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Hirokazu Ninomiya received his Ph.D. in mathematics in 1995 from Kyoto University under the supervision of Takaaki Nishida.

He is currently Professor of School of Interdisciplinary Mathematical Sciences at Meiji University. His research interests are mainly in parabolic equations and systems including free boundary problems, especially, entire solutions, pattern formation and roles of diffusion.

Title:Propagation phenomena in reaction-diffusion equations

Abstract:Propagation phenomena arise in a large variety of systems in physics, chemistry and biology. In this talk we focus on propagation phenomena of the reaction-diffusion equation. Recently traveling wave solutions and entire solutions of the reaction-diffusion equation have been studied intensively. Here traveling wave solution means the solution translating with a constant speed without changing its profile and the entire solution is a solution existing for any positive and negative time. Various traveling wave solutions and entire solutions have been constructed not only in the whole space, but also in an exterior domain. I will survey the recent studies and the relation between traveling wave solution and the entire solution including the application to the propagation phenomena.