

# **ABJAD: AN OPEN-SOURCE SOFTWARE SYSTEM FOR FORMALIZED SCORE CONTROL**

## Introductory Workshop

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Trevor Bača<sup>1</sup>   Josiah Wolf Oberholtzer<sup>1</sup>   Jeffrey Treviño<sup>2</sup>

Study Day on Computer Simulation of Musical Creativity  
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<sup>1</sup>Department of Music, Harvard University

<sup>2</sup>Department of Music, Colorado College

1. *In media res*: Rhythm-makers
2. Abjad?
3. Score Applications
4. Non-score Applications
5. Conclusion

The Abjad API for Formalized Score Control extends the Python programming language with an open-source, object-oriented model of common-practice music notation that enables composers to build scores through the aggregation of elemental notation objects.

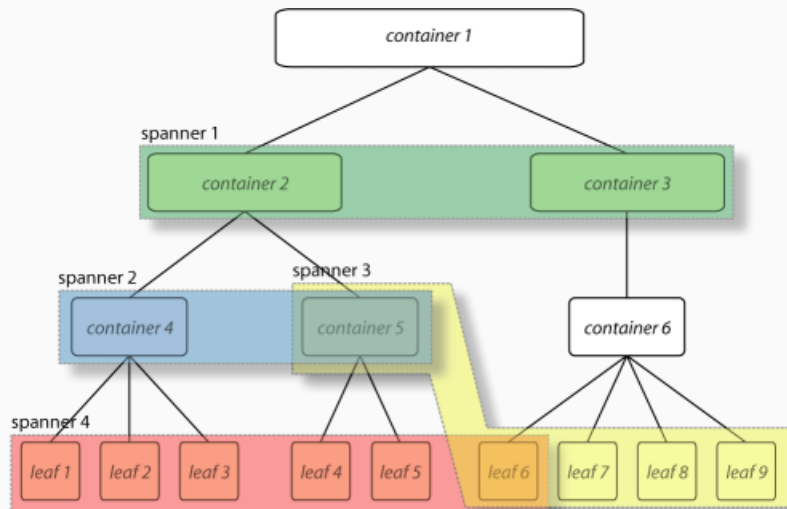
## *IN MEDIA RES*: RHYTHM-MAKERS

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ABJAD?

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# OBJECT MODEL



- 496 public classes
- 387 public functions
- 186,963 lines of code
- 9399 unit tests
- 10190 documentation tests

- C into Finale via MIDI (1997)
- Mathematica into Sibelius via MIDI (2001)
- Mathematica into SCORE (2003)
- Mathematica into LilyPond (2004)
- Python into Adobe Illustrator (2004)
- Python into LilyPond (2005)
- Max/MSP into MS Access into Adobe Illustrator (2008)<sup>1</sup>
- Public release on GoogleCode (2008)
- Migration to GitHub (2011)
- Abjad 2.16 released (2015)

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<sup>1</sup>An attempt by Josiah before discovering Abjad.



Table 1: Abjad Software Stack

Python				
Abjad				
<del>Score</del>	LilyPond	Steinberg?	...	...

## SCORE APPLICATIONS

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2015 **Invisible Cities (iii): Ersilia**

for chamber orchestra

2015 **Invisible Cities (ii): Armilla**

for viola duet

2014 **Invisible Cities (i): Zaira**

for eight players

2014 **Plague Water**

for bari sax, e-guitar, piano and percussion

2011 **Aurora**

for string orchestra

2010 **Lagartija**

for mixed quartet







## NON-SCORE APPLICATIONS

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## CONCLUSION

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## Documentation

<http://projectabjad.org>

## GitHub Repository

<http://github.com/Abjad/abjad>

## User Mailing List

<http://groups.google.com/group/abjad-user>

### Trevor Bača

- [trevor.baca@gmail.com](mailto:trevor.baca@gmail.com)
- [trevorBaca.com](http://trevorBaca.com)
- [github.com/trevorBaca](https://github.com/trevorBaca)

### Jeffrey Treviño

- [jeffrey.trevino@gmail.com](mailto:jeffrey.trevino@gmail.com)
- [jeffreytrevino.com](http://jeffreytrevino.com)
- [github.com/jefftrevino](https://github.com/jefftrevino)

### Josiah Wolf Oberholtzer

- [josiah.oberholtzer@gmail.com](mailto:josiah.oberholtzer@gmail.com)
- [josiahwolfoberholtzer.com](http://josiahwolfoberholtzer.com)
- [github.com/josiah-wolf-oberholtzer](https://github.com/josiah-wolf-oberholtzer)