

Thread 4 "netgen" hit Breakpoint 1, ngfem::ConstantCoefficientFunctionC::Evaluate (this=0x7fffd0098900, ip=...)
at /home/dow/ngsuite/ngsolve-src/fem/coefficient.cpp:184
184 throw Exception("no real evaluate for ConstantCF-Complex");
(gdb) where

```
#0 ngfem::ConstantCoefficientFunctionC::Evaluate (this=0x7fffd0098900, ip=...) at /home/dow/ngsuite/ngsolve-src/fem/coefficient.cpp:184
  double ConstantCoefficientFunctionC :: Evaluate (const BaseMappedIntegrationPoint & ip)
const
{
  throw Exception("no real evaluate for ConstantCF-Complex");
}
```

```
#1 0x00007fffe920b6ca in ngfem::CoefficientFunction::Evaluate (this=<optimized out>, ip=..., result=...)
  at /home/dow/ngsuite/ngsolve-src/include/./fem/coefficient.hpp:173
  virtual void Evaluate(const BaseMappedIntegrationPoint & ip,
                        FlatVector<> result) const
  {
    double f = Evaluate (ip);
    result(0) = f;
  }
```

```
#2 0x00007fffe81f7b8a in ngfem::VectorialCoefficientFunction::Evaluate (this=<optimized out>, ip=..., result=...)
  at /home/dow/ngsuite/ngsolve-src/fem/coefficient.cpp:4109
  virtual void Evaluate(const BaseMappedIntegrationPoint & ip,
                        FlatVector<> result) const
  {
    int base = 0;
    for (auto & cf : ci)
    {
      int dimi = cf->Dimension();
      cf->Evaluate(ip, result.Range(base,base+dimi));
      base += dimi;
    }
  }
```

```
#3 0x00007fffe81fe17c in ngfem::ComponentCoefficientFunction::Evaluate (this=0x7fffd0104070, ip=...)
  at /home/dow/ngsuite/ngsolve-src/fem/coefficient.cpp:3342
  using BASE::Evaluate;
  virtual double Evaluate (const BaseMappedIntegrationPoint & ip) const
  {
    VectorMem<20> v1(c1->Dimension());
    c1->Evaluate (ip, v1);
    return v1(comp);
  }
```

#4 0x00007ffe920b6aa in ngfem::CoefficientFunction::EvaluateComplex (this=<optimized out>, ip=...)

```
at /home/dow/ngsuite/ngsolve-src/include/./fem/coefficient.hpp:109
virtual Complex EvaluateComplex (const BaseMappedIntegrationPoint & ip) const
{
  return Evaluate (ip);
}
```

#5 0x00007ffe78eb4a2 in ngfem::CoefficientFunction::T_Evaluate<std::complex<double> > (ip=..., this=<optimized out>)

```
at /home/dow/ngsuite/ngsolve-src/fem/coefficient.hpp:275
template <>
inline Complex CoefficientFunction ::
T_Evaluate<Complex> (const BaseMappedIntegrationPoint & ip) const
{
  return EvaluateComplex (ip);
}
```

#6 ngfem::DVec<3>::GenerateVectorIR<ngfem::FiniteElement, ngfem::MappedIntegrationRule<2, 3, double>, ngbla::FlatMatrixFixWidth<3, std::complex<double>, 3> > (lh=..., vecs=<synthetic pointer>, mir=..., fel=..., this=0x7fffd023d158)

```
at /home/dow/ngsuite/ngsolve-src/fem/bdbequations.hpp:1007
  for (int j = 0; j < mir.Size(); j++)
    for (int i = 0; i < N; i++)
      {
        vecs(j,i) =
        coefs[i] -> template T_Evaluate<TSCAL> (mir[j]);
      }
}
```

#7 ngfem::T_BIntegrator<ngfem::DiffOpIdBoundaryEdge<3, ngfem::HCurlFiniteElement<2> >, ngfem::DVec<3>, ngfem::HCurlFiniteElement<2> >::T_CalcElementVector<std::complex<double> > (this=0x7fffd023d090, fel=..., eltrans=..., elvec=..., lh=...)

```
at /home/dow/ngsuite/ngsolve-src/fem/bdbintegrator.hpp:1517
template <typename TSCAL>
void T_CalcElementVector (const FiniteElement & fel,
   const ElementTransformation & eltrans,
   FlatVector<TSCAL> elvec,
   LocalHeap & lh) const
{
  try
  {
    IntegrationRule ir(fel.ElementType(), IntegrationOrder(fel));
    MappedIntegrationRule<DIM_ELEMENT, DIM_SPACE> mir(ir, eltrans, lh);

    FlatMatrixFixWidth<DIM_DMAT, TSCAL> dvecs(ir.GetNIP(), lh);
    dvecop.GenerateVectorIR (fel, mir, dvecs, lh);
  }
}
```

#8 0x00007ffe822f82f in ngfem::LinearFormIntegratorAnyDim::CalcElementVector
(this=0x7fffd01041b0, bfel=..., eltrans=..., elvec=...,
lh=...) at /home/dow/ngsuite/ngsolve-src/fem/integrator.cpp:2068

```
int dim = eltrans.SpaceDim();  
if (lfi[dim])  
    lfi[dim] -> CalcElementVector(bfel, eltrans, elvec, lh);  
else  
    throw Exception (ToString("Integrator-Anydim not available for dimension ")+
```

#9 0x00007ffe822aa0e in ngfem::CompoundLinearFormIntegrator::CalcElementVector
(this=0x7fffd023cd40, bfel=..., eltrans=..., elvec=...,
lh=...) at /home/dow/ngsuite/ngsolve-src/fem/integrator.cpp:1974

```
FlatVector<Complex> vec1(fel[comp].GetNDof(), lh);  
lfi->CalcElementVector (fel[comp], eltrans, vec1, lh);
```

#10 0x00007ffe8c9bbf8 in ngcomp::S_LinearForm<std::complex<double>
>::Assemble(ngstd::LocalHeap&)::{lambda(ngcomp::FESpace::Element,
ngstd::LocalHeap&)#2}::operator()(ngcomp::FESpace::Element, ngstd::LocalHeap&) const (lh=...,
el=..., __closure=0x7fffd023c520)
at /home/dow/ngsuite/ngsolve-src/comp/linearform.cpp:225

#11 std::_Function_handler<void (ngcomp::FESpace::Element, ngstd::LocalHeap&),
ngcomp::S_LinearForm<std::complex<double> >::Assemble(ngstd::LocalHeap&)::
{lambda(ngcomp::FESpace::Element, ngstd::LocalHeap&)#2}>::_M_invoke(std::_Any_data const&,
ngcomp::FESpace::Element&&, ngstd::LocalHeap&) (__functor=..., __args#0=<optimized out>,
__args#1=...) at /usr/include/c++/5/functional:1871

#12 0x00007ffe8ba2b7f in std::function<void (ngcomp::FESpace::Element,
ngstd::LocalHeap&)>::operator()(ngcomp::FESpace::Element, ngstd::LocalHeap&) const
(__args#1=..., __args#0=..., this=<optimized out>) at /usr/include/c++/5/functional:2267

#13 ngcomp::<lambda(ngstd::IntRange)>::operator()(ngstd::IntRange) const
(__closure=__closure@entry=0x7fffdfa21e20, r=...)
at /home/dow/ngsuite/ngsolve-src/comp/fespace.cpp:1231

#14 0x00007ffe8ba6997 in ngstd::ParallelForRange<long unsigned int,
ngcomp::IterateElements(const ngcomp::FESpace&, ngfem::VorB, ngstd::LocalHeap&, const
std::function<void(ngcomp::FESpace::Element, ngstd::LocalHeap&)>&>::<lambda(ngstd::IntRange)>
> (costs=..., antasks=0,
f=..., r=...) at /home/dow/ngsuite/ngsolve-src/include/./ngstd/taskmanager.hpp:198

#15 ngcomp::IterateElements(ngcomp::FESpace const&, ngfem::VorB, ngstd::LocalHeap&,
std::function<void (ngcomp::FESpace::Element, ngstd::LocalHeap&)> const&) (fes=...,
vb=ngfem::BND, clh=..., func=...) at /home/dow/ngsuite/ngsolve-src/comp/fespace.cpp:1246

#16 0x00007ffe8c9f6ea in ngcomp::S_LinearForm<std::complex<double> >::Assemble
(this=0x7fffd023b260, clh=...)

at /home/dow/ngsuite/ngsolve-src/comp/linearform.cpp:203

#17 0x00007fffe8da1b24 in <lambda(std::shared_ptr<ngcomp::LinearForm>, int)>::operator()
(__closure=<optimized out>,
 heapsize=<optimized out>, self=...) at /home/dow/ngsuite/ngsolve-src/comp/python_comp.cpp:2365

#18 pybind11::detail::argument_loader<std::shared_ptr<ngcomp::LinearForm>, int>::call_impl<void,
ExportNgcomp(pybind11::module&):<lambda(std::shared_ptr<ngcomp::LinearForm>, int)>&, 0ul,
1ul, pybind11::detail::void_type> (f=..., this=0x7ffdfa22390)
 at /home/dow/ngsuite/ngsolve-install/include/pybind11/cast.h:1492
---Type <return> to continue, or q <return> to quit---

#19 pybind11::detail::argument_loader<std::shared_ptr<ngcomp::LinearForm>, int>::call<void,
pybind11::detail::void_type,
ExportNgcomp(pybind11::module&):<lambda(std::shared_ptr<ngcomp::LinearForm>, int)>&> (f=...,
this=0x7ffdfa22390)
 at /home/dow/ngsuite/ngsolve-install/include/pybind11/cast.h:1474

#20 pybind11::cpp_function::<lambda(pybind11::detail::function_call&)>::operator() (__closure=0x0,
call=...)
 at /home/dow/ngsuite/ngsolve-install/include/pybind11/pybind11.h:153

#21
pybind11::cpp_function::<lambda(pybind11::detail::function_call&)>::_FUN(pybind11::detail::function_call &)
 at /home/dow/ngsuite/ngsolve-install/include/pybind11/pybind11.h:131

#22 0x00007ffff76509f0 in pybind11::cpp_function::dispatcher (self=<optimized out>,
args_in=0x7fffe0242c88, kwargs_in=0x0)
 at /home/dow/ngsuite/ngsolve-src/external_dependencies/netgen/external_dependencies/pybind11/include/pybind11/pybind11.h:571

#23 0x00007ffff3d101b9 in PyCFunction_Call () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#24 0x00007ffff3e2af5b in PyEval_EvalFrameEx () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#25 0x00007ffff3ebac0c in ?? () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#26 0x00007ffff3ebace3 in PyEval_EvalCodeEx () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#27 0x00007ffff3e2289b in PyEval_EvalCode () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#28 0x00007ffff3e3fd3f in PyRun_StringFlags () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#29 0x00007ffff3e40d7b in PyRun_SimpleStringFlags () from /usr/lib/x86_64-linux-gnu/libpython3.5m.so.1.0

#30 0x00007fffe96cf4b3 in PythonEnvironment::exec (this=<optimized out>, s=...)
at /home/dow/ngsuite/ngsolve-src/solve/./ngstd/python_ngstd.hpp:80

#31 0x00007fffe96cc850 in PythonEnvironment::exec_file (fstr="", this=<optimized out>)
at /home/dow/ngsuite/ngsolve-src/solve/./ngstd/python_ngstd.hpp:102

#32 <lambda(std::__cxx11::string)>::operator()(std::__cxx11::string) (init_file_="periodicmaxwell.py",
__closure=<optimized out>)
at /home/dow/ngsuite/ngsolve-src/solve/ngsolve.cpp:571

#33 0x00007fffe96ccbdb in std::_Bind_simple<NGS_LoadPy(ClientData, Tcl_Interp*, int, char
const**)>::<lambda(std::__cxx11::string)>(std::__cxx11::basic_string<char, std::char_traits<char>,
std::allocator<char> >)>::_M_invoke<0ul> (this=<optimized out>)
at /usr/include/c++/5/functional:1531

#34 std::_Bind_simple<NGS_LoadPy(ClientData, Tcl_Interp*, int, char
const**)>::<lambda(std::__cxx11::string)>(std::__cxx11::basic_string<char, std::char_traits<char>,
std::allocator<char> >)>::operator() (this=<optimized out>) at /usr/include/c++/5/functional:1520

#35 std::thread::_Impl<std::_Bind_simple<NGS_LoadPy(ClientData, Tcl_Interp*, int, char
const**)>::<lambda(std::__cxx11::string)>(std::__cxx11::basic_string<char, std::char_traits<char>,
std::allocator<char> >)> >::_M_run(void) (this=<optimized out>)
at /usr/include/c++/5/thread:115

#36 0x00007ffff6a48c80 in ?? () from /usr/lib/x86_64-linux-gnu/libstdc++.so.6

#37 0x00007ffff30c46ba in start_thread (arg=0x7fffdfa23700) at pthread_create.c:333

#38 0x00007ffff64b73dd in clone () at ../sysdeps/unix/sysv/linux/x86_64/clone.S:109