



Code: Dr Zygmunt Szpak

```
= SVector{1,2}
1:2,1:2] := Λ₁[n][index,index]
n[3:4,3:4] := Λ₂[n][index,index]
m = hom(M[n])
m' = hom(M'[n])
Uₙ = (m ⊗ m')
∂ₓuₙ = [(e₁ ⊗ m') (e₂ ⊗ m') (m ⊗ e₁)
Bₙ = ∂ₓuₙ * Λₙ * ∂ₓuₙ'
Σₙ = θ' * Bₙ * θ
Σₙ⁻¹ = inv(Σₙ)
T₁ = @SMatrix zeros{Float64,l,l}
for k = 1:l
    eₖ = I₁[:,k]
    ∂eₖΣₙ = (Iₘ ⊗ eₖ') * Bₙ *
    accumulating the result
    terms in
```



For this year's Julia conference, I decided to try an experiment – to make a typeface designed specifically for programming in Julia.

I've called this typeface JuliaMono. It consists of five fonts: JuliaMono-Regular, JuliaMono-Medium, JuliaMono-Bold, JuliaMono-ExtraBold, and JuliaMono-Black. The different weights allow some flexibility for formatting, in environments which allow font changes in code.

It's free to download, and is available in OTF format, so it can be installed on MacOS, Windows, and Unix.

JuliaMono contains most of the Unicode characters that Julia programmers would expect to find.

There are a few special contextual alternates (often called 'ligatures'), but not too many, because I'm not a big fan of them. You can probably turn these off anyway.

There are also some alternate versions of a few glyphs, so you can choose the appearance of characters such as the zero and g.

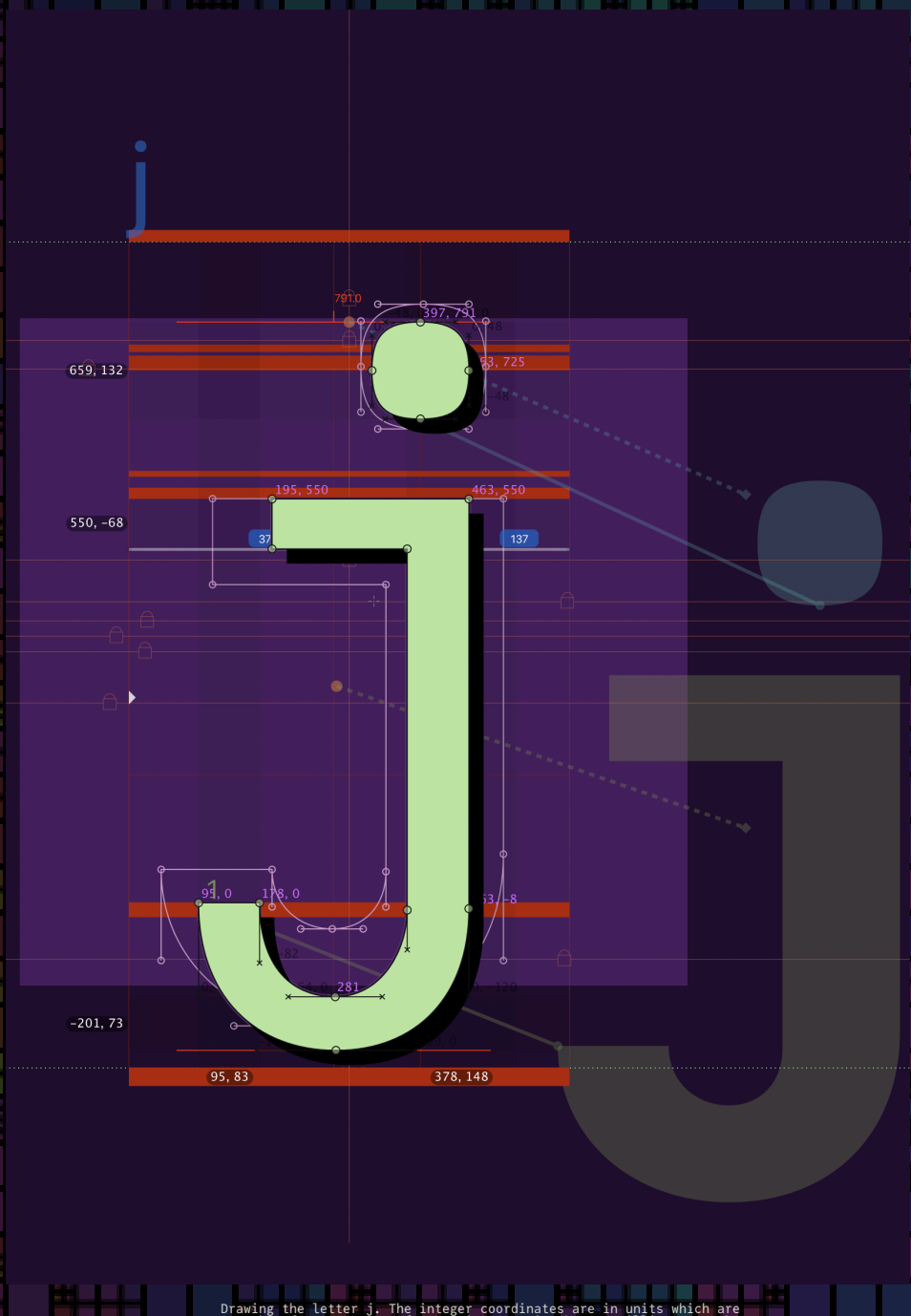
A few non-Unicode characters have sneaked in to the Private Use areas. Here's \ue800: ♫

This poster introduces JuliaMono, a monospaced typeface (font) designed with the Julia programming language in mind. If you want to know more about it, or try it out, visit:

[juliamono.netlify.app](https://juliamono.netlify.app)

The website provides more examples, details of how to use the font in various different editing environments, and answers to as-yet unasked questions.

To download it, go to [github.com/cormullion/juliamono](https://github.com/cormullion/juliamono).



# A Julia coding font

```
complex.jl
complex.jl

function _cpow(z::Union{...}, p::Union{T,Complex{T}})
    end
    else
        rᵖ = abs(z)^pᵣ
        ϕ = pᵣ*angle(z)
    end
elseif isreal(z)
    iszero(z) && return real(p) > 0 ? com
        Complex{T(NaN),T(NaN)} # 0 or N
    zᵣ = real(z)
    pᵣ, pᵢ = reim(p)
    if zᵣ > 0
        rᵖ = zᵣ^pᵣ
        ϕ = pᵢ*log(zᵣ)
    else
        r = -zᵣ
        θ = copysign(T(π),imag(z))
        rᵖ = r^pᵣ * exp(-pᵢ*θ)
        ϕ = pᵣ*θ + pᵢ*log(r)
    end
else
    pᵣ, pᵢ = reim(p)
    r = abs(z)
    θ = angle(z)
    rᵖ = r^pᵣ * exp(-pᵢ*θ)
    ϕ = pᵣ*θ + pᵢ*log(r)
end
```