society		Member	2015 - Now
* Membership without a specific role need not be mentioned				