

CMI Mathematics Colloquium

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Fourier series and PDEs

Mythily Ramswami

Fourier proposed in early 19th century, a PDE for heat conduction and also a method to solve that equation, now known as Fourier series. We briefly retrace that history and the controversies surrounding his work. Then we indicate the later developments and some instances of their applications to PDEs.

Specific examples of wave equation and Compressible Navier-Stokes system will be sketched.