

言語 / 英語 Language/English

Biotic roles in soil structural dynamics: exploring underground architecture

9/6 Fri
15:30-17:00



東京農工大学 小金井キャンパス BASE 本館 2 階セミナー室
Seminar Room, 2nd Floor, BASE, Koganei Campus, TUAT



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Soil structure is fundamentally important in affecting how soils function, and is underwritten by the nature of soil pore networks. These multi-scale three-dimensional mazes form an “inner space” in and through which all soil processes occur. Soil pore networks regulate the passage of gases, water and associated materials in particular and profound ways. They provide the basic physical framework which supports plant roots. And they form the habitat for the huge range of soil biota which live belowground. As such, soil structure ultimately governs the actions and reactions of soil organisms, which are responsible for delivering the majority of the key ecosystem goods and services provided by soil systems. However, soil organisms themselves are both directly and indirectly involved in the creation and dynamics of soil structure. Thus the actions of soil biota modify the belowground environment in ways which in turn affect their functioning. This interaction between structural dynamics and biotic activity leads to an effective functioning of the soil system, and can be usefully conceptualised as that of 'soil architecture'. This talk will explore the fundamental mechanisms of biological roles in soil architectural phenomena and consider how such knowledge can be used to inform more sustainable soil management. The crucial role of plants in this whole story, and the opportunities this provides for such management, will also be explained.

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Everyone is welcome to attend.