

Erratum in SIAM Book (2010):

Nonlinear Waves in Integrable and Nonintegrable Systems

- Page 33, Eq. (2.125), the correct form of F is

$$F = \begin{pmatrix} 0 & c_1 e^{\theta_1} & \dots & c_N e^{\theta_N} \\ e^{-\theta_1^*} & M_{11} & \dots & M_{1N} \\ \vdots & \vdots & \vdots & \vdots \\ e^{-\theta_N^*} & M_{N1} & \dots & M_{NN} \end{pmatrix}. \quad (2.125)$$

- Page 65, Eq. (2.268), the second row, second column of \mathcal{L} should be: $i\partial_t - \partial_{xx} - 4|u|^2$
- Page 67, Eq. (2.280): the operator \mathcal{L}^A should be:

$$\mathcal{L}^A = \begin{pmatrix} -i\partial_t + \partial_{xx} + 4|u|^2 & -2u^{*2} \\ 2u^2 & -i\partial_t - \partial_{xx} - 4|u|^2 \end{pmatrix} \quad (2.280)$$

- Page 79, Eqs. (3.1)–(3.2): a factor of 2 is missing in the nonlinear terms. The correct equations are

$$iu_t + u_{xx} + 2(|u|^2 + |v|^2)u = 0, \quad (3.1)$$

$$iv_t + v_{xx} + 2(|u|^2 + |v|^2)v = 0, \quad (3.2)$$

- Page 82, Eqs. (3.29)–(3.30): a factor of 2 is missing in the nonlinear terms. The correct equations are

$$iu_t + u_{xx} + 2(|u|^2 - |v|^2)u = 0, \quad (3.29)$$

$$iv_t + v_{xx} + 2(|u|^2 - |v|^2)v = 0, \quad (3.30)$$

- Page 109, Eqs. (3.211)–(3.212): a factor of 2 is missing in the nonlinear terms. The correct equations are

$$iu_t + u_{xx} + 2(|u|^2 + |v|^2)u = 0, \quad (3.211)$$

$$iv_t + v_{xx} + 2(|u|^2 + |v|^2)v = 0, \quad (3.212)$$

- Page 112, Eqs. (3.226)–(3.227): a factor of 2 is missing in the nonlinear terms. The correct equations are

$$iu_t + u_{xx} + 2(|u|^2 - |v|^2)u = 0, \quad (3.226)$$

$$iv_t + v_{xx} + 2(|u|^2 - |v|^2)v = 0, \quad (3.227)$$

- Page 178, Eq. (5.73), the sign of the potential is wrong. The correct potential is:

$$V(x) = -3 \left[e^{-(x-1.5)^2} + e^{-(x+1.5)^2} \right] \quad (5.73)$$

- Page 179, caption of Fig. 5.5, line 1-2: “double-hump potential” should be “double-well potential”.