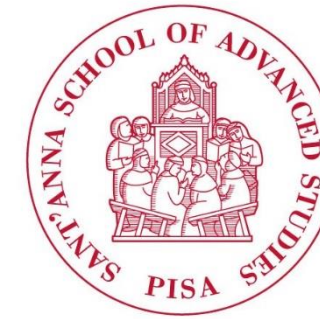


Surface analysis probe



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Invention



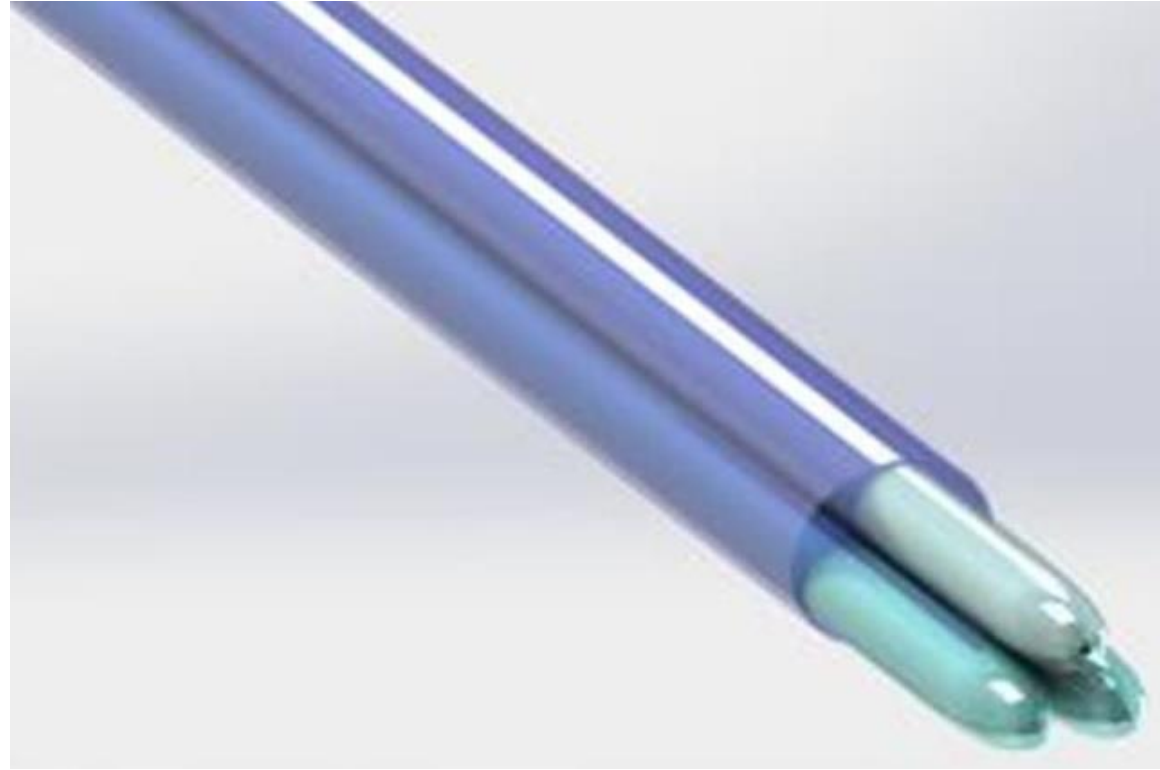
The invention is a probe for the analysis of a surface, that is not easily available for an operator. The probe allowed to scan surface roughness and stiffness. It is useful for microsurgery scan as much as endoscopy but also in industrial context for tissue analysis, in automotive for shell quality control and to monitor disastered environments.

The invention allowed to analyze surface roughness which is not accessible to a human operator, where it is not possible to control the speed of movement of the probing device on the surface itself. Whether the probe has to verify the presence of a tumor area within a gastrointestinal canal, it is now possible since the device includes a series of deformation sensors and a control unit.

The main advanateges are:

- Measurement of tissue stiffness
- Discrimination between different textures even when scrolling
- Measure the temperature of the intraluminal environment
- Measurement of the overall curvature of the entire endoscope

Drawings
& pictures



Industrial applications



Industrial applications in the field of:

- Endoscopy
- Laparoscopy
- Industrial textile
- Disastered environments

Possible developments



The research group is interested in obtaining industrial collaborations aimed at increasing the technological maturity of the present invention or industrial partners interested in taking the license of the technology object of this patent.

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