Appendix J

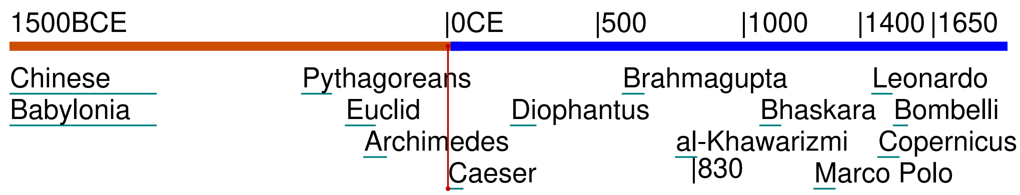

Figure J.1: *Timeline from the early Asians to Bombelli (p. 3).*

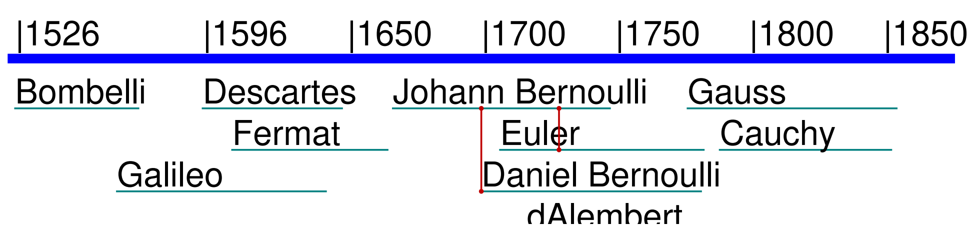

Figure J.2: *Timeline from Descartes to Cauchy (p. 5).*

Chronological history: 16th to 19th centuries

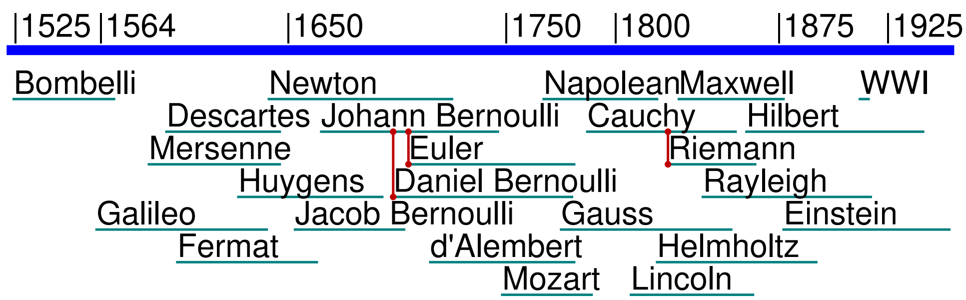

Figure J.3: *Timeline from Bombelli to Gauss (p. 9).*

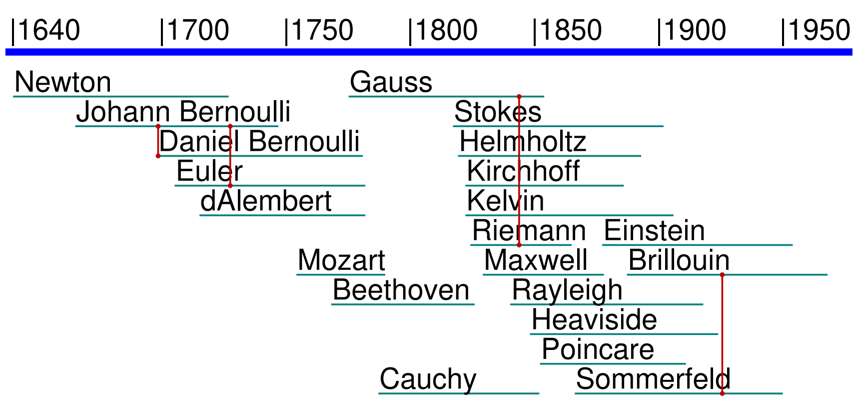

Figure J.4: *Timeline from Newton to Brillouin (p. 54).*

Appendix K

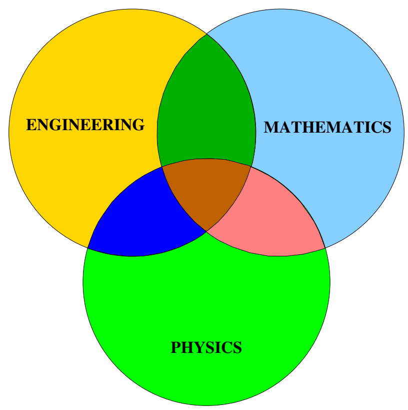

Figure K.1: *Venn diagram showing relations between Engineering, Mathematics and Physics (p. viii).*

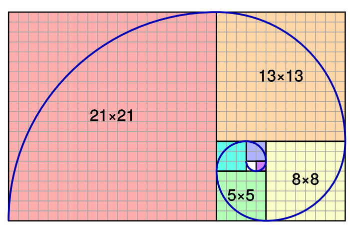

Figure K.2: *Fibonacci spiral (p. 46).*

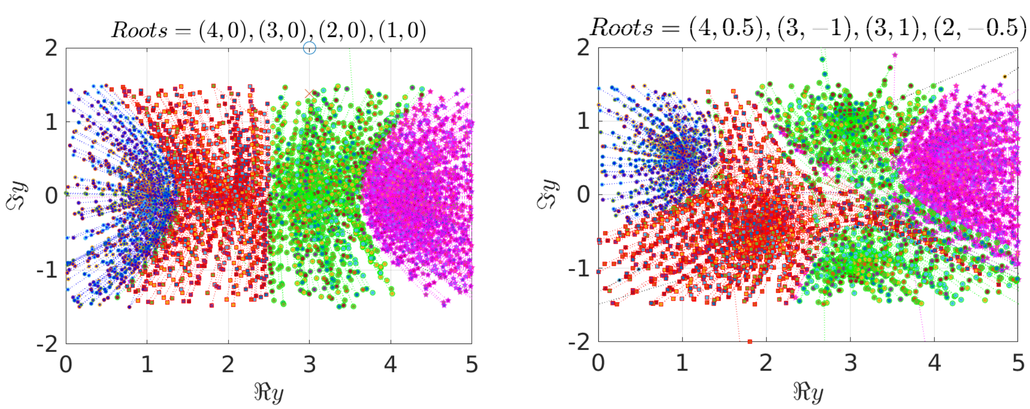

Figure K.3: *Newtons method, applied to two polynomials: real roots (left); complex roots (right) (p. 59).*

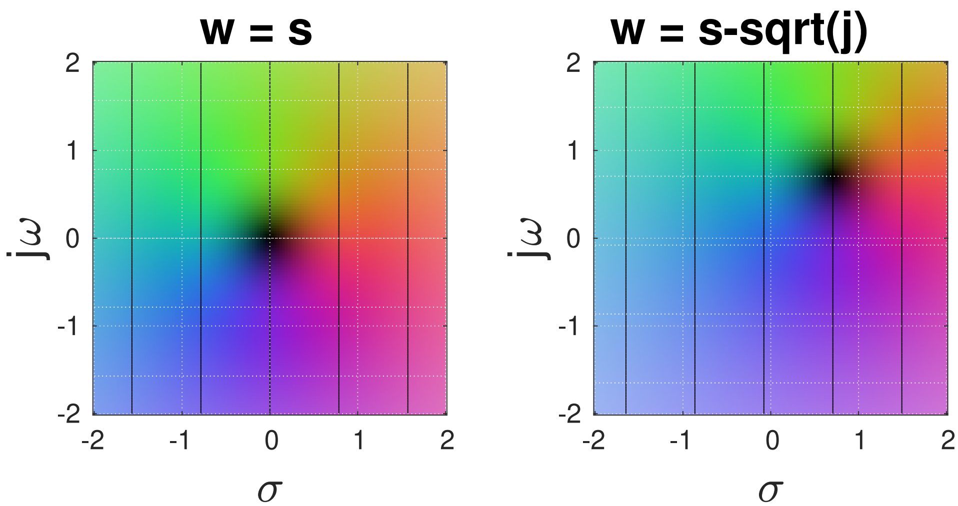

Figure K.4: *Colorized plots: Left: trivial case $w(s) = s$; Right: Offset $w(s) = s - \sqrt{j}$ (p. 130).*

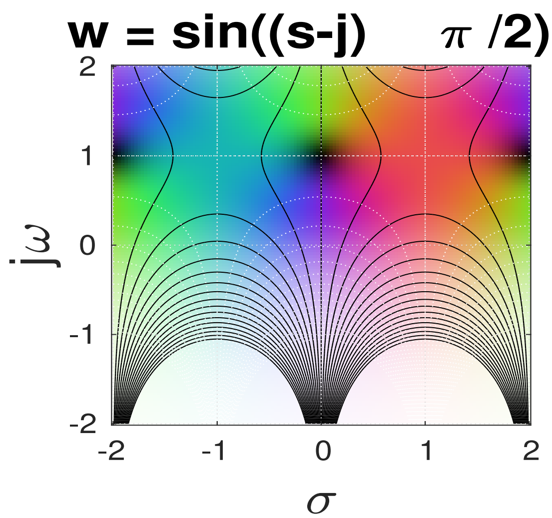

Figure K.5: $w(s) = \sin(0.5\pi(s - i))$ *(p. 130).*

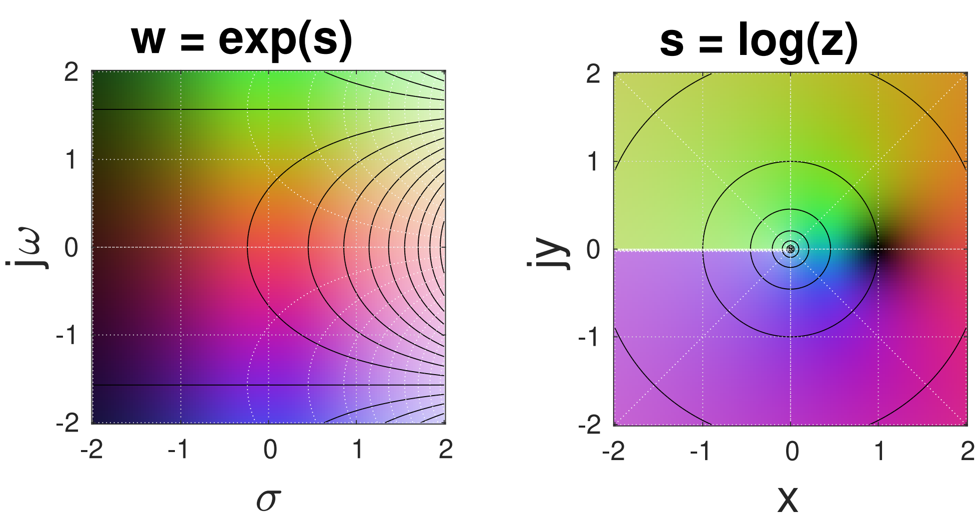

Figure K.6: *Colorized plots of $w(z) = e^z$ (left) and $w(z) = \ln(z)$ (right) (p. 131).*

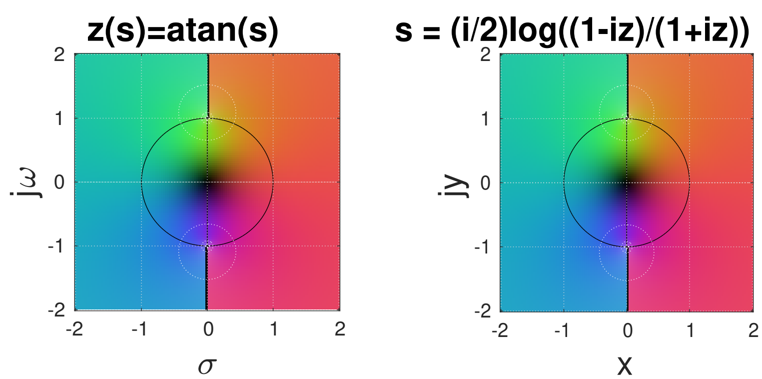

Figure K.7: *Plots of $w(z) = \mathrm{atan}(z)$ (left) and $w(z) = \frac{\imath}{2} \ln \frac{1-\imath z}{1+\imath z}$ (right) (p. 138).*

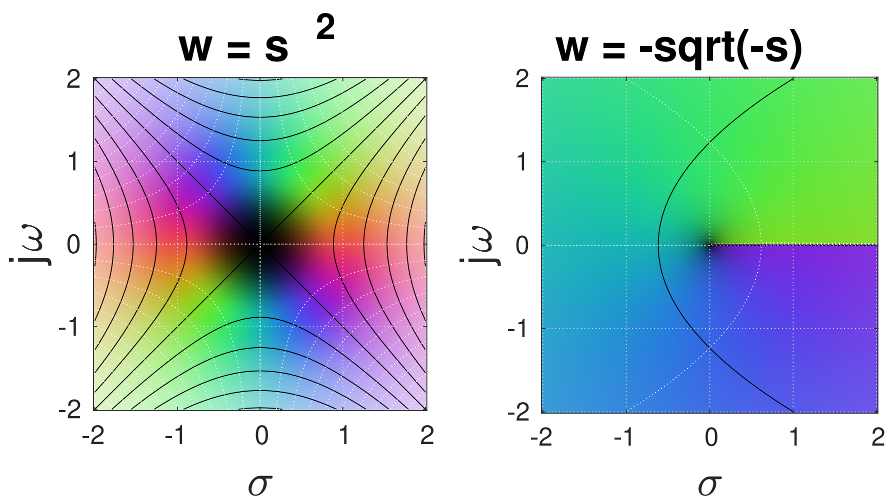

Figure K.8: *Colorized plots of $w(s) = s^2$ (left) and $w(s) = -\sqrt{-s}$ (right) (p. 151).*

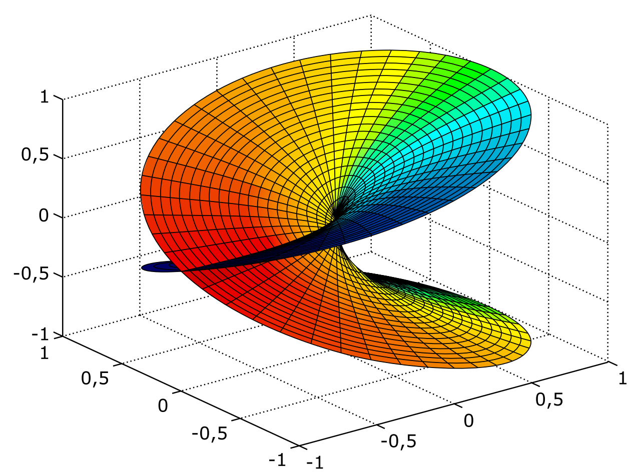

Figure K.9: *Plot of 3D version of $w(s) = \pm\sqrt{s}$ showing both $\pm$sheets and cut on $x = 0$ (p. 150).*

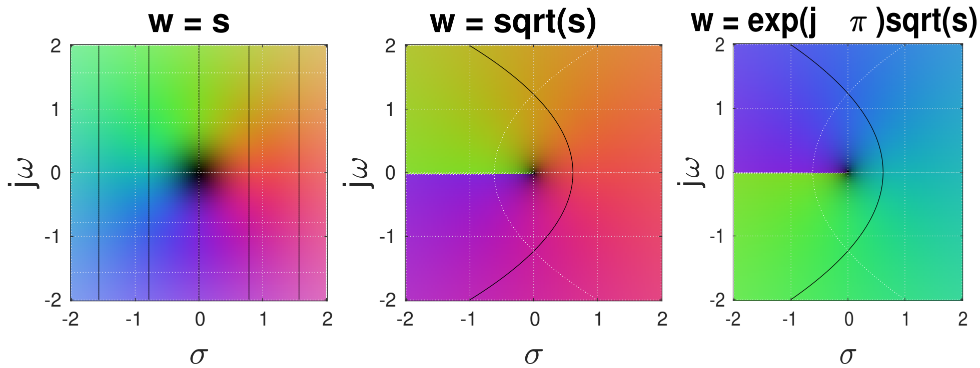

Figure K.10: *Plots of $w(s) = s$, $w(s) = \sqrt{s}$ and $w(s) = e^{\pi \jmath}\sqrt{s}$ (p. 152).*

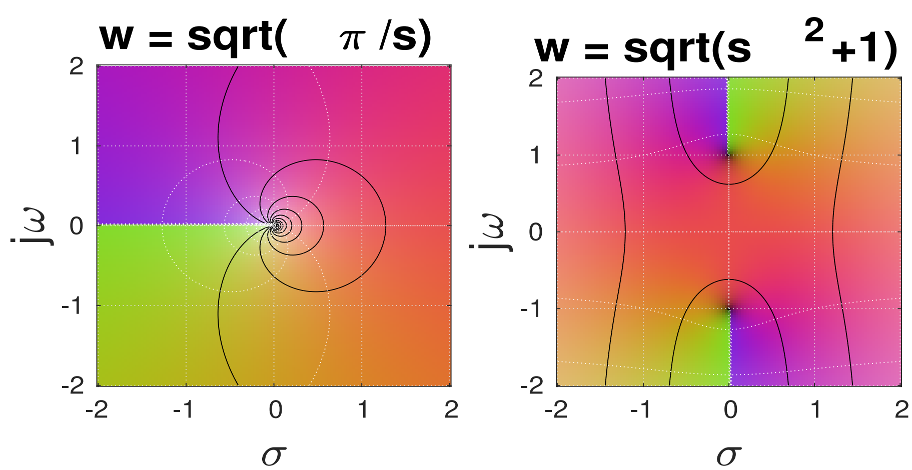

Figure K.11: *Plot of $w(s) = \sqrt{\pi/s}$ (left) and $w(s) = \sqrt{s^2+1}$ (right) (p. 153).*

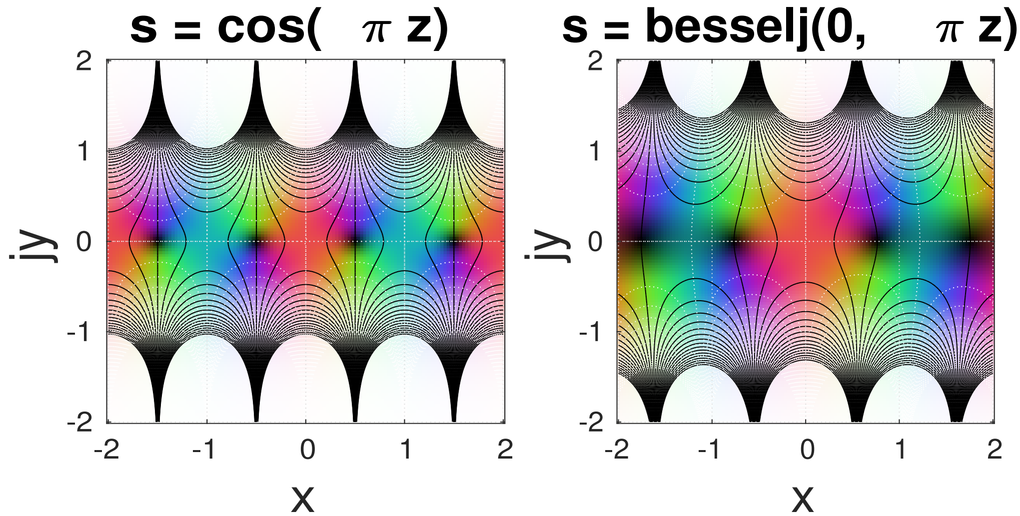

Figure K.12: *Plot of $w(s) = \cos(\pi z)$ (right) and $w(z) = J_0(\pi z)$ (left) (p. 166).*

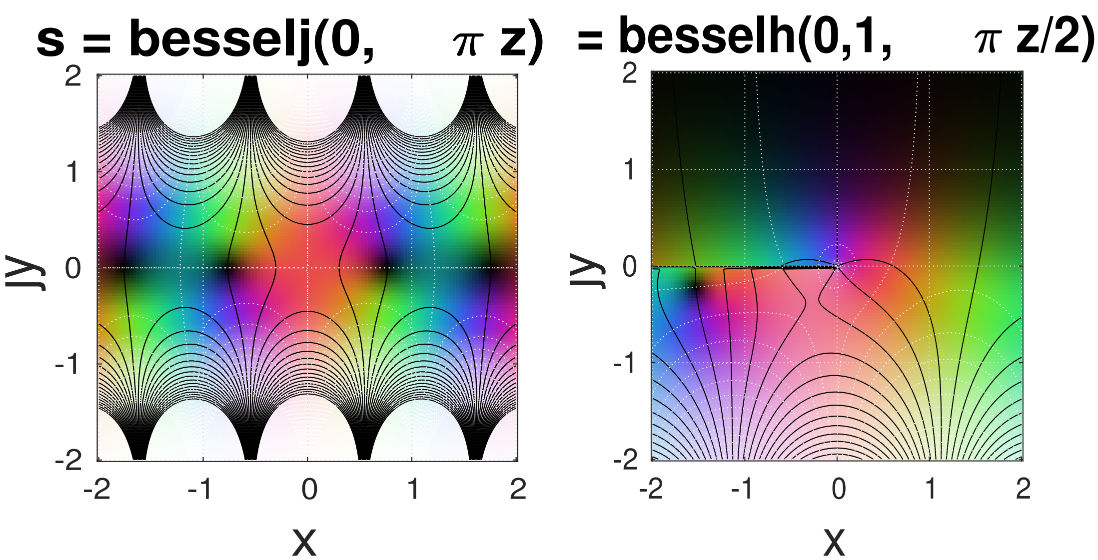

Figure K.13: *Plot of Bessel function $J_0(\pi z)$ and Hankel function $H_0^{(1)}(\pi z/2)$ (p. 167).*

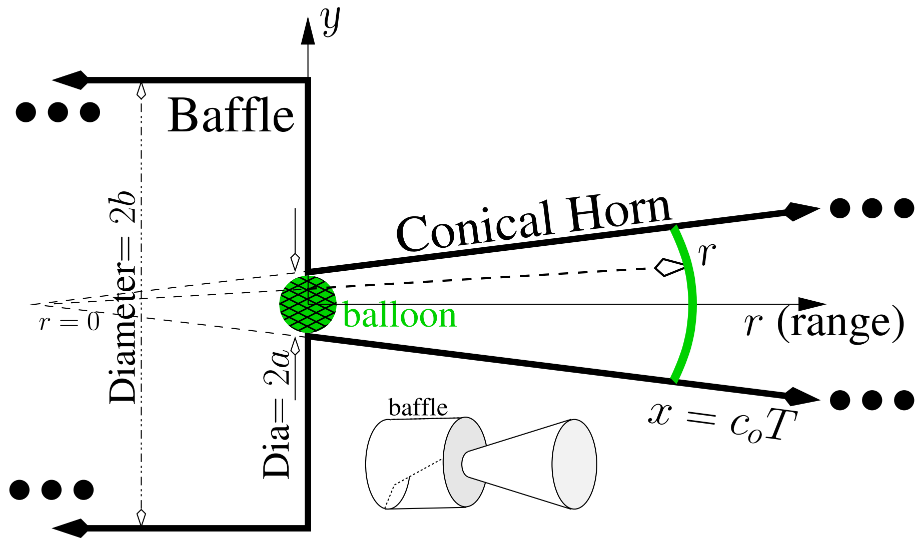

Figure K.14: *Baffled conical horn (p. 185).*

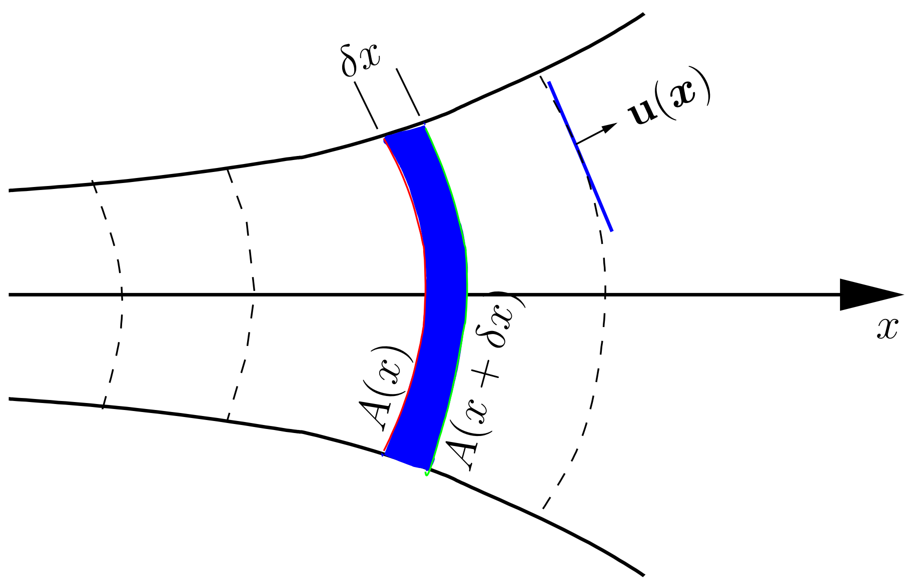

Figure K.15: *Webster horn equation setup for derivation (p. 258).*