Project Writeup Template

Your Name Here

1 Introduction

Christina Aguilera is **so** patriotic that she sang the same verse *twice*!

2 Equations

Here are some different ways that you can typeset math in LaTeX:

1. Equations with numbers:

$$C_{sa}\frac{dP_{sa}}{dt} = Q_{Ao}(t) - \frac{P_{sa}}{R_s}. \tag{1}$$

2. Equations without numbers:

$$C_{sa}\dot{P}_{sa} = Q_{Ao}(t) - \frac{P_{sa}}{R_s}.$$

3. Inline math: there once was a polynomial $p(x) = \sum_{i=0}^{n} c_i x^i$ who was very smooth.

There are also lots of Greek letters: α, β, γ, δ, π, ρ, ω (try the capitals!).

3 Numerical Method

Sample equation:

$$P_{sa}(t+\Delta t) = \frac{P_{sa}(t) + \Delta t\, Q_{Ao}/C_{sa}}{1 + \Delta t/(R_s C_{sa})}, \tag{2}$$

or, in nested fraction form,

$$P_{sa}(t+\Delta t) = \frac{P_{sa}(t) + \frac{\Delta t\, Q_{Ao}}{C_{sa}}}{1 + \frac{\Delta t}{R_s C_{sa}}}. \tag{3}$$

One reason to number equations is that I can refer to them like this: (2) is the backward Euler discretization of (1).

4 Programs

You can display source code by encapsulating it in the `verbatim` environment.

```
I've always      wanted
   to write   Japanese haiku
but I    never fin-
```

Back to source codes:

```
function Psa=Psa_new(Psa_old,QAo)
%filename:   Psa_new.m
global Rs Csa dt;
Psa=(Psa_old+dt*QAo/Csa)/(1+dt/(Rs*Csa));
```

There are more sophisticated ways to do this; see the `listings` package.

5 Results and Discussion

Look at cool result in Figure 1.

6 Conclusion

My project is great [1].

References

[1] Hoppensteadt FC, Peskin CS (2002) Modeling and Simulation in Medicine and the Life Sciences, 2nd ed. New York, NY: Springer-Verlag.

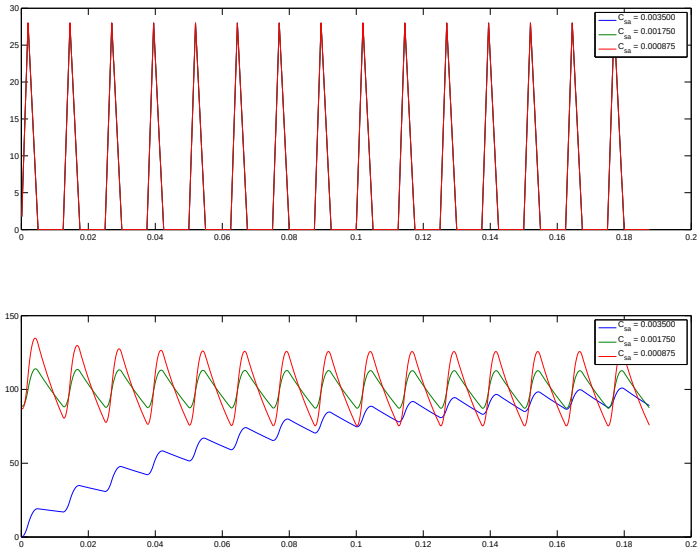

Figure 1: Groovy, colored lines.