



POORNIMA

COLLEGE OF ENGINEERING

Report on Visiting Scientist Position at AHI EVRAN UNIVERSITY, TURKEY

Project title: Extended Fractional Operators and Their Applications

Host Scientist: İ Onur Kıymaz (Associate Professor, Ahi Evran University, Turkey)

Visiting Scientist: Shilpi Jain (Associate Professor, Poornima College of Engineering, Jaipur, India)

Duration of the visit: 12 August to 10 September, 2017

Achievements:

1. International joint project with Ahi Evran University, Turkey
2. Participated in the 6th International Eurasian Conference on Mathematical Sciences and Applications, which was held at Budapest, HUNGARY
3. Visit the Ahi Evran University, Turkey as visiting scientist
4. Joint research papers

Summary Report:

Abstract: The project was mainly devoted to the study of some fractional integral and derivative operators involving some special functions and established their various properties including the generating relations. We also discussed on development of new fractional operators and then how we can use them on boundary value problems. The team has started work on several research papers presenting results obtained in this project. The support of the Ahi Evran University Research Grant Program has played a crucial role in allowing the team to conduct the joint collaboration and we have gratefully acknowledged in the papers.

Part-1

I have joined the Ahi Evran University, Turkey on dated August 12, 2017. After joining, I went to Budapest, HUNGARY and attended the 6th International Eurasian Conference on Mathematical Sciences and Applications, which was held at Budapest, HUNGARY from 15 - 18 August 2017 supported by Ahi Evran University, Turkey (Project ID number FEF.D1.16.001). During the conference, I have presented my joint research works part of our joint project as follows (Presented in IECMSA-2017 and after finalization try to submit at suitable Journals):

1. Composition Formulae Associated Fractional Integral Operators with the Multi-Index Mittag-Leffler Functions
2. A Further Generalization of Fractional Operators
3. A Further Generalization of Gamma, Beta and Hypergeometric Functions
4. A Note on the Extended Type Riemann-Liouville Fractional Derivative Operator

Part-2

After return-back at Ahi Evran University, Turkey, we are started to working on all the presented papers and after finalization try to submit at suitable Journals (work going on till date).

I also got the chance to interact with other faculty members of AEU and discuss some possibilities about future joint work. Here, I specially mentioned some of my discussions on hypergeometric functions, differential equations and functional analysis with the Prof. AysegulCetinkaya and Prof. M. BakiYagbasan.

Also, I discussed with the Prof. Dr. Levent Kula (Head of Mathematics Department). We discussed on many thinks related to our departments and research. We also discussed on future possibilities. He is very dynamic person.

It is really a good experience of spending some time with Prof. Onur. I really feel honored to have joint research work with Prof. Onur. In my opinion, he is the top most mathematician in Turkey.

Finally, I would like to express my deep thanks to Ahi Evran University to provide me full financial support to visit Ahi Evran University, Turkey and Budapest, Hungary and also Poornima College of Engineering, Jaipur for provide me necessary facilities for this visit successfully.

Dr. Shilpi Jain
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