**Programme Name:**

SIAM Conference on Analysis of Partial Differential Equations (PD19)

**Programme Website:**

https://www.siam.org/Conferences/CM/Conference/pd19

**Programme Dates:**

December 11-14, 2019

**Travel Dates:**

December 8-25, 2019

**Programme Venue & Location:**

La Quinta Resort & Club, La Quinta, California, USA.

**Describe the programme and how it pertains to your personal/professional development:**

SIAM Conference on Analysis of Partial Differential Equations (PDEs) is a conference, organised by the Society for Industrial and Applied Mathematics, that aims to bring together scientists and mathematicians working in PDEs or in related fields. In this conference, contemporary challenges raised by recent advances in engineering, industry, and bio-technology, are discussed and confronted with state-of-the-art mathematical and computational tools in PDEs. The themes of this year range from fluid dynamics, mathematical physics, to PDEs in biological and complex systems. The program consists of plenary sessions, tutorials, and smaller thematic sessions.

Attending the conference pertains to my personal and professional development in two ways. Academically, many of talks at the conference intersect with the topic of my capstone, which is approximation of governing equations of fluid dynamics. Although my advisor and I have defined a clear set of goals for the theoretical component of the project, the applied component has to do with application of the obtained results, and thus is very much exploratory in nature. Since many thematic talks at the conference explore wide-ranging applications of fluid dynamics, I will have a chance to look at fluid dynamics from a broader perspective, and thus understand the possible ways in which I could pursue my capstone.

Professionally, the conference will give me an opportunity to talk to mathematicians with whom I am interested in working. I am applying for PhD programs in mathematics, and attending a large conference like PD19 as I apply allows me to get to know potential faculty and see if their graduate schools can be a good fit for me. More specifically, I am applying to three schools in California, namely UC Davis, UC San Diego, and UC Santa Cruz, and the faculty that I have identified from those schools will be at the conference too.

**What are your goals and outcome of this trip?**

My first goal is to attend the sessions from the following:

* CP4 **Wave Propagation:** <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67693>, Dec 11, 2:30-4:30pm
* MS35 **Regularity, Singularity and Turbulence in Fluids III**: https://meetings.siam.org/sess/dsp\_programsess.cfm?SESSIONCODE=67615, Dec 12, 8:30-10:30am
* MS46 **Asymptotic Preserving Schemes for Multiscale Hyperbolic and Kinetic Equations**: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67572>, Dec 12, 2:30-4:30pm

## MS61 Regularity, Singularity and Turbulence in Fluids III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67617>, Dec 13, 8:30-10:30am

* MS63 **Inviscid Fluid Dynamics**: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67605>, Dec 13, 8:30-10:30am

## MS72 Recent Results in Incompressible Fluid Mechanics - Part I of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67625>, Dec 13, 3:15-5:15pm

## MS85 Recent Results in Incompressible Fluid Mechanics - Part II of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67626>, Dec 14, 8:30-10:30am

## MS71 Recent Developments on Analysis and Computations in Fluid Dynamics - Part I of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67471>, Dec 13, 3:15-5:15

## MS73 Recent Progress in Incompressible Fluid Dynamics - Part I of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67579>, Dec 13, 3:15-5:15

## MS86 Recent Progress in Incompressible Fluid Dynamics - Part II of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67580>, Dec 14, 8:30-10:30am

## MS98 Recent Results in Incompressible Fluid Mechanics - Part III of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67627>, Dec 14, 2:30-4:30pm

## MS99 Recent Progress in Incompressible Fluid Dynamics - Part III of III: <https://meetings.siam.org/sess/dsp_programsess.cfm?SESSIONCODE=67581>, Dec 14, 2:30-5pm

My second goal is to meet the following mathematicians: