

Southampton Imaging Conference | Imaging across scales – from Molecules to Humans

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Generating synthetic microscope images of pollen using latent space

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The architectures of pollen grains have evolved due to environmental and ecological factors. We use style transfer, a deep learning technique, to generate new synthetic images of microscope images of pollen grains to help understand their structure and gain insights into botanic adaptive strategies. The ability to create synthetic image via deep learning expands our capacity to study various pollen types, enhancing our understanding of plant evolution and ecology, with potential impact in agriculture, botany, climate science and sustainability.