Concerto

for prepared piano & ensemble

by

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in partial fulfillment of the requirements for the
degree of

Doctor of Philosophy

Department of Music
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**Instrumentation**

**Flute**  
**Oboe**  
**Bb Clarinet**  
**Bassoon**

**Horn**  
**Bb-Trumpet**  
**Trombone**  
**Eb Tuba**

| Percussion 1 | Vibraphone with variable speed motor  
|             | Tubular Bells (1 1/3 octaves)  
|             | Crotales (2 octaves)  
|             | Glockenspiel (2 octaves)  
|             | Plattenglocken (C#, D3, Eb3, A3, E4, G4) |

| Percussion 2 | Vibraphone with variable speed motor  
|             | Tubular Bells (2 octaves)  
|             | Crotales (2 octaves)  
|             | Plattenglocken (E3, G3, Ab3) |

**Piano 2**

| Solo Prepared Piano | Preparations provided by the composer |

| Violin 1 |  
| Violin 2 |  
| Viola |  
| Violoncello |  
| Double Bass | (5 String) |

**Duration:** approximately 17 minutes

**The score is transposed.**
Performance Instructions

Disposition
The soloist should be at the front and center of the stage. Percussion 1 should be at the back-left, Percussion 2 at the back-right, and Piano 2 should be at the back-center. The remainder of the ensemble should use a standard disposition.

Accidentals

\[ \sharp \] approximately 1/4 tone sharp
\[ \natural \] approximately 1/4 tone flat
\[ \uparrow \] approximately 1/8 tone sharp
\[ \downarrow \] approximately 1/8 tone flat

For woodwind multiphonics, accidentals are descriptive, not prescriptive; players should not attempt to tune the multiphonic to the given pitches.

For string harmonics, the 1/4 flat symbol is used to denote the intonation of a 7th-partial harmonic, and the 1/8 flat for 5th-partial harmonics. The intonation of natural harmonics, including even-numbered partials, should not be corrected.

Tempi
In certain sections of the piece, the conductor is instructed to begin at quarter note = 45 and continuously modulate the tempo between 40 and 50 bpm with a period of 16 to 20 seconds (i.e., a complete cycle from 45 up to 50, down to 40, and back up to 45 should take between 16 and 20 seconds). At quarter note = 45, one bar of 3/4 takes 4 seconds, so one could perform one quarter of the cycle over the course of a measure. If we take four measures to execute the cycle, in the first measure we will accelerate from quarter = 45 to quarter = 50; in the second measure we slow from quarter = 50 to quarter = 45; in the third measure, we continue to slow from quarter = 45 to quarter = 40; and in the fourth measure we accelerate from quarter = 40 to quarter = 45. Then the cycle repeats.

Woodwinds
Computer-assisted notation programs do not lend themselves very well to the notation of the subtleties of woodwind multiphonics: the indeterminate fluctuations, perforations, beatings, whistles, noises, and variety of tone colors. The composer has provided only the most prominent pitches, duration, and dynamic. Larger note heads indicate the most prominent pitches, while smaller note heads indicate secondary pitches.

Flute Multiphonic Fingerings (in order of appearance in score):

\[ \text{[image of flute fingerings]} \]

Oboe Multiphonic Fingerings (in order of appearance in score):

\[ \text{[image of oboe fingerings]} \]

Clarinet Multiphonic Fingerings (in order of appearance in score):

\[ \text{[image of clarinet fingerings]} \]
Basoon Multiphonics:

The most common type of multiphonic used in this piece involves isolating or emphasizing partials over an ordinario fingering:

Diamond notehead indicates fingered pitch; large and small ordinary noteheads indicate prominent and secondary sounding pitches; Arabic numerals above indicate partials to be emphasized.

Other basoon multiphonic fingerings in order of appearance in score:

Brass

When playing as a choir, brass should tune to natural intervals when possible. Cent deviations and the interval name (e.g., 'just M3') are indicated above the staff.

Percussion

Percussion should play laissez vibrer throughout. Instrument indications (Vib., Crot., Glock., Platt.) apply until the next instrument change. Mallet indications (SOFT, MED., HARD, CLAVE, MALLET) apply only to the note above which they appear. If no mallet indication is given, MED. mallets should be used for Vib., Röhr., and Platt., and hard plastic mallets for Glock. and Crot. Mallet indications refer to the following mallets:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SOFT</td>
<td>soft yarn vibraphone mallets</td>
<td>soft cord/yarn vibraphone mallets</td>
<td>medium mallet</td>
</tr>
<tr>
<td>MED</td>
<td>medium cord vibraphone mallets</td>
<td>medium cord vibraphone mallets</td>
<td>medium mallet</td>
</tr>
<tr>
<td>HARD</td>
<td>hard cord vibraphone mallets</td>
<td>unweighted, unfelted, rawhide mallets</td>
<td>hard plastic mallet</td>
</tr>
<tr>
<td>MALLET</td>
<td>hard plastic mallet</td>
<td>clave</td>
<td></td>
</tr>
</tbody>
</table>

Solo Prepared Piano

If possible, a 9' grand piano should be used. Preparations and instructions for preparation are provided by the composer. The sustain pedal should be fixed in the depressed position.

The solo part is marked rubato. Because the soloist's eyes will often be directed inside the piano and not at the conductor, the soloist is not expected to coordinate rhythmically with the rest of the ensemble. Events should still be executed more or less on time.

When playing harmonics, the soloist should use the lightest possible pressure and remove the finger from the string as soon as possible once the harmonic is sounding. In this way, a heavy attack on harmonics can be avoided.

Strings

Non-harmonic pizzicati should be played with a light vibrato. Otherwise, the piece should be played without vibrato.
Commissioned work by Kunststiftung NRW and Ensemble Musikfabrik

Premiere: February 25, 2018
Conductor: Peter Rundel
Concerto for prepared piano & ensemble

Joseph Lake

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poco rall.
\( j = 45, \) oscillate slowly between \( j = 40 - 50 \) with a period of 16-20°
\[ \begin{align*}
\text{Fl.} & \quad \text{Cl.} \\
\text{Bsn.} & \quad \text{Hn.} \\
\text{Tpt.} & \quad \text{Tbn.} \\
\text{Tba.} & \quad \text{Perc. 1} \\
\text{Perc. 2} & \quad \text{Pno. 2} \\
\text{Solo Pno.} & \quad \text{Vln. 1} \\
\text{Vln. 2} & \quad \text{Vla.} \\
\text{Vc.} & \quad \text{Db.}
\end{align*} \]
freely, in alternation with the soloist

8 - 10" for each event group
Appendix A: Instructions for Preparation of Piano

Preparations will be provided by the composer.

The following objects should be used to prepare the piano:


2. ‘Gold Chain Segment’ — 0.5” segment of one link of a 24 x 13.6 x 2.8 mm round, brassed steel decorative chain (Dörner+Helmer Zierkette Nr. 8210, Stahl vermessingt, http://www.produkte24.com/images/catalogs/3509/pdf 31717.pdf). A small amount of pastex may be necessary to keep the strings from buzzing.

3. ‘Large Wood’ — 1” segment of 5/8 x 1/8” hardwood/oak strip or rectangular dowel.


5. ‘Small Wood’ — 9/16” segment of 5/8 x 1/8” hardwood/oak strip or rectangular dowel.


7. ‘Plastic U’ — 5/8” segment of one link of 43 x 21 x 6 mm (inside length / outside width / diameter) plastic chain.

8. ‘Light Washer’ — 6.4 x 20 mm zinc-plated flat washer (1.6 mm thick).

9. ‘Keychain’ — 14 mm metal key ring.

10. ‘One Staple’ — 5/8” 18-gauge 7/32” Narrow Crown staple. ‘Vertical’ indicates that only one time of the staple should be woven through the piano strings. ‘Horizontal’ indicates that both times of the staple should be woven through the strings.

The position of preparations is given relative to harmonic nodes. Third partial refers to the third partial node closest to the keyboard; fifth partial refers to the fifth partial node which falls between the third partial node closest to the keyboard and the second partial node.

<table>
<thead>
<tr>
<th>Key</th>
<th>Preparation</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bb2</td>
<td>Blue Disk</td>
<td>Bottom of disk 1.5-1.75” past 3rd partial</td>
</tr>
<tr>
<td>B2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3</td>
<td>Gold Chain Segment</td>
<td>Halfway between 3rd and 5th partial</td>
</tr>
<tr>
<td>Db3</td>
<td>Large Wood</td>
<td>Top of wood 0.5-0.75” short of 2nd partial</td>
</tr>
<tr>
<td>D3</td>
<td>Thin Red Disk</td>
<td>Center of disk at 2nd partial</td>
</tr>
<tr>
<td>Eb3</td>
<td>Small Wood</td>
<td>Center of segment at 2nd partial</td>
</tr>
<tr>
<td>E3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F3</td>
<td>Blue Disk</td>
<td>Bottom of disk approximately 0.25” past 3rd partial</td>
</tr>
<tr>
<td>F#3</td>
<td>Six Staples</td>
<td>Halfway between 3rd and 5th partial</td>
</tr>
<tr>
<td>G3</td>
<td>Plastic U</td>
<td>1.5-1.75” short of 2nd partial</td>
</tr>
<tr>
<td>Ab3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3</td>
<td>Light Washer</td>
<td>Halfway between 3rd and 2nd partial</td>
</tr>
<tr>
<td>Bb3</td>
<td>Large Wood</td>
<td>Top of wood 0.5-0.75” short of 2nd partial</td>
</tr>
<tr>
<td>B3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C4</td>
<td>Blue Disk</td>
<td>Center of disk at 2nd partial</td>
</tr>
<tr>
<td>Db4</td>
<td>Keychain</td>
<td>0.25-0.75” from dampers</td>
</tr>
<tr>
<td>D4</td>
<td>Six Staples</td>
<td>Center of staples at 3rd partial</td>
</tr>
<tr>
<td>Eb4</td>
<td>One Staple (Vertical)</td>
<td>At 2nd partial</td>
</tr>
<tr>
<td>E4</td>
<td>Keychain</td>
<td>0.25-0.75” from dampers</td>
</tr>
<tr>
<td>F4</td>
<td>One Staple (Horizontal)</td>
<td>Halfway between 3rd and 5th partial</td>
</tr>
<tr>
<td>F#4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G4</td>
<td>Keychain</td>
<td>Slightly farther than halfway between 3rd and 2nd partial</td>
</tr>
<tr>
<td>Ab4</td>
<td>Light Washer</td>
<td>Center of washer at 2nd partial</td>
</tr>
<tr>
<td>A4</td>
<td>Thin Red Disk</td>
<td>Center of disk at 2nd partial</td>
</tr>
<tr>
<td>Bb4</td>
<td>One Staple (Horizontal)</td>
<td>At 2nd partial</td>
</tr>
<tr>
<td>B4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C5</td>
<td>Thin Red Disk</td>
<td>Center of disk at 2nd partial</td>
</tr>
<tr>
<td>Db5</td>
<td>One Staple (Vertical)</td>
<td>At 2nd partial</td>
</tr>
</tbody>
</table>
Appendix B: Performance Instructions (Solo Prepared Piano)

If possible, a 9' grand piano should be used. The sustain pedal should be fixed in the depressed position.

The solo part is marked rubato. Because the soloist's eyes will often be directed inside the piano and not at the conductor, the soloist is not expected to coordinate rhythmically with the rest of the ensemble. The part is, however, harmonically coordinated with the ensemble, so it is important that the soloist not get too far behind or too far ahead.

When playing harmonics, the soloist should use the lightest possible finger pressure and remove the finger from the string as quickly as possible once the harmonic is sounding. In this way, a heavy attack on harmonics can be avoided.

harmonic - diamond note head indicates key struck (or string plucked), normal note head indicates sounding pitch.

harmonic on prepared string - diamond note head indicates key struck (or string plucked); ordinary note heads indicates resulting pitches (there may be more that one from a single key strike); arabic numeral above indicates which partial to touch, as this may not always be obvious from the resulting pitches.

multiphonic - identical to a harmonic, but the finger should be removed as fast as possible after striking or plucking the string so that the harmonic and fundamental both sound together.

pz. pizzicato; pluck string with pad of finger.

pz. fingernail pizzicato; pluck string with fingernail.

snap pizzicato; pull string up with fingernail and let it snap back down.

SP quasi-sul ponticello; pluck close to the tuning pins.

ST quasi-sul tasto; pluck toward middle of string.