Professor Ståhle addresses problems of fracture of thin film laminates, stress corrosion, hydrogen embrittlement, growth of bone and materials testing. He focuses on the mechanical conditions leading to dissolution of materials, instabilities of material surfaces, stress driven diffusion, growth of precipitates and initiation and growth of cracks.

He graduated in engineering physics and received a PhD at Lund University in 1985, became Docent (86) and then acting Professor of Solid Mechanics at Uppsala University (87), Professor at Luleå University (93), Professor of Mechanics of Materials at Malmö University (00) and since 2009 he is Professor of Solid Mechanics at Lund University.

From 2004 to 2009 he was the chairman of the National Committee for Theoretical and Applied Mechanics at the Swedish Royal Academy of Science, correspondent of EuroMech 1994 to 1996, expert for the Swedish Research Council, the NATO Collaborative Research Council and the Royal Society of London and Swedish representative in the General assembly of the International Union of Theoretical and Applied Mechanics since 2012.