Sound and Signals Mikio Tohyama

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Chapter 2

5, December, 2016

page	error	correct
p.16 eqn.(2.30)	$= \frac{2\delta\omega}{\omega_0{}^2 - \omega^2}$	$= \frac{-2\delta\omega}{\omega_0{}^2 - \omega^2}$
p.26 eqn.(2.63)	$= (1 + \frac{m_o}{2} \cos \frac{\Delta\omega}{2} t) \sin \omega_c t$	$= (1 + m_o \cos \frac{\Delta\omega}{2} t) \sin \omega_c t$
eqn.(2.66)	$A = \sqrt{1 + \frac{m_o{}^2}{4} \cos^2 \frac{\Delta\omega}{2} t}$	$A = \sqrt{1 + m_o{}^2 \cos^2 \frac{\Delta\omega}{2} t}$
eqn.(2.67)	$\phi(t) = \tan^{-1}\left(\frac{m_o}{2} \cos \frac{\Delta\omega}{2} t\right)$	$\phi(t) = \tan^{-1}\left(m_o \cos \frac{\Delta\omega}{2} t\right)$
eqn.(2.70)	$\frac{d\phi(t)}{dt} = -\frac{1}{1 + \frac{m_o{}^2}{4} \cos^2 \frac{\Delta\omega}{2} t} \frac{m_o \Delta\omega}{4} \sin \frac{\Delta\omega}{2} t \cong -\frac{m_o \Delta\omega}{4} \sin \frac{\Delta\omega}{2} t$	$\frac{d\phi(t)}{dt} = -\frac{1}{1 + m_o{}^2 \cos^2 \frac{\Delta\omega}{2} t} \frac{m_o \Delta\omega}{2} \sin \frac{\Delta\omega}{2} t \cong -\frac{m_o \Delta\omega}{2} \sin \frac{\Delta\omega}{2} t$
p.27 Fig.2.8	$m_o =$	$2m_o =$
Fig.2.9	$m_o =$	$2m_o =$
p.28 Fig.2.10	$m_o =$	$2m_o =$

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Chapter 3

23, July, 2013

page	error	correct
p.32 line 33	···at 0 C and 0 K at -273 C.	···at 0 °C and 0 K at -273 °C.
p.33 line 1	···for 0 C,	···for 0 °C,
line 2	by 1 C.	by 1 °C.

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Chapter 4

23, July, 2013

page	error	correct
p.52 line 13	⋯ following the Newtonian low ⋯	⋯ following the Newtonian law ⋯

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Chapter 5

31, August, 2015

page		error	correct
p.55	5.1.1 (title)	Speed of Transversal Wave	Speed of Transverse Wave
p.69	line 17	⋯ are fixe ad $x = 0$ and ⋯	⋯ are fixed at $x = 0$ and ⋯
p.75	line 14	⋯ excitation as	⋯ excitation at
p.76	eqn.(5.97)	$\tau_{O_L} = 2(x)/c = N_\gamma T_s$	$\tau_{O_L} = 2x/c = N_\gamma T_s$
p.78	eqn.(5.111)	$H(x',x,k) = \mathrm{i}\dfrac{\left(\sin kx' - \dfrac{\mathrm{i}\delta}{2}\right)\sin\left(\sin k(x-x') - \dfrac{\mathrm{i}\delta}{2}\right)}{\sin\left(kL - \mathrm{i}\delta\right)} \cong -\dfrac{\sin kx' \sin k(x-x')}{\delta \cos kL + \mathrm{i}\sin kL}$	$H(x',x,k) = \mathrm{i}\dfrac{\sin\left(kx' - \dfrac{\mathrm{i}\delta}{2}\right)\cdot\sin\left(k(L-x) - \dfrac{\mathrm{i}\delta}{2}\right)}{\sin\left(kL - \mathrm{i}\delta\right)} \cong -\dfrac{\sin kx' \cdot \sin k(L-x)}{\delta \cos kL + \mathrm{i}\sin kL}$
	line 15	$\sin kx = 0$. ⋯	$\sin k(L-x) = 0$. ⋯
	line 17	⋯ waves are exited on the string.	⋯ waves are excited on the string.
	line 18	⋯ between the source nad	⋯ between the source and

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Chapter 6

30, June, 2015

page	error	correct
p.91 line 18	⋯ atomic ⋯	⋯ atmospheric ⋯

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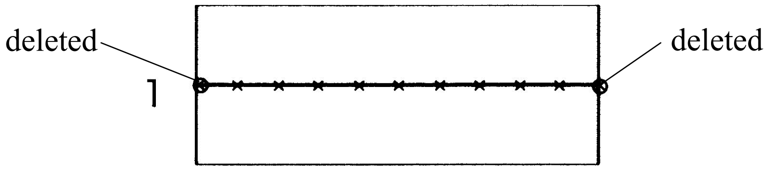
Chapter 7

30, June, 2015

page	correct
p.115 Fig.7.9	

page	error	correct
p.116 line 5-6	magnitude of volume velocity	magnitude squared of volume velocity
line 15	Z_A the boundary such that	Z_A at the boundary such that
line 18	⋯ can be express following ⋯	⋯ can be expressed following ⋯

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Chapter 8

1, July, 2015

page	error	correct
p.121 Fig.8.1	Incidental wave	Incident wave
p.126 line 12	⋯ in the two media.	⋯ in the two mediums.
line 13	⋯ between the two media.	⋯ between the two mediums.
p.127 line 4	⋯ between the two media.	⋯ between the two mediums.
line 5	⋯ between different media.	⋯ between different mediums.
p.131 eqn.(8.35)	$\frac{\partial v}{\partial t}4\pi r^2 =$	$\frac{\partial v(r,t)}{\partial t}4\pi r^2 =$
p.132 line 4	⋯ in proportion to the volume velocity of the source ⋯	⋯ in proportion to the acceleration of the volume velocity of the source ⋯
eqn.(8.44)	$= p\frac{\mathrm{i}kr+1}{r}$	$= p(r,t)\frac{\mathrm{i}kr+1}{r}$
p.133 line 3	⋯ with a finite radius length.	⋯ with a finite radius.

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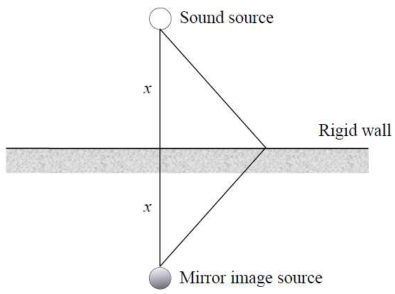
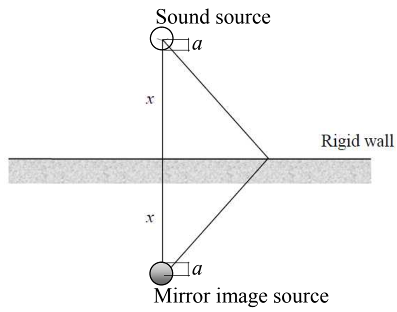
Chapter 9

18, June, 2018

page	error	correct
p.140 eqn.(9.7)	$\Delta q =$	$\Delta q(r,t) =$
eqn.(9.8)	$\Delta q = \dfrac{\partial s}{\partial t} 4\pi r^2 \Delta r$	$\Delta q(r,t) = \dfrac{\partial s(r,t)}{\partial t} 4\pi r^2 \Delta r$
eqn.(9.8)	$p = \kappa s$	$p(r,t) = \kappa s(r,t)$
p.143 eqn.(9.26)	$r\dfrac{\partial \phi_v(r,t)}{\partial t} =$	$\dfrac{\partial \phi_v(r,t)}{\partial t} =$
p.144 line 14	… waves passes …	… waves pass …
p.149 Fig.9.3		
p.150 eqn.(9.59)	$= \dfrac{Q}{4\pi} \cdot \dfrac{\mathrm{i}\omega\rho_0}{\mathrm{i}ka+1} e^{\mathrm{i}ka} \left[\dfrac{1}{a} e^{-\mathrm{i}ka} + \dfrac{\mu}{2x} e^{-\mathrm{i}k2x} \right] e^{\mathrm{i}\omega t}$	$= \dfrac{Q}{4\pi} \cdot \dfrac{\mathrm{i}\omega\rho_0}{\mathrm{i}ka+1} e^{\mathrm{i}ka} \left[\dfrac{1}{a} e^{-\mathrm{i}ka} + \dfrac{\mu}{2x-a} e^{-\mathrm{i}k(2x-a)} \right] e^{\mathrm{i}\omega t}$
eqn.(9.60)	$= \dfrac{1}{4\pi a} \cdot \dfrac{\mathrm{i}\omega\rho_0}{\mathrm{i}ka+1} \left[1 + \dfrac{a\mu}{2x} e^{\mathrm{i}ka-\mathrm{i}k2x} \right]$	$= \dfrac{1}{4\pi a} \cdot \dfrac{\mathrm{i}\omega\rho_0}{\mathrm{i}ka+1} \left[1 + \dfrac{a\mu}{2x-a} e^{\mathrm{i}k2a-\mathrm{i}k2x} \right]$

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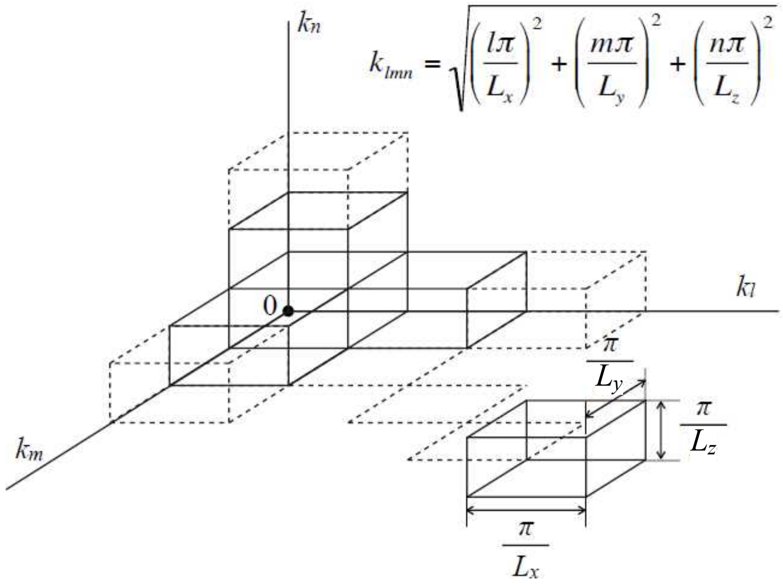
Chapter 10

28, June, 2018

page	correct
p.166 Fig.10.1	

page	error	correct
p.168 line 13	⋯ increases is proportional to ⋯	⋯ increases in proportion to ⋯
p.178 eqn.(10.89)	$h(\mathbf{x}', \mathbf{x}, t) = \cdots = \frac{\hat{Q}_0}{2\pi}\sum_N \frac{\Lambda_N}{V}\phi_N(\mathbf{x})\phi_N(\mathbf{x}')c^2 \cdots = \cdots$	$h(\mathbf{x}', \mathbf{x}, t) = \cdots = -\frac{\hat{Q}_0}{2\pi}\sum_N \frac{\Lambda_N}{V}\phi_N(\mathbf{x})\phi_N(\mathbf{x}')c^2 \cdots = \cdots$
p.181 line 16	⋯= - λ_u suitable ⋯	⋯= - λ_u and suitable ⋯

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Chapter 11

18, June, 2018

page	error	correct
p.193 eqn.(11.7)	$\frac{dE_0}{dt} = -\alpha M_{FP_3} E_0.$ (W)	$\frac{dE_0}{dt} = -\alpha n_{c_3} E_0.$ (W/m^3)
line 20	Here $\alpha M_{FP_3} \cdots$	Here $\alpha n_{c_3} \cdots$
p.194 eqn.(11.16)	$E_0 = \left\langle E_0(k_x^2, k_y^2 \right\rangle =$	$E_0 = \left\langle E_0(k_x^2, k_y^2) \right\rangle =$
p.195 line 29	Namely, the energy flow into $\cdots$	Namely, the energy flows into $\cdots$
p.200 line 17	$\cdots$system of (r, θ, ϕ).	$\cdots$system of (θ, ϕ, r).
p.201 line 2	$\cdots$at ($r = ct$, θ, ϕ).	$\cdots$at (θ, ϕ, $r = ct$).
p.204 line 23	However, from a closer to	However, from a closer
p.206 eqn.(11.60)	$I_2(t) = \frac{W_0}{2S_{2D}t}(1-\alpha_2)^{N_{c2}(t)},$	$I_2(t) = \frac{W_0 dt}{2S_{2D}t}(1-\alpha_2)^{N_{c2}(t)},$
p.207 eqn.(11.66)	$\log I_2(t) \cong \log\frac{W_0}{2S_{2D}} + \frac{L_{2D}ct}{\pi S_{2D}}\log(1-\alpha_2) - \log t,$	$\log I_2(t) \cong \log\frac{W_0 dt}{2S_{2D}} + \frac{L_{2D}ct}{\pi S_{2D}}\log(1-\alpha_2) - \log t,$
p.208 line 12	$\cdots$ C has a different frequency characteristics $\cdots$	$\cdots$ C has different frequency characteristics $\cdots$
p.211 line 24	$\cdots$ can be derived because of	$\cdots$ can be derived using
p.212 eqn.(11.78)	$\log I_1(t) = \log\frac{W_0}{4\pi L_{1D}c} + \frac{ct}{L_{1D}}\log(1-\alpha_1) - \log t^2.$	$\log I_1(t) = \log\frac{W_0 dt}{4\pi L_{1D}c} + \frac{ct}{L_{1D}}\log(1-\alpha_1) - \log t^2.$
p.214 eqn.(11.85)	$= I_3(t) + I_2(t) + I_1(t)$	$= \frac{p^2 \Delta\omega}{\rho_0 c}\left[I_3(t) + I_2(t) + I_1(t)\right]$

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Chapter 13

30, June, 2015

page	error	correct
p.252 Fig.13.4	△ : $\sigma_D{}^2$	△ : $\sigma_B{}^2$
p.263 line 18	**line**, which is a parallel ⋯	**line**, which is parallel ⋯
p.277 line 23	⋯, cannot discarded ⋯	⋯, cannot be discarded ⋯
p.281 line 16	shift of between ⋯	shift between ⋯

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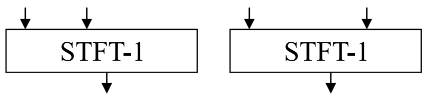
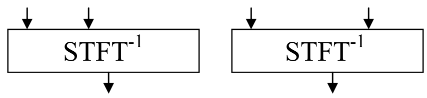
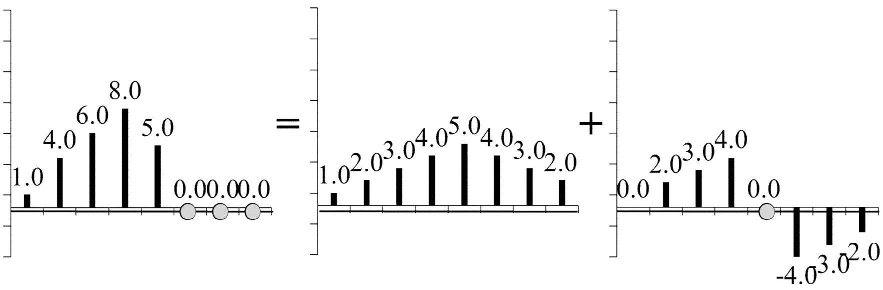
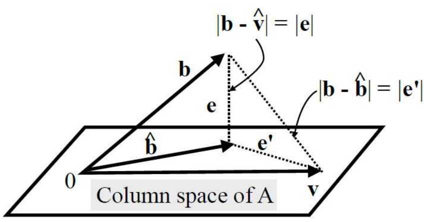
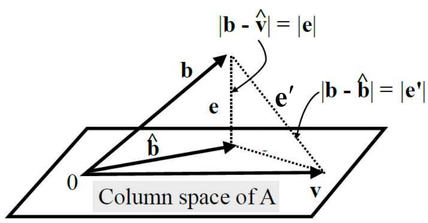
Chapter 14

5, December, 2016

page	error	correct
p.306 Fig.14.1		

page	correct
p.308 Fig.14.3	Causal sequence = Even sequence + Odd sequence 

page	error	correct
p.315 Fig.14.9 (title)	⋯ in base band from ⋯ ⋯ by (i)-(iii) from[13] (Fig.11)	⋯ in high frequency band from ⋯ ⋯ by (i)-(iii) [117]
Fig.14.10 (title)	⋯ in higher frequency band from ⋯ ⋯ filtering [117]	⋯ in base band from ⋯ ⋯ filtering from[13] (Fig.11)
p.318 line.6 (equation)	$X(e^{-\mathrm{I'd}\Omega}) =$	$X(e^{-i\Omega}) =$
p.322 line 2-3	⋯ intelligible, it does not ⋯	⋯ intelligible, but it does not ⋯
p.333 Fig.14.24		
p.340 Fig.14.34	(c) Instaneous phase	(c) Instantaneous phase

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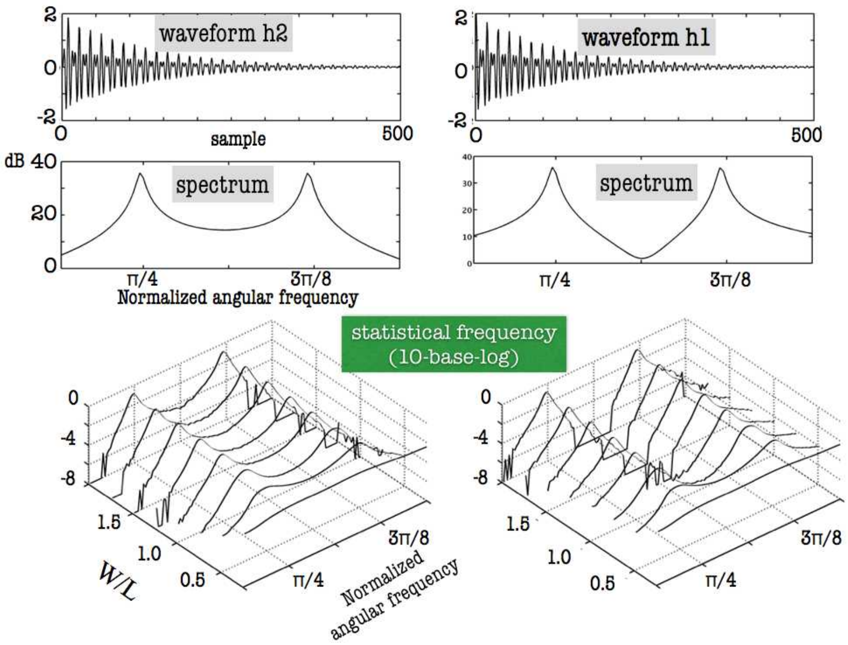
Chapter 15

22, March, 2017

page	error	correct
p.353　line 6	···, if the sound source could assumed	···, if the sound source could be assumed

page	correct
p.354　Fig.15.2	

page	error	correct
p.361　line 9	··· is slightly greater th |a| as shown	··· is slightly greater than |a| as shown
p.365　line 21	··· equalization. The open-loop	··· equalization of the open-loop

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Appendix・References

30, June, 2015

page	error	correct
p.381　ref.[58]	···, pp. 56-57. IEEE ···	···, 56-57. IEEE ···
ref.[59]	···and the Definition of Reproduced Sound 41(3), 222–224 (1978)	···and the Definition of Reproduced Sound. Acustica 41(3), 222–224 (1978)
ref.[70]	···, 1381-1402 (2008)	···, 1381-1402. Springer (2008)
ref.[71]	pp. 183-198. Princeton ···	183-198. Princeton ···
p.382　ref.[81]	···, pp. 188-198. Academic	···, 188-198. Academic
p.383　ref.[118]	···, pp. 429-432 (1994)	···, 429-432 (1994)
ref.[119]	···, pp. 2167-2174 (1997)	···, 2167-2174 (1997)
p.384　ref.[125]	···, pp. 425-428 (2003)	···, 425-428 (2003)
ref.[127]	···, pp. 589-593 (2006)	···, 589-593 (2006)

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