Abstract: In the talks, some new results about the neutron transport equation will be presented. I focus on the geometric correction for the diffusion limit of the neutron transport equation in disk and in annuli. The BV-regularity of the solution in non-convex domain will be also showed. It will be divided into the following parts:

1. Introduction of the neutron transport equation and the existence of the solutions;
2. The analysis of the asymptotic behavior of the solution and the Milne problem about the boundary layer problem;
3. The estimates of the remained part and the completeness of the diffusion limit for the neutron transport equation;
4. The BV-regularity of the solution for the neutron transport equation in non-convex domain with diffusive boundary condition.

Lecture 1
Date: 17 August 2016 (Wednesday)
Time: 3:00 pm – 5:00 pm
Venue: Room 222, Lady Shaw Building, The Chinese University of Hong Kong

Lecture 2
Date: 19 August 2016 (Friday)
Time: 3:00 pm – 5:00 pm
Venue: Room 222, Lady Shaw Building, The Chinese University of Hong Kong

Lecture 3
Date: 24 August 2016 (Wednesday)
Time: 3:00 pm – 5:00 pm
Venue: Room 222, Lady Shaw Building, The Chinese University of Hong Kong

Lecture 4
Date: 26 August 2016 (Friday)
Time: 3:00 pm – 5:00 pm
Venue: Room 222, Lady Shaw Building, The Chinese University of Hong Kong

All are Welcome!