Contribution ID: **1186**　　　　Type: **Poster (Student, In Competition) / Affiche (Étudiant(e), inscrit à la compétition)**

A Computational Analysis of the Application of Skewness and Kurtosis to Corrugated and Abraded Surfaces

Tuesday 14 June 2016 19:38 (2 minutes)

In this poster, we describe the results of our investigation into the relevance of skewness and kurtosis as measures of surface roughness. Two types of surfaces are computationally generated: abraded surfaces consisting of surface scratches, and corrugated surfaces, consisting of hemispherical features. It was found that abraded surfaces could be well described by the skewness and kurtosis, exhibiting a large variation in these parameters over the range of surfaces sampled. The RMS roughness, RMS slope, and surface area ratio did not change significantly by comparison. A monotonic relationship was also found to exist between the skewness and kurtosis for abraded surfaces. For corrugated surfaces, the skewness and kurtosis were nearly constant for surfaces with RMS roughness values differing by a factor of 5, while the RMS roughness, RMS slope, and surface area ratio changed significantly in comparison, indicating that these surfaces are best characterized by the latter three parameters. No monotonic relationship was found to exist between skewness and kurtosis for corrugated surfaces.

Primary author:　Mr DOWNEY, Tyler (Memorial University of Newfoundland)

Co-authors:　Dr BEAULIEU, Luc (Memorial University of Newfoundland); Mr MARTIN, Peter (Memorial University of Newfoundland)

Presenter:　Mr DOWNEY, Tyler (Memorial University of Newfoundland)

Session Classification:　DCMMP Poster Session with beer / Session d'affiches, avec bière DPMCM

Track Classification:　Condensed Matter and Materials Physics / Physique de la matière condensée et matériaux (DCMMP-DPMCM)