

MAP 2220 – FUNDAMENTOS DE ANÁLISE NUMÉRICA

2º Semestre - 2017

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Objetivos

- Expor o aluno a alguns **métodos numéricos** para que sejam usados nas demais disciplinas. Resolução de problemas em microcomputadores usando linguagens e/ou "software" adequados fora do horário de aula.

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Programa

- Aproximação e Interpolação: MMQ, Lagrange, Hermite, Splines. Integração Numérica: Newton-Cotes, Gaussiana. Métodos iterativos: soluções de equações e sistemas de equações algébricas e transcendentes: Newton, raízes de polinômios, gradientes conjugados.

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Avaliação

- Os alunos serão avaliados através de 3 provas teóricas, sendo que a média das provas será composta pela média aritmética das duas maiores notas.
- Não haverá prova substitutiva.
- Serão realizados 3 trabalhos computacionais.
- A média final é composta pela média das provas (70%) e dos trabalhos computacionais (30%).
- A média final deve ser superior a 5.
- O calendário de provas será divulgado em breve.

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Bibliografia

R.L. Burden & J.D. Faires, *Numerical Analysis*, 9th ed, 2010

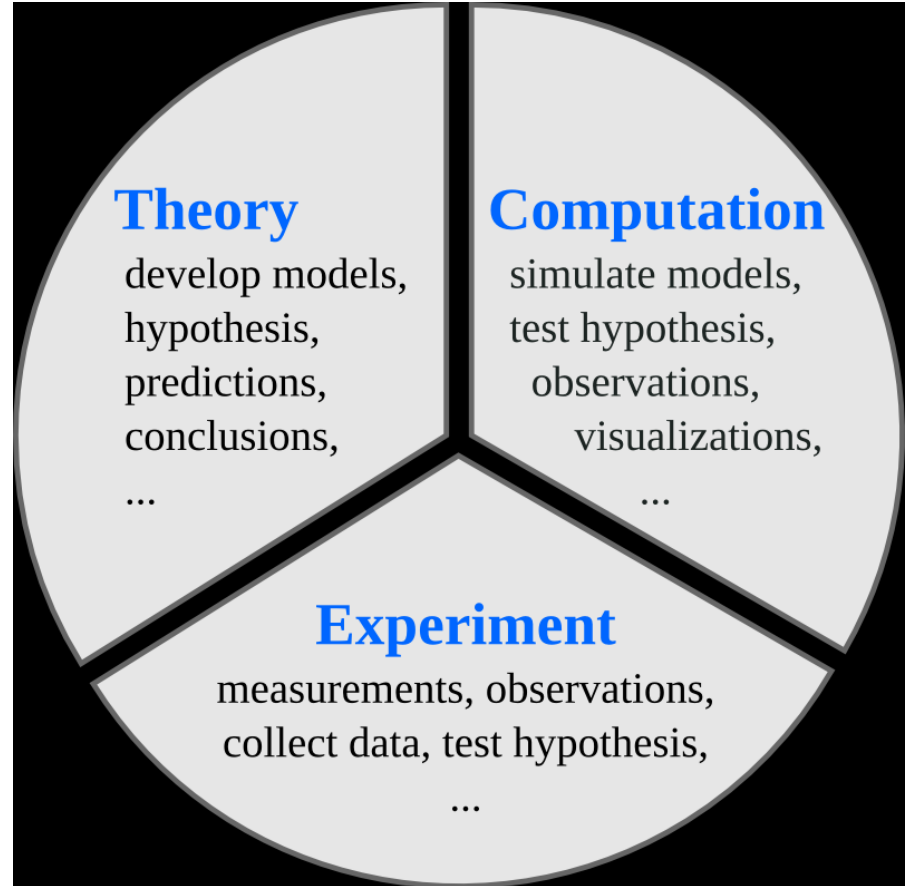
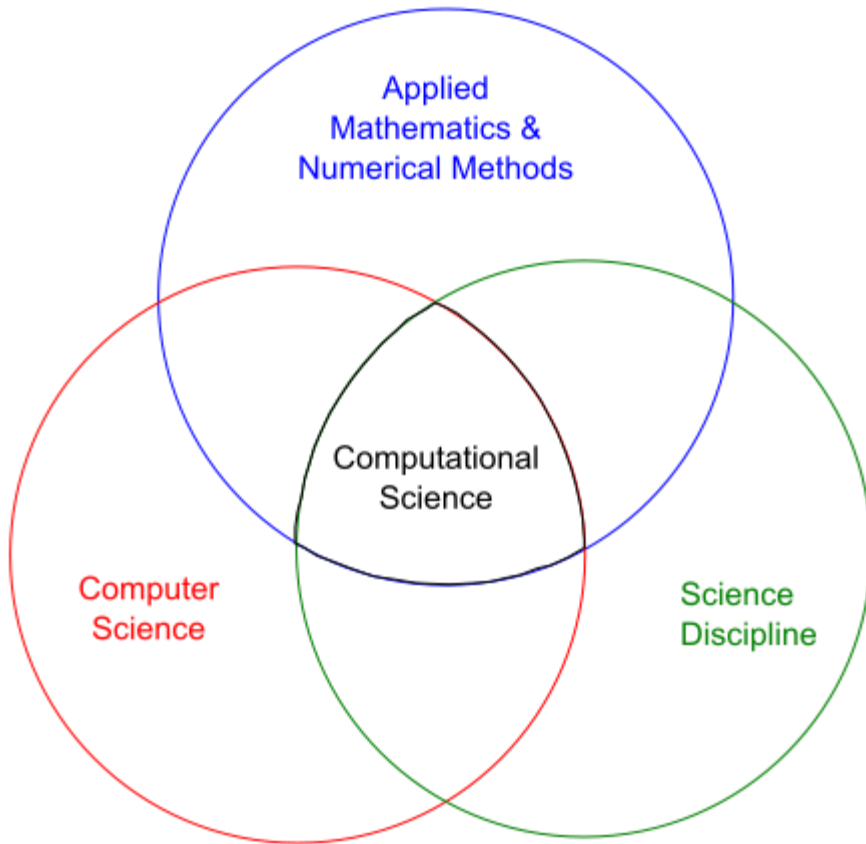
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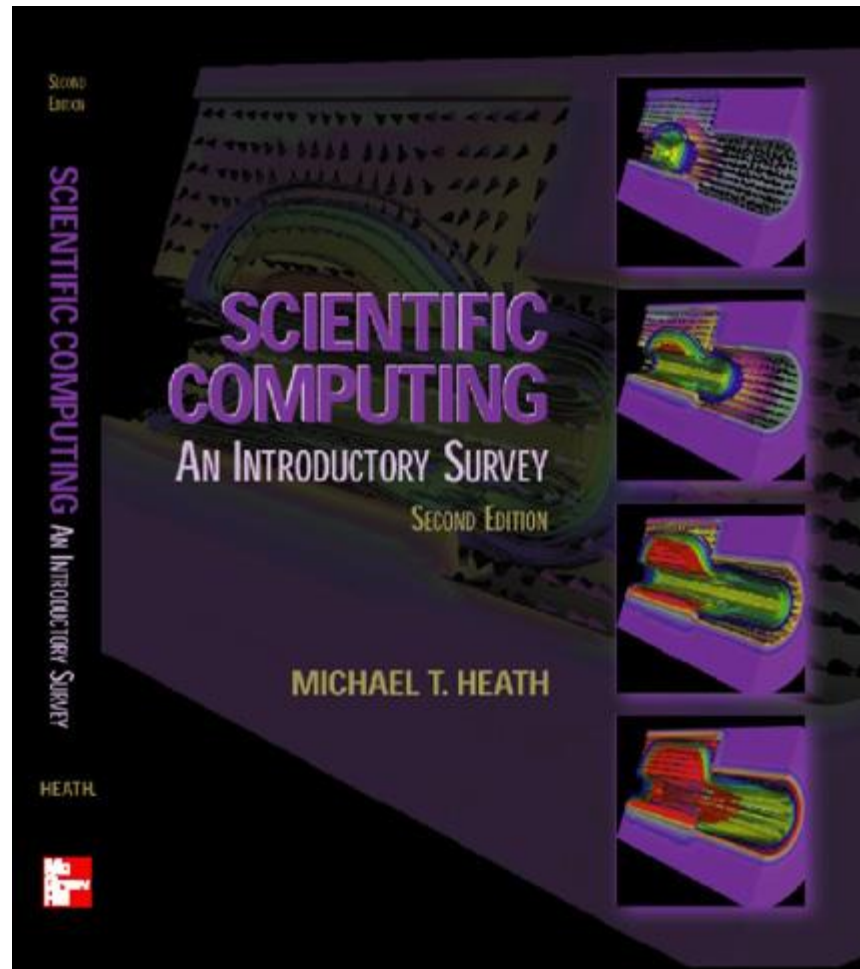
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<http://heath.cs.illinois.edu/scicomp/notes/>

chap01.pdf

MAP2220

Richard L. Burden
J. Douglas Faires

Numerical Analysis



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