



Aula	Data	Hora Início	Duração	Docentes	Sala
1	2011-02-07	11:00	2h	Adérito Araújo	DM - S.2.5
I. Introduction 1.1 Basic notation 1.2 Standard problems in numerical linear algebra 1.3 General techniques 1.3.1 Matrix factorizations 1.3.2 Permutation theory 1.3.3 Effects of roundoff errors					
2	2011-02-07	14:30	2h	Adérito Araújo	DM - S.2.5
1.4 Matrix-vector multiplication 1.5 An introduction to Matlab					
3	2011-02-14	11:00	2h	Adérito Araújo	DM - S.2.5
1.6 Orthogonal vectors and matrices 1.7 Norms					
4	2011-02-14	14:30	2h	Adérito Araújo	DM - S.2.5
1.10 The singular value decomposition					
5	2011-02-21	11:00	2h	Adérito Araújo	DM - S.2.5
2. QR Factorization and Least Squares 2.1 Projectors 2.2 QR factorization					
6	2011-02-21	14:30	2h	Adérito Araújo	DM - S.2.5
2.3 Gram-Schmidt orthogonalization 2.4 Numerical instability: an example with MatLab					
7	2011-02-28	11:00	2h	Adérito Araújo	DM - S.2.5
2.5 Householder triangularization					
8	2011-02-28	14:30	2h	Adérito Araújo	DM - S.2.5
2.6 Least squares problems					

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9	2011-03-07	11:00	2h	Adérito Araújo	DM - S.2.5
					3. Conditioning and stability 3.1 Conditioning and condition numbers 3.2 Floating point arithmetic 3.3 Stability
10	2011-03-07	14:30	2h	Adérito Araújo	DM - S.2.5
					3.4 Stability of Householder triangularization
11	2011-03-14	11:00	2h	Adérito Araújo	DM - S.2.5
					3.5 Stability of back substitution
12	2011-03-14	14:30	2h	Adérito Araújo	DM - S.2.5
					3.6 Conditioning of least squares problems 3.7 Stability of least squares algorithms
13	2011-03-21	11:00	2h	Adérito Araújo	DM - S.2.5
					4 Systems of equations 4.1 Gaussian elimination 4.2 Pivoting and stability 4.3 Cholesky factorization
14	2011-03-21	14:30	2h	Adérito Araújo	DM - S.2.5
					4.5 Ill-conditioned linear systems 4.5.1 Tikhonov regularization
15	2011-03-28	11:00	2h	Adérito Araújo	DM - S.2.5
					5. Eigenvalues 5.1 Eigenvalue problem
16	2011-03-28	14:30	2h	Adérito Araújo	DM - S.2.5
					5.2 Overview of eigenvalue algorithms
17	2011-04-04	11:00	2h	Adérito Araújo	DM - S.2.5
					5.3 Reduction to Hessenberg or tridiagonal forms
18	2011-04-04	14:30	2h	Adérito Araújo	DM - S.2.5
					5.4 Rayleigh quotient and inverse iteration

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19	2011-04-11	11:00	2h	Adérito Araújo	DM - S.2.5
	5.5 QR algorithm				
20	2011-04-11	14:30	2h	Adérito Araújo	DM - S.2.5
	6. Iterativa methods 6.1 Overview of iterative methods 6.2 Stationary iterative methods				
21	2011-05-02	11:00	2h	Adérito Araújo	DM - S.2.5
	Discussion of the final projects.				
22	2011-05-02	14:30	2h	Adérito Araújo	DM - S.2.5
	Discussion of the final projects.				
23	2011-05-16	11:00	2h	Adérito Araújo	DM - S.2.5
	6.3 Steepest descent method				
24	2011-05-16	14:30	2h	Adérito Araújo	DM - S.2.5
	6.4 Conjugate gradients				
25	2011-05-23	11:00	2h	Adérito Araújo	DM - S.2.5
	6.5 The Arnoldi and Lanczos iterations				
26	2011-05-23	14:30	2h	Adérito Araújo	DM - S.2.5
	6.6 GMRES 6.7 Preconditioning				
27	2011-05-30	11:00	2h	Adérito Araújo	DM - S.2.5
	Discussion of the final projects.				
28	2011-05-30	14:30	2h	Adérito Araújo	DM - S.2.5
	Discussion of the final projects.				