

# New ways to detect and modulate musculoskeletal pathologies

**Prof. Frank SCHILDBERG**  
University of Bonn, Germany



**Date:** 20 March 2025 (Thursday)

**Time:** 11:00 am — 12:30 pm (HKT)

**Venue:** Y5-203, 5/F

Yeung Kin Man Academic Building

## Abstract

Preimplant pathologies, including aseptic implant failure and periprosthetic joint infection, are major challenges in musculoskeletal research. This presentation will explore three exciting innovations: a novel regulator of osteoclast function, an innate immune pathway in aseptic implant loosening, and a novel method for rapid antibiotic susceptibility profiling of bacterial strains associated with musculoskeletal infections. This research provides the basis for novel diagnostic and therapeutic strategies, ultimately driving innovation in orthopedic care.

## Biography

Prof. Frank Schildberg is Professor of Musculoskeletal Immunology and Head of the Research Unit at the Department of Orthopedics and Trauma Surgery at the University Hospital Bonn. He studied molecular biomedicine and after receiving his PhD from the University of Bonn in 2012, he transferred to Harvard Medical School for postdoctoral and junior group leader positions. Since July 2017, he has been Research Director at the Department of Orthopedics and Trauma Surgery at the University Hospital Bonn, before taking up a professorship at the same department in November 2023. The main focus of his research is in the field of osteo- and trauma immunology. The overall goal is to understand the cellular and molecular mechanisms of musculoskeletal immune responses in order to develop novel immunology-centered diagnostic and therapeutic options to better predict and treat musculoskeletal pathologies. Specifically, current studies are investigating immune responses in the context of implants and during bone homeostasis.