
hbspy - A Python Interface to the Hierarchical B-spline C++ Library

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ABSTRACT

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I describe the tools available for creating a Python interface to the HBS C++ library. HBS stands for hierarchical B-splines and the C++ library is used to represent surfaces or volumes of arbitrary complexity in terms of hierarchical splines. This library is under active development by faculty in the Physics and Engineering departments at BYU. I will defend the choice of using Python as the high-level interface. I will also describe projects that facilitate wrapping compiled languages (like C, C++ or Fortran) in Python. Among them are SWIG, Boost.Python, Cython, and a new project under active development – xdress. xdress blends an expressive typesystem, AST parsers like GCC-XML or the Clang AST, and code generating utilities into an easy to use system for constructing Python wrappers around C or C++ code.

what?

Keywords: python, C++, algebraic geometry, B-splines

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1 INTRODUCTION

1.1 BACKGROUND

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1.2 MOTIVATION

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1.3 CONTEXT

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2 METHODS

2.1 SWIG

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2.2 BOOST.PYTHON

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like “Huardest gefburn”? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written

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2.3 CYTHON

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2.4 XDRESS

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3 RESULTS AND DISCUSSION

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4 CONCLUSION

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