

**Errata for ‘Recurrence Sequences’**  
by Everest, van der Poorten, Shparlinski and Ward.

The authors reiterate their thanks to the many people who sent in comments on early drafts of the book, and add to their number Stefan Gerhold, Christophe Reutenauer, Andrzej Schinzel, Joe Silverman, Neil Sloane, Katherine Stange for the corrections here.

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page 26. 3rd line of Section 2.2: replace ‘solution of’ with ‘solutions of’

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page 34. The inequality in Theorem 2.5 should read

$$\max_{0 \leq i \leq n-1} \frac{|a(x_i)|}{|\alpha_1|^{x_i} x_i^{-n}} > 1$$

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page 70. We are grateful to Christophe Reutenauer for the following correction. The result on Hadamard inversion, characterizing those linear recurrence sequences  $(a(x))$  with the property that  $(1/a(x))$  is also a linear recurrence result, was shown by Benzaghrou in 1970 using complex analysis in the paper

Benali Benzaghrou, Algèbres de Hadamard, *Bull. Soc. Math. France* **98**, 209–252 (1970).

An algebraic proof, extending the result to any characteristic, was given by Reutenauer in the paper

Christophe Reutenauer, Sur les éléments inversibles de l’algèbre de Hadamard des séries rationnelles, *Bull. Soc. Math. France* **110**, 225–232 (1982).

This argument may also be found in the chapter on recurrence sequences in the monograph

Jean Berstel, Christophe Reutenauer, *Rational series and their languages*. EATCS Monographs on Theoretical Computer Science, **12**. Springer-Verlag, Berlin (1988).

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page 70. We are grateful to Katherine Stange for pointing out a serious error at the bottom of page 70. The words “in which case

$$\gcd(a(x), a(y)) = a_{\gcd(x,y)}”$$

should be omitted. There are many divisibility sequences without this property of course.

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page 95, line 1; page 172, line -7; page 173, line 3; page 315, line -3. Replace ‘Merten’s Theorem’ with ‘Mertens’ Theorem’.

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page 97, line 17: replace ‘addition’ with ‘additional’

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page 101, line -5: replace ‘for almost  $\alpha$ ’ with ‘for almost all  $\alpha$ ’

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page 107–8. Theorem 6.9 should read as follows. Let  $\alpha_{ij}, \beta_i, i = 1, \dots, m, j = 1, \dots, n$  be elements of an algebraic number field  $\mathbb{K}$ . Assume that for at least one  $k \leq m$  the numbers  $\alpha_{k1}, \dots, \alpha_{kn}$  are linearly independent. Then if the system of congruences

$$\prod_{j=1}^n \alpha_{ij}^{x_j} \equiv \beta_i \pmod{\mathfrak{p}}, \quad i = 1, \dots, m,$$

is solvable for almost all prime ideals  $\mathfrak{p}$  of  $\mathbb{K}$ , the system of equations

$$\prod_{j=1}^n \alpha_{ij}^{x_j} = \beta_i, \quad i = 1, \dots, m,$$

is solvable in integers.

(The powers  $x_j$  were missing).

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page 127, start of Section 8.1. It is not necessary to take the fractional part in the definition of the set  $A$ , since the sequence is assumed to lie in the unit cube.

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page 149, line 5. Replace ‘there no zeros’ with ‘there are no zeros’

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page 222, line 24. Second [767] should be [768].

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page 255: all the entries are correct, but some are in the wrong order or repeated. This is fixed in the [linked page](#).

Please e-mail further corrections to [t.ward@uea.ac.uk](mailto:t.ward@uea.ac.uk).