$$\frac{v^{n+1}-v^n}{\Delta t} = \frac{1}{m}\left(F(t_n) - s(u^n) - f(v^n)\right), \tag{4.88}$$

$$\frac{u^{n+1}-u^n}{\Delta t} = v^n, \tag{4.89}$$

which is, as usual, reordered to the algorithmic form

$$v^{n+1} = v^n + \frac{\Delta t}{m}\left(F(t_n) - s(u^n) - f(v^n)\right), \tag{4.90}$$

$$u^{n+1} = u^n + \Delta t v^n\,. \tag{4.91}$$