Applied Math: Numerical Analysis and Scientific Computing

SISSA PhD Course

UNITS Master Course

Federico Pichi and Gianluigi Rozza

11 November 2025

Who am I

- Graduated in Mathematics in Rome - La Sapienza

- Previous PhD student at SISSA and postdoc at EPFL

- Research interests: Bifurcating Phenomena, Reduced Order Models, Machine Learning

- Assistant Professor at SISSA in the mathLab group

- Webpage (https://fpichi.github.io)

Schedule

Day	Time	Type	Room	Topic
Tue 11 November 2025	16–18	Lecture	005	**Interpolation**
Wed 12 November 2025	9–11	Lecture	005	**Interpolation**
Tue 18 November 2025	16–18	Lecture	005	**Interpolation**
Wed 19 November 2025	9–11	Practice	005	*Exercises*
Tue 25 November 2025	16–18	Lecture	128	**Quadrature**
Wed 26 November 2025	9–11	Lecture	128	**Quadrature**
Tue 2 December 2025	16–18	Lecture	133	**Quadrature**
Wed 3 December 2025	9–11	Practice	004	*Exercises*

References

1. Quarteroni, A., Sacco, R., Saleri, F., Gervasio, P., 2014. Matematica Numerica, UNITEXT. Springer Milan, Milano. https://doi.org/10.1007/978-88-470-5644-2

2. Quarteroni, A., Valli, A., 1994. Numerical Approximation of Partial Differential Equations. Springer-Verlag. https://link.springer.com/book/10.1007/b98885

3. Quarteroni, A., Saleri, F., Gervasio, P., 2014. Scientific Computing with MATLAB and Octave, Texts in Computational Science and Engineering. Springer Berlin, Heidelberg. https://link.springer.com/book/10.1007/978-3-642-45367-0

4. Arnold, D.N., 2001. A Concise Introduction to Numerical Analysis. https://www-users.cse.umn.edu/~arnold/597.00-01/nabook.pdf