Intro

Recommended Literature

[Recommended Literature]

- historical context
- where this theorem comes from
- what it does
- why we care
- how we're gonna go about it

initial example

[[motivating example]] action of SL2 on both the upper half plane and $\hat{R}$. put pictures.

setup

what we have in our environment: Hilbert Spaces, which representations, etc. will need to put some parts of measure theory in here, but not sure what is didactically good. at some point it won't matter, just that it's in there.

copy from Kerr and Li, mostly [[setup from Kerr Li]]

heavy handed section about direct integral

idk wtf I'm gonna do for that but I'll figure it out. (oh me, of high hopes.) [[Unitary Representations and Direct Integral]]

Proof of Theorem

Put a prelude in here, reminding people what we're doing here as we've just distracted them with the setup garbage

start with proof using SL2

[[the SL(2, R) part of the proof]]

generalize to SLn

[[The SL(n, R) part of the proof]] [[The proof for a general G]]

Outlook

return to initial example.

Appendices

put any garbage I assume known in here? -> prob not. needs to precede the proof

Functional analysis

Representation Theory

Direct Integral