



International Mathematical Union -
Commission for Developing Countries

IMU Breakout Graduate Fellowship Program
2021 Report
FIMU Board Meeting. October 2021

CDC Secretary for Policy
Olga Gil Medrano



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Description of the Program

Thanks to a generous donation by all the winners of the Breakthrough Prizes the IMU, with the assistance of [FIMU](#), launched in 2016 a fellowship program to support postgraduate studies, [in a developing country](#), leading to a PhD degree in the mathematical sciences. The IMU Breakout Graduate Fellowship Program offers a limited number of grants for excellent students from developing countries. After the first pilot call in 2016 and once solved the economic sustainability issues, FIMU has decided the convenience of a yearly call starting in 2019.



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2021 Selection Committee

Olga Gil Medrano (Spain) - Secretary for Policy (Chair)

Mama Foupouagnigni (Cameroon)- CDC-Africa Representative

Jose Balmaceda (Philippines) - CDC-Asia Representative

Andrea Solotar (Argentina) - CDC-Latin America Representative

Emanuel Carneiro (IMPA Brazil/ICTP Italy)



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Five years after the launching: 2016-2021 Summary

Students awarded: 16 (9 Female)

From 11 different countries

- Africa: 6
- Asia: 3
- Eastern Europe: 1
- Latin America: 1

A total of USD 316.100 allocated

Two students have obtained PhD degree:

- Abebe Regassa Tufa (Ethiopia) PhD obtained in June 2018 at Botswana International University of Science and Technology.
- Adeolu Taiwo (Nigeria) PhD obtained in June 2021 University of KwaZulu-Natal, South Africa.



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2021 Call: awardees

This year the committee has decided to award all the money allocated by FIMU for new grants: USD 40.000

There are two excellent students both from Vietnam:

- Nguyen Hang Female Vietnam 3 years \$6.600,00/year \$19.800,00
- Tung Trinh Male Vietnam 3 years \$7.100,00/year \$21.300,00

It has been a tie among five good nominations

- Phiri Avulundiah Edwin Male Zambia 2 years \$7.000,00/year (PhD in South Africa)
- Jose Sayooj Aby Male India 3 years \$4.500,00/year
- Owolabi Oluwatosi Male Nigeria 3 years \$7.000,00/year (PhD in South Africa)
- Renald, Edwiga Female Tanzania 3 years \$2.000,00/year (A grant from his Univ. IMU-BGF can only cover the tuition fees)
- Duong Thi Hong Female Vietnam 1 year \$4.700,00 (Employed at the Uni. as officer; at the end of her thesis work)

In principle, the awarding to the two last students listed above seems to have less impact in their careers than for the other three, but the gender balance and the fact that the total amount allocated was modest, has led the committee to award all of them. We keep exactly on the limit for new grants and the amount committed is lower than expected, since none of the nominators applied for the complete 4 year period.



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The 2021 call: some data.

Nominations completed: 14 (4 Female)

From 9 different countries

- Africa: 7
- Asia: 2

Only 14 completed application received by the deadline May 31, that has been extended till July 1. The evaluation process has been rescheduled. No more applications received by the new deadline. Nevertheless, though few we have got very good applications, as I have described above.



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The 2021 call awardees (I):

Hang Nguyen is a Vietnamese PhD student at the Institute of Mathematics of the Vietnam Academy of Science and Technology nominated by her advisor Professor Truong Hoang. She plans to work on *Cylinder In Fano Varieties*.

Hong Duong Thi is a Vietnamese PhD student at the Thai Nguyen University of Sciences in Vietnam nominated by her advisor Professor Thuan Mai. She plans to work on *Stability of Some Classes of System of Fractional Order. Differential Equations and Application in Control Theory*.

Sayooj Aby **Jose** is an Indian PhD student at the Alagappa University in India nominated by his advisor Professor Raja Ramachandran. He plans to work on *Mathematical Modeling on Population Dynamical Systems and Epidemiology*.



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The 2021 call awardees (II):

Abd-semii'Oluwatosin-Enitan **Owolabi** is a Nigerian PhD student at the University of Kwazulu-Natal, Durban in South Africa nominated by his advisor Professor Oluwatosin Temitope Mewomo. He plans to work on *Further investigation on Split Generalised Mixed Equilibrium Problem, Monotone Inclusion Problem and Fixed point Problem in Hilbert and Banach spaces.*

Avulundiah Edwin **Phiri** is a Zambian PhD student at the University of Pretoria in South Africa nominated by his advisor Professor Roumen Anguelov. He plans to work on *Application of Data-Driven Methods to Dynamical Systems.*



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The 2021 call awardees(III):

Edwiga Kishinda **Renald** is a Tanzanian PhD student at the Nelson Mandela African Institution of Science and Technology in Tanzania nominated by her advisor Professor Verdiana Grace Masanja. She plans to work on *Mathematical Modelling of Lumpy Skin Disease with Controls in Pastoralist Societies in Tanzania*.

Trinh Tung is a Vietnamese PhD student at Hanoi National University in Vietnam nominated by his advisor Professor Le Mau Hai. He plans to work on *The log canonical threshold, the weighted log canonical threshold and applications*.



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Ongoing awardees

(2016) Ramírez Luna, María Alejandra. The amount awarded is USD 13.000 per year. The end of the PhD is scheduled for September 2021.

(2016) Do, Thai Duong. The amount awarded is USD 6.600 per year. The end of the PhD is scheduled for April 2022.

(2019) Phan, Thanh Hong. The amount awarded is USD 6.000 per year. The end of the PhD is scheduled for July 2021.

(2019) Sukhoresbka, Darya. The amount awarded is USD 3.600 per year. The end of the PhD is scheduled for October 2023.

(2020) Agonkoui, Christelle Judith. The amount awarded is USD 7.100 per year. The end of the PhD is scheduled for December 2023.

(2020) Falah, Annisa Nur. The amount awarded is USD 6.100 per year. The end of the PhD is scheduled for December 2022.

(2020) Namanya, Caroline. The amount awarded is USD 9.700 per year. The end of the PhD is scheduled for December 2023.



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Economical Issues (I): Report 2015-2021 (in USD)

A	B	C	D	E	F	G	H
Year	FIMUtoIMU	FIMUtoIMU (admin)	IMUtoTWAS	IMUtoTWAS (admin)	IMUtoLMS	IMUtoLMS (admin)	
2016	25.000,00	5.000	29.300	5.000	0	0	
2017	26.886,23		29.300	5.000	0	0	TWAS admin payed with IMU funds
2018	28.729,69	5.000	19.600	5.000	0	0	
2019	50.000,00	5.000	19.600	10.350	17.500	0	
2020	50.000,00	15.780	19.600	5.000	40.400	5.510	
2021	66.500,00	5.500	0	0	56.800	6.600	
TOTAL 16-21	247.115,92	36.280	117.400	30.350	114.700	12.110	B-D-F = 15.015 C-E-G = -6.180

FIMU Funds transferred on December of year n are accounted on year (n+1)



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Economical Issues (II): Forecast (in USD)

A	B	C	D	E	F	G	H	I	J
Year	FIMUtoIMU	FIMUtoIMU (admin)	IMUtoTWAS	IMUtoTWAS (admin)	IMUtoLMS	IMUtoLMS (admin)		Col. G in GBP	
TOTAL 16-21	247.115,92	36.280	117.400	30.350	114.700	12.110	B-D-F = 15015 C-E-G = -6180		
FUNDS ALREADY COMMITTED									
2022					55.700	approx. 6.750		5.000	
2023					28.300			5.000	
Funds needed during 2022									
		Grants (ongoing. 55.700 + new 40.000 = 95.700)				Request to FIMU 80.700			
		Administration:				Request to FIMU (6750+1180 = 7930)			