

C++ code 11.6.18: Implementation of `solveCauchyProblem()` → [GitLab](#)

```
2 Eigen::VectorXd solveCauchyProblem(const UniformCubicSpline &f,  
3                                   const Eigen::VectorXd &mu0, double h,  
4                                   double T) {  
5     Eigen::VectorXd muT(mu0.size());  
6     double tau = std::min(h / std::abs(f.derivative(-1.0)),  
7                          h / std::abs(f.derivative(1.0)));  
8     double n = (int)std::floor(T / tau);  
9     GodunovFlux godunovFlux(f);  
10    auto rhs = [h, &godunovFlux](const Eigen::VectorXd &mu) {  
11        return semiDiscreteRhs(mu, h, godunovFlux);  
12    };  
13    muT = RalstonODESolver(rhs, mu0, tau, n);  
14    return muT;  
15 }
```