

# Report on Research Visit of Dr. Xianping Li

[University of Missouri - University of the Western Cape -- Academic Exchange Program for 2018]

I would like to thank the UMSAEP program for my visit to the University of the Western Cape (UWC). This report is based on the questionnaire contained in the UM-UWC exchange application form 2017. As part of this exchange program, I visited UWC from May 26 to June 8, 2018.

## **i. What were the objectives of your visit?**

The main objective of this visit was to collaborate with Professor Kailash Patidar at UWC to develop the Fitted Finite Element Method and discuss more potential projects. I met Professor Patidar in Summer 2017 when he was visiting another faculty in my department at UMKC. We had a brief discussion about developing a new computational method that integrates both of our expertise.

## **ii. If your objectives were fulfilled, to what do you attribute your success? If not, what were the reasons?**

The objectives were partially fulfilled. We have started developing the Fitted Finite Element Method and worked through the major ideas. Some initial results have been obtained. Due to the limited visiting time, however, we did not have chance to discuss some of the details. In the meantime, implementing the method using MATLAB still encounters some difficulties in our programming code. We are continuing the work after the end of my visit and plan to submit the results to a journal paper.

## **iii. If you could change any aspect of your visit, what would it have been?**

In future, I would arrange longer time for the visit and try to involve graduate students from both UMKC and UWC for some projects.

## **iv. How could the planning and preparation for your visit have been improved by UWC?**

The administrative staffs had taken care of most of the issues and my visit to UWC had not encountered any difficulty.

## **v. What is your overall assessment of the value of the UM / UWC Exchange Program?**

The UM/UWC Exchange Program is very valuable. It not only provides the opportunity for the collaborators to experience the different cultures but also improves the efficiency of the collaboration. It is much easier to discuss the projects in person than via email or videos.

## **vi. If you could change any aspect of the exchange program, what would it be?**

I was very satisfied with the experience and cannot think of anything that needs to be changed right now.

## **vii. Did you encounter any notable problems during your visit?**

No. Everything goes smoothly.

## **viii. How will your visit contribute to strengthening and improving programs at UWC?**

My host at UWC, Professor Patidar, is an applied mathematician. Our collaborative research can be used to solve different mathematical models arising from different fields, including disease modeling and medical image processing. The collaboration itself strengthens the applied mathematics program at UWC. The outcome can contribute to the communities in Western Cape and South Africa, which in turn, will improve the programs at UWC.

## **ix. Given the opportunity to participate in the exchange again, would you do so?**

I definitely would like to participate in the program again. My last visit was relatively short.

## **x. What, if anything, about your exchange experience surprised you?**

Although I had some preparation for the culture difference, I was surprised that UWC and Western Cape did not require much culture adjustment.

## **xi. What did you like most about the program?**

It provides the collaborators the opportunities to work together face to face without much interruption, which improves the efficiency of the collaboration.

**xii. What other observations would you like to share?**

UWC is a good university full of collaborative opportunities and Western Cape is a great place to visit. I would encourage more faculty members in UM system to participate in the program and visit UWC.

**xiii. How is the knowledge and experience gained on this exchange program going to influence your future work related endeavors?**

It shows me the power of collaboration and devotion on research. The face-to-face discussion and focus on research without interruption are really valuable.

**xiv. What specifically will these future endeavors entail?**

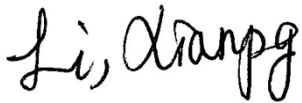
I will seek more opportunities for research collaboration and expect to produce more high quality research papers within reasonable amount of time.

**xv. Should the exchange program be continued? If so, why?**

Sure. The program is beneficial to both UM and UWC and has great impact on the collaborators from both institutions.

I would like to thank the program again, especially project director Rodney Uphoff and project specialist Ashley Rhode, for all the arrangements for my visit to UWC.

Sincerely,



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