Collapse all

B1 Projects

- B1 Inspera submission guidance 2023-24.pdf
- B1 Project Allocation 2023.pdf

Introductory Material

- Intro to B1 - slides.pdf

Project A: Force on a Driven Lid over a Cavity

- Force_on_driven_lid_Slides.pdf
- B1 - Force on a driven lid over a cavity v5.pdf
- omega_v1.zip

ProjectB: Optimization for Regression and Classification Models

- B1_projectB_optimization_slides.pdf
- B1_project_B_Optimization_Specs_2023.pdf
- B1_project_B_code_unsolved.zip
- Project Report: LaTeX Template (https://www.overleaf.com/latex/templates/b1-mini-project-template-oxford-engineering-science/yhvwckswdvnr)

Numerical Algorithms

0. Start here...

- B1 Numerical Algorithms Introduction Armour October2023.pdf

1. a) Lecture Slides

- B1 Numerical Algorithms L1 Slides Armour October2023.pdf
- B1 Numerical Algorithms L2 Slides Armour October2023.pdf
- B1 Numerical Algorithms L3 Slides Armour October2023.pdf
- B1 Numerical Algorithms L4 Slides Armour October2023.pdf

1. b) Panopto Lecture Recordings

- B1 Numerical Algorithms Lecture One (https://ox.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=bd68acfa-f0da-4c78-a7db-b09f00e9ca66)
- B1 Numerical Algorithms Lecture Two (https://ox.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=1e23d1ff-7934-42af-adaa-b09f00e9d0f4)
- B1 Numerical Algorithms Lecture Three (https://ox.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=e05e001c-8b5e-49fb-83bd-b09f00e9d7a4)
- B1 Numerical Algorithms Lecture Four (https://ox.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=84017985-5c4d-4efc-b2d0-b09f00e9e025)

2. Panopto Bonus Videos

- Panopto Playlist for Bonus Videos (https://ox.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?pid=67e6554f-1f63-486a-9373-b0a10165de0e)

3. MATLAB Codes

- B1_L1_Difference_Formula.m
- B1_L1_derivative_2d.m
- B1_L2_overfitting.m
- B1_L2_Gradient_descent.m
- B1_L4_2D_wave_equation.m
- B1_QAPlus_Polynomial_Regression_using_Gradient_Descent.m

4. Useful Resources

- Numerical Methods in Engineering with MATLAB Jaan Kiusalaas. (https://www.cambridge.org/highereducation/books/numerical-methods-in-engineering-with-matlab/6C25A7D2943FB907D0014B5F3C79BE97#contents)
- An Introduction to Numerical Analysis Endre Süli and David F. Mayers (https://ebookcentral.proquest.com/lib/oxford/detail.action?docID=221072)
- Elementary Numerical Analysis: An Algorithmic Approach S. D. Conte and Carl de Boor. (https://epubs.siam.org/doi/book/10.1137/1.9781611975208)

5. Computational Class

- B1 Numerical Algorithms Computational Class Video (https://ox.cloud.panopto.eu/Panopto/Pages/Viewer.aspx?id=bdf74b8e-a43c-456e-bf4b-b0ac00ed6830)
- B1 Computational Class Questions 2023.pdf
- B1 Computational Class Solutions 2023.pdf
- B1_CC_Q2_left_point_rule-1.m
- B1_CC_Q3_midpoint_rule-1.m

- B1_CC_Q4_richardsons_method-1.m
- B1_CC_Q5_predictor_corrector-1.m
- B1_CC_Q5_shooting_method-1.m
- B1_CC_Q6_Laplace_solver.m

6. Lecture Notes (A useful guide)

- B1 Numerical Algorithms Notes OLD.pdf

Optimisation

- B1-Optimization-Lecture1-Prisacariu 23.pdf
- B1-Optimization-Lecture2-Prisacariu 23.pdf
- B1-Optimization-Lecture3-Prisacariu 23.pdf
- B1-Optimization-Lecture4-Prisacariu 23.pdf
- B1 Optimisation Example Sheet.pdf

Finite Elements

- Lecture 1.pdf
- Lecture 2.pdf
- Lecture 3.pdf

- **Lecture 4.pdf**
- **Problem Sheet.pdf**
- **Student code.zip**
- **OxPDE.pdf**