

京都大学教育研究振興財団助成事業 成 果 報 告 書

平成31年 4月 3日

公益財団法人京都大学教育研究振興財団

会 長 藤 洋 作 様

所 属 部 局 理学研究科・地球惑星科学専攻

職 名 准教授

氏 名 ENESCU Bogdan Dumitru (エネスク ボグダン・ドウミトル)

助 成 の 種 類	平成30年度 ・ 研究活動推進助成			
申請時の科研費 研究 課 題 名	地震の誘発を利用した日本列島の火山及び活断層における応力推定			
上記以外で助成金 を 充 当 した 研 究 内 容	なし			
助成金充当に関 わる共同研究者	(所属・職名・氏名) —			
発表学会文献等	(この研究成果を発表した学会・文献等) Bogdan Enescu, Kengo Shimojo, Anca Opris, Yuji Yagi and Jiancang Zhuang, Triggering and Decay Characteristics of Dynamically Activated Seismicity in Japan, S21A-03, American Geophysical Union (AGU) Fall Meeting, December 11, 2018, Washington DC (口頭発表)			
成 果 の 概 要	研究内容・研究成果・今後の見通しなどについて、簡略に、A4版・和文で作成し、添付して下さい。(タイトルは「成果の概要／報告者名」)			
会 計 報 告	交付を受けた助成金額	1,000,000 円		
	使用した助成金額	1,000,000 円		
	返納すべき助成金額	0 円		
	助成金の使途内訳	費 目	金 額	
		旅費(シンガポール出張)	172,220円	
		旅費(台湾出張)	131,440円	
今後の使用見込		696,340円		
当財団の助成に つ い て	(今回の助成に対する感想、今後の助成に望むこと等お書き下さい。助成事業の参考にさせていただきます。) 大変に助かりました。ありがとうございました。			

成果の概要／エネスク・ボグダン

My research focused on the Japanese earthquake activity, as well as the earthquake activity in other Asian countries with intense seismicity. The objective is to better characterize triggered seismicity following large inland and subduction-zone earthquakes and, in this way, to contribute to a better assessment of earthquake hazard.

In order to achieve this goal, I initiated two international collaborations, with researchers from Singapore and Taiwan. I had also an invited seminar in both countries.

During my trip to Singapore (January 16-19, 2019), I have established a fruitful collaboration with Prof. Shengji Wei, Earth Observatory of Singapore (EOS), Nanyang Technological University. The topics we have discussed include:

- 1) Work on the seismicity of Myanmar, where EOS has installed a relatively new broadband seismic network. Due to the active tectonics in the region, Myanmar is threatened by a high level of seismic hazard. However, the earthquakes and velocity structure in the region are poorly known due to the lack of regional seismic observations. This is the target of the current project, in which one of our graduate Ph.D. students will be involved.
- 2) Integrate the findings for Myanmar into the broader seismotectonic framework of Asia and compare seismicity features with those in Japan.

During my trip to Taiwan (March 24-26, 2019), I visited the laboratory of Prof. Kate Chen, National Taiwan Normal University, following a visit of one of her Master students to our laboratory. The collaboration with Prof. Chen focused on the characterization of seismicity of the southern Central Range. We have applied earthquake detection methods, similar to those employed in Japan, for detecting very small earthquakes and correlate their occurrence with the fault structure.

Our current research focuses on earthquake activity in Japan (e.g., the 2018 Osaka earthquake) and other seismic regions in Asia. In order to process various data for Japan or those recorded in other regions (e.g., Myanmar), we need powerful workstations and memory for data storage. Therefore, in the following weeks (within May), I am planning to purchase with the remaining funds a Dell workstation for heavy computations. The computer will be dedicated to processing earthquake waveform data and advance the research I have started recently, in collaboration with our international partners.

I am very grateful to the foundation for their financial support that made possible this research possible and will do my best in the future.