

## Errata of the PhD Thesis ‘Finite Antenna Arrays - An Eigencurrent Approach’ by Dave Bekers

- List of symbols: add the following point to the symbols ‘ $\times$ ’ under ‘Other symbols: ‘5. size indication of a rectangular array, e.g.,  $A \times B$ , where  $A$  and  $B$  are either length scales or numbers of elements’.
- p. 2, Figure 1.2: the white rectangular object with the two pins should be indicated as ‘dielectric’.
- p. 3, last two lines: replace ‘bandwidth’ by ‘frequency band’. Moreover, add the following two sentences: ‘The width of the frequency band is called the bandwidth, often expressed as a percentage of the center frequency in the band. Antennas with a bandwidth of the order of 10% are in general classified as narrow-band antennas, whereas antennas with a much larger bandwidth are in general classified as wide-band antennas.’
- p. 5, 2nd paragraph, line 10 – 12: replace ‘To obtain ... desired frequency band’ by ‘Consequently, the performance depends on the frequency as well. To minimize the frequency dependency, reflection and phase change should be uniform over a desired frequency band.’
- p. 9, item 2, line 1: replace ‘rectangular uniform’ by ‘uniform rectangular’.
- p. 9, item 2.1, line 6: add ‘the size of’ between ‘...showed that’ and ‘... an experimental’.
- p. 9, item 2.1, line 8: remove ‘broadband’.
- p. 9, item 2.1, last sentence: replace this sentence by the following text: ‘As an example, we consider an array with spacing  $0.5 \lambda_0$ , where  $\lambda_0$  is the wavelength corresponding to the frequency of excitation  $f_0$ . If the array exhibits a narrow frequency band, the required array size suggested in [48] is  $10 \times 10$ , which is much lower than the size suggested in [100], i.e.,  $25 \times 25$ . If the same array exhibits a wide frequency band, say  $f_0/5 \leq f \leq f_0$ , the required size is  $50 \times 50$ , which is much larger than the size suggested in [100].’
- p. 61, caption Figure 2.13, 2nd line: remove ‘of half a wavelength’.
- p. 61, line 3 – 4: remove the sentence ‘The parameter values ... Appendix ??.’.
- p. 104, 2nd line below (5.2): Replace ‘eigencurrents’ by ‘eigenfunctions’.
- p. 104, line 8 – 9 below (5.2): Replace the sentence ‘The eigenfunctions  $\mathbf{u}_n$  of  $\mathcal{PZ}_a\mathcal{P}$  are the eigencurrents of the array.’ by ‘The eigenfunctions  $\mathbf{u}_n$  of  $\mathcal{PZ}_a\mathcal{P}$  are the ‘eigenstates’ of the array, which we call the eigencurrents.’
- p. 121, 2nd line: replace  $n\sqrt{n}$  by  $n$ . Add the following sentence after ‘...index.’: ‘Note that this behavior of the eigenvalues can also be observed from the series expansion (B.10) for the logarithmic kernel, in which the coefficient  $n/(n^2 - 1)$  reveals the linear behavior for larger values of  $n$ .
- p. 122, caption Table 5.2, line 3: replace ‘ $\pi/3$ ’ by ‘ $\pi/3$ ’.
- p. 179, item 1: replace  $n\sqrt{n}$  by  $n$ .
- p. 204, caption Figure 6.16: add ‘( $\times$ )’ after ‘ $ka = \pi/3$ ’.
- p. 210, caption Figure 6.24, line 5: replace ‘ $2\ell = \lambda/2$ ’ by ‘the frequency with  $ka = 1.047$ ’.
- p. 210, caption Figure 6.24, line 8: replace ‘ $\beta = b/\ell = 0.0205$ ’ by ‘ $\beta = b/a = 3/100$ ’. Moreover, add ‘ $\psi = \pi/2$ ’.
- p. 212, caption Figure 6.25, 1st line: remove ‘and minima’.
- p. 226, caption Figure 6.36, line 4: replace ‘(\*)’ by ‘(\* or solid line)’; replace ‘(o)’ by ‘(either  $\Delta$  and o, or dashed and dashed-dotted)’. Moreover, replace ‘... one group ...’ by ‘... one ( $\Delta$  or dashed) and two (o or dashed-dotted) groups ...’.
- p. 239, third bullet, line 1: replace ‘experiments’ by ‘experiment’.
- p. 255, item [9]: replace ‘Eijdnhoven’ by ‘Eindhoven’.
- p. 262, item [89]: add ‘In *Proceedings of the international conference of Electromagnetism and Advanced Applications*’ before ‘pages’.