

# Mathematics in Data Science

Keynote speaker: Prof. Zuowei Shen

## Abstract

We are living in the era of big data. The discovery, interpretation and usage of the information, knowledge and resources hidden in all sorts of data to benefit human beings and to improve everyone's day to day life is a challenge to all of us. The huge amount of data we collect nowadays is so complicated, and yet what we expect from it is so much. This provides many challenges and opportunities to many fields, especially, the field of mathematical science. In this talk, we will show by examples how mathematics has been playing important roles in the era of big data. We will further discuss how mathematics can move the frontier of data science and what kind of challenges mathematicians face in this era of big data.

## About the speaker

Professor Zuowei Shen is Vice Provost (Graduate Education & Special Duties) at the National University of Singapore (NUS).

Professor Shen received his PhD in 1991 from the University of Alberta, Canada and completed his postdoctoral training at University of Wisconsin-Madison.

Professor Shen is well-known for his fundamental contributions in mathematical foundations of data science, especially in the areas of approximation and wavelet theory, image processing and compressed sensing, computer vision and machine learning. He sits on several editorial boards of top journals and has been invited to speak at many international conferences and congresses, including the International Congress of Mathematicians (ICM) in 2010 and the International Congress of Industrial and Applied Mathematics (ICIAM) in 2015.