3D Analytic geometry in using the link between CAS and Geometry applications of the TI N'Spire

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Workshop Proposal for the TI-Nspire & Derive Strand

ABSTRACT

We will start this workshop in showing how to represent in the Graphs and Geometry application of the TI N'Spire, in parallel perspectives, points given by their coordinates, lines and circles also generated by points given by their coordinates. We will continue in showing how to construct cones and cylinders (in using coordinates) having circles as basis but also having other curves given by their parametric equations as basis. We will have the opportunity to use the possible links between the Calculator page and the Geometry page.
We will point the power of the tools "Slider", "Store", "Link", "Lock" as well as the difficulty for both teachers and students to deal with the different sorts of approach of the notion of "variable" and "unknown" in this environment.
We will use for the workshop, the last version of the handheld (with the touchpad) as well as the new version of the Teacher Edition version of the TI N'Spire software.

Keywords
Analytic geometry. Cones. Cylinders. Variables. Unknowns

Observations
We will provide to the participants the last version of the handheld (with touchpad) as well as a demo version of the Teacher Edition software.