Optical transfer function notation – Chapters 7 and 8
The autocorrelation notation used for the optical transfer function (OTF) expressions in Eqs. (7.26), (7.28) and (8.5) is not precise. The result of the autocorrelation $H(f_u, f_v) \ast H(f_u, f_v)$ is actually a function of frequency difference variables, for example $f_u' = f_{u1} - f_{u2}$ and $f_v' = f_{v1} - f_{v2}$. However, in the linear systems theory development of the OTF, the difference variables of the autocorrelation involving $H$ are found to be equivalent to the actual frequency variables for the OTF. So, for simplicity and convenience, expressions like $H(f_u, f_v) = H(f_u, f_v) \ast H(f_u, f_v)|_{\text{norm}}$ are used for the OTF.

Point Spread Function amplitude scaling – Chapter 8.
The amplitude scaling is arbitrary for the PSFs that are computed in several scripts in Chapter 8. See for example the plots in Fig. 8.5 (c) and (d) and Fig. 8.6 (c) and (d). A useful scaling is to normalize the PSF amplitude to the peak value of the diffraction-limited PSF. In other words, the diffraction-limited PSF would have a peak value of 1. Assuming an un-obscured circular pupil function, this amplitude scaling is implemented as follows:

In the `lens_psfmtf` script (pg. 150), line 43 changes to

43  \[ h2=(1/\pi*(lz/wxp)^2*(M/L)^2)^2*abs(ifftshift(ifft2(fftshift(H)))).^2; \]

In the `psf_map` script (pg. 158), line 41 changes to

41  \[ h2=(1/\pi*(lz/wxp)^2*(M/L)^2)^2*abs(ifftshift(ifft2(H)))).^2; \]

Note that in the `image_super` script (pg. 161) the PSF is already normalized in line 49 \[ h2=h2/(\text{sum}(\text{sum}(h2))); \] to provide a properly scaled superposition result.

Quasi-monochromatic light – Section 9.1.1, Pg. 170
The light described in Section 9.1.1 is more accurately labeled narrowband light as opposed to quasi-monochromatic light. Narrowband light simply requires $\Delta \nu << \nu_0$. Quasi-monochromatic light has two conditions: 1) $\Delta \nu << \nu_0$ and 2) essentially perfect temporal coherence is assumed for any ray paths under consideration. Quasi-monochromatic light is often invoked when studying the spatial coherence properties of an illumination pattern. It would be more appropriate to introduce the quasi-monochromatic definition in the spatial coherence discussion within Section 9.2.

Partial temporal coherence irradiance expressions – Section 9.1.2, Pg. 172
With regard to the way the temporal coherence simulation is approached, it makes more sense to write Eq. (9.8) as
\[ I(x, y) = I(x, y) \int_{-\infty}^{\infty} \tilde{S}(\nu) d\nu \quad (9.8) \]

and Eq. (9.9) as

\[ I(x, y) \approx I(x, y) \sum_{n=1}^{N} \tilde{S}(\nu_n) \delta \nu \quad (9.9) \]

Note that the integral of the normalized power spectral density \( \tilde{S}(\nu) \) is equal to 1.

**Partial spatial coherence simulation figure – Section 9.2.3, Pg. 182**

The diagram for the partial spatial coherence example (Fig. 9.9) can cause some confusion. Rather than two beams entering from the left, a better representation might be a single, broad, partially coherent beam that enters from the left and encounters a mask with two holes that is placed at the input face of the lens.