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SOME IMPORTANT ISSUES OF MIL AND LFD ANISOTROPY MEASURES THAT USERS ARE USUALLY NOT CONSCIOUS

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Summary: Trabecular bone tissue, vascular system, alveoli, polymer scaffolds, metallic foams absorbing impact energy, some minerals and rocks are examples of porous objects with pronounced micro-architectures. Last years, thanks to sudden development of X-ray tomography and micro-tomography, methods to quantify its anisotropy are frequently applied. Classical 2D methods are also expanded to 3D situations. Two very widely used methods, namely Mean Intercept Length and Line Fraction Deviation, have some drawbacks that users are usually not conscious. The source of the problem lies in the discrete (rasterized or pixelized) nature of computer images. This work is dedicated to improvement of both methods and overcome their limitations.