

# Errata for the book “Numerical Methods for Evolutionary Differential Equations” by Uri Ascher

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In this file I have collected various changes to be made to my book. You are welcome to mark these changes in your copy, and to please inform me if you find more of these bugaboos.

1. *p. 3 l. 7* should read

$$|e^{i\theta}| = \sqrt{\cos^2 \theta + \sin^2 \theta} = 1.$$

2. *p. 13 eqn (1.14)* should read

$$\|v^n\| = \sqrt{h \sum_j (v_j^n)^2}.$$

3. *p. 32 l. 1* should read

... (satisfying in particular  $v(2\pi) = v(0)$ )

4. *p. 76 l. 14* should read

$\phi(x) =$  instead of  $g(x) =$

5. *p. 80 l. -1* should read

$$\phi(x) = x - \frac{g(x)}{g'(x)}.$$

6. *p. 82 l. -6* should read

$$\hat{v}_{-J/2} = \hat{v}_{J/2}$$

7. *p. 83 l. 12* should read

`w_hat = (1i)^r * ([0:J/2-1 J2 -J/2+1:-1].^r)' .* v_hat;`

8. *p. 102 1st equation* should read

$$w_{i+1/2,j}^x = \frac{1}{h} \int_{y_{j-1/2}}^{y_{j+1/2}} w^x(x_{i+1/2}, y) dy,$$

9. *p. 129 l. -14* should read

... discretization in space ...

10. *p. 174 l. 14* should read

... 6.2.1, as well as [14]).

11. *p. 190 l. -7* should be  $\mathbf{y}^2$ :

$$\mathbf{y}^2(t_n) = \begin{pmatrix} \mathbf{q}_{n+1}^1 \\ \mathbf{p}_n \end{pmatrix}$$

12. *p. 299 caption to Table 9.3* should read

... at  $t = 200$  and  $t = 1000$ .