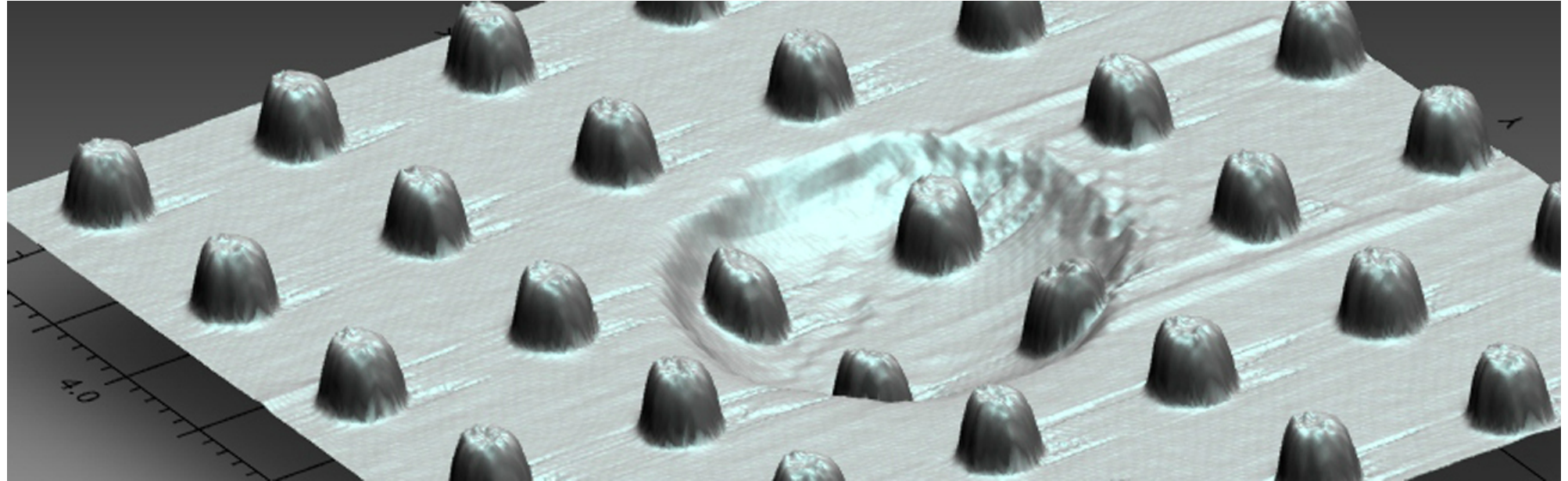


TrueMap v5 | TrueGage | Surface Metrology



3D Surface Visualization

Simply being able to visualize the measured 3D surface provides more knowledge into the features of a surface than a simple roughness parameter value. TrueMap contains a multitude of visualization options that allow the user to better understand their data. Pseudo-color, reflective, and color representations of the surface are available in addition to our new ambient shading rendering technology that adds depth and realism to the rendered image.

2D profiles can be extracted between any two locations on the 3D surface for additional analysis in both TrueMap and TrueSurf, our 2D profile analysis software.

Data pre-processing

Quite often the raw measured data acquired by an instrument must be pre-processed. TrueMap includes utilities to remove the nominal shape of a surface (form), thresholding, filling in non-measured holes in the data, etc. These utilities provide a powerful palette of tools for an engineer to study their surface data in detail.

Filtering

TrueMap's filtering tools provide a way to separate different wavelengths/frequencies of a surface. In other words roughness can be separated from waviness and waviness can be separated from nominal shape (form) of a surface. Both Gaussian and spline filters are available in addition to spatial filters. Form can be removed from the surface data using polynomial fitting algorithms.

Measurement of geometry (dimensions)

The software provides tools to measure the distance between locations on the surface as well as measure angles and radii. Step height measurements can also be quickly performed by defining regions of interest on the surface data. This ability is often quite useful when measuring MEMs and other mechanical/electrical components. The volume of a hole or peak can also be computed.

Particle Analysis

TrueMap provides a convenient way to separate particles from a background. This is a very useful tool in many fields including metallurgy, dermatology, plastics, and polymer manufacturing. Grains are separated from the background (remaining surface) with respect to a reference plane.

Spectral Analysis

Spectral analysis algorithms are available to help characterize surface lay and periodicity. Power spectral density, Fourier frequency analysis, texture direction and isotropy, and autocorrelation are some of the tools available in TrueMap.

3D (Areal) Surface Texture Parameters

TrueMap is continuously being updated with the latest surface texture parameters as defined in both the ISO and ASME standards.

- Amplitude parameters: Sa, Sq, St, Sp, Sv, Sz, Ssk, Sku
- Hybrid parameters: Ssc, Sdq, Sdr

- Functional parameters: Sci, Sbi, Sr1, Sr2, Svi, Sk, Spk, Svk
- Spatial parameters: Srw, Std, Str, Sal, Sds, Stdi