

C++ code 9.6.12: Implementation of `interpolateInitialData()` → [GitLab](#)

```
2 template <typename FUNCTOR_U, typename FUNCTOR_V>
3 std::pair<Eigen::VectorXd, Eigen::VectorXd> interpolateInitialData(
4     std::shared_ptr<lf::uscalfe::UniformScalarFESpace<double>> fe_space_p,
5     FUNCTOR_U &&u0, FUNCTOR_V &&v0) {
6     Eigen::VectorXd dof_vector_u0, dof_vector_v0;
7
8     // Generate Lehigh++ mesh functions out of the functors
9     auto mf_u0 = lf::mesh::utils::MeshFunctionGlobal(
10         [&u0](Eigen::Vector2d x) -> double { return u0(x); });
11     auto mf_v0 = lf::mesh::utils::MeshFunctionGlobal(
12         [&v0](Eigen::Vector2d x) -> double { return v0(x); });
13
14     dof_vector_u0 = lf::fe::NodalProjection(*fe_space_p, mf_u0);
15     dof_vector_v0 = lf::fe::NodalProjection(*fe_space_p, mf_v0);
16
17     std::pair<Eigen::VectorXd, Eigen::VectorXd> initialData =
18         std::make_pair(dof_vector_u0, dof_vector_v0);
19     return initialData;
20 }
```