* Among these processes, polishing is the most common technology used in those applications in which high surface qualities, in terms of low roughness level, minimized subsurface damage and high form accuracies, are demanded. It is an essential step in optics manufacturing and in mold finishing operations
* The aim is to find out a trend of a feature or features calculated from the AE signals obtained along the process. Such an evaluation was made with the objective of collecting valuable information for the establishment of the end point detection of polishing process; this is when the required surface roughness is reached or it is necessary to replace the tool and select a finer one and/or change other polishing condition, to carry on with the following stage of polishing
* The scope was to extract relevant signal features to input to pattern recognition paradigms in order to identify correlations between process generated acoustic emission and polished workpiece surface roughness.
* Main spindle rotational speed = 300 rpm
* Feed speed = 5 mm/s
* Polishing force = 1800 or 1000 g
* Oscillation = 500 pulses per min
* Stroke = 1 mm
* Six polishing sessions, each composed of 60 passes, were carried out with session duration ~ 15 min and 50 s. During each polishing session, the full length of the alloy steel bar was polished over and over using alternated polishing force values:
* x 1800 grams 1 × 60 passes x 1000 grams 3 × 60 passes x 1800 grams 2 × 60 passes
* mean, variance, kurtosis, skewness, energy

What all things we need to identify – surface roughness, end point detection ?

Are we using vallence SW

Data from sensor where it is available – on PC or …

Which cloud platform we can use

During which process I need to take signals – polishing or grinding