

## Discrete Mathematics Seminar

Time: Friday, 17 April 2015, 2:00-3:00 PM  
Room: 237 Derrick Hall  
Title: Distribution of integers with  $k$  prime factors  
Speaker: Dr. Weili Yao, Mathematics Department

### Abstract:

The distribution of primes has great interest in analytic number theory. Several interesting conjectures and celebrated results in this area will be introduced, and our recent work related to these results is showed.

It was proved that primes are well distributed in arithmetic progressions, but the exact number of those primes is not available. It is reasonable to ask whether there is a simple formula that approximates to it. Recently, we consider a more general case, the number of integers in arithmetic progressions, each of them has  $k$  prime factors, where  $k$  is allowed to tend to infinity with respect to  $x$ , and obtain a sharper asymptotic formula for it, and hence extend classical results in this direction.

### Bio:

Dr. Weili Yao came from China. She received her PhD from Xi'an Jiaotong University in 2007. Her research interests lie in additive number theory and exponential sums. She held postdoctoral positions at Shandong University (2010-2013). She is currently an associate professor at Shanghai University.