

Pensieve header: This is the index file for the APAI project.

```
In[*]:= SetDirectory["C:\\drorbn\\AcademicPensieve\\Projects\\APAI"]
```

```
Out[*]:= C:\\drorbn\\AcademicPensieve\\Projects\\APAI
```

```
{
  "TitleNotes" → StringJoin["
<div style=\"clear: right; float: right; padding: 8px; width: 400px;\"><a
  href=APAI.pdf><img width=400px src=figs/PXL_20220621_051527081@_.jpg></a></div>
This is the construction / computation page for my joint paper with
  <a class=external href=\"http://www.rolandvdv.nl/\">Roland van der Veen</a>:
<p><b>A Perturbed-Alexander Invariant.</b>
<p><em>Dedicated to the memory of
  V.&nbsp;F.&nbsp;R.&nbsp;Jones, 1952-2020, a friend and a mentor.</em>
<p>Paper PDF here: <a href=APAI.pdf>APAI.pdf</a>. Computations here: <a href=APAI.nb>APAI.nb</a>.
<p><b>Abstract.</b> ",
  StringReplace[ReadString["abstract.tex"], {
    "\\par" → "<p>",
    "\\`" → "\"", "\\'" → "'",
    "\\ " → " ",
    "\\sleps" → "sl_{2+}^\\epsilon",
    "{\\bf " → "<b>", "\\fb}" → "</b>"
  }],
  "\\n"
]
}
```

```
Out[*]:= {TitleNotes →
```

```
<div style="clear: right; float: right; padding: 8px; width: 400px;"><a href=APAI.pdf><img width=400px
src=figs/PXL_20220621_051527081@_.jpg></a></div>This is the construction / computation
page for my joint paper with <a class=external href="http://www.rolandvdv.nl/">Roland
van der Veen</a>, <p><b>A Perturbed-Alexander Invariant</b><p><a href=APAI.pdf>Paper
PDF here</a> <p><em>Dedicated to the memory of V.~F.~R.~Jones, 1952--2020, a
friend and a mentor.</em> <p>Computations here: <a href=APAI.nb>APAI.nb</a>
<p><b>Abstract.</b> In this note we give concise formulas, which lead to a simple and
fast computer program that computes a powerful knot invariant. This
invariant  $\rho_1$  is not new, yet our formulas are by far the simplest
and fastest: given a knot we write one of the standard matrices  $A$ 
whose determinant is its Alexander polynomial, yet instead of
computing the determinant we consider a certain quadratic expression in
the entries of  $A^{-1}$ . The proximity of our formulas to the Alexander
polynomial suggest that they should have a topological explanation. This
we don't have yet.
```