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## Piano strings with reduced inharmonicity

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### Abstract

The inharmonicity of the lower strings of straight pianos is still rather large especially for the first octave. Consequently, the timber of these strings can be sometimes awful and chords on the first octave highly dissonant. The idea of the present study is to show how this defect can be rectified by using an inhomogeneous winding on the whole string in order to minimize inharmonicity. The problem is solved by using an optimization procedure considering a non uniform linear density. Result show that the inharmonicity can be highly reduced. First results on a real string will be presented and discussed.

Keywords: Piano, String, Inharmonicity

### REFERENCES

- [1] Dalmont, J.-P.; Maugeais, S. Piano strings with reduced inharmonicity. To be published in Acta Acustica united with Acustica.