

## Desenvolvimento de Software - Nivel Avançado

O desenvolvimento de softwares com características científicas possui peculiaridades e dificuldades que direcionam a equipe da ESSS a utilizar uma metodologia própria que incorpora o melhor das metodologias consagradas do mercado.

### .....> C++

- Modern C++ Design: Generic Programming and Design Patterns Applied, Andrei Alexandrescu  
>>Amazon.com: Books: Modern C++ Design: Generic Programming and Design Patterns Applied
- Expression Templates, Todd Veldhuizen  
>>Expression Templates (Todd Veldhuizen)
- Template Metaprograms, Todd Veldhuizen  
>>Template Metaprograms (Todd Veldhuizen)
- The View Template Library, Martin Weiser & Gary Powell  
>>The View Template Library
- Custom Iterators for the STL, Christopher Baus & Thomas Becker  
>>Custom Iterators
- Policy Adaptors and The Boost Iterator Adaptor Library, David Abrahams & Jeremy Siek  
>><http://www.oonumerics.org/tmpw01/abrahams.pdf>

### .....> Scientific Programming

- Generic Components for Grid Data Structures and Algorithms with C++, Guntram Berti  
>><http://www.math.tu-cottbus.de/INSTITUT/Isnwmr/papers/tmpw00.pdf>
- A Generic Toolbox for The Grid Craftsman, Guntram Berti  
>><http://www.math.tu-cottbus.de/INSTITUT/Isnwmr/papers/leipzig01.pdf>
- Generic Software Components for Scientific Computing, Ph.D. Dissertation, Guntram Berti  
>>Generic Software Components for Scientific Computing [Guntram Berti, Dissertation]
- Will C++ be faster than Fortran?, Todd Veldhuizen  
>>Will C++ be faster than Fortran?
- Scientific Computing: C++ versus Fortran, Todd Veldhuizen  
>>Scientific Computing: C++ versus Fortran

### .....> Bibliotecas

- C++ Boost  
>>Boost C++ Libraries
- Pooma – Parallel Object-Oriented Methods and Applications  
>>POOMA
- The Matrix Template Library – Generic Components for High Performance Scientific Computing  
>>The Matrix Template Library
- Blitz++ - Object Oriented Scientific Computing  
>>Blitz++ Home Page
- View Template Library  
>>VTL (View Template Library) Homepage
- PETE – Portable Expression Template Engine  
>>Portable Expression Template Engine | Main