

*Parallel Scientific Computation: A Structured
Approach Using BSP, second edition*

List of Errata

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The following errors came to my attention so far (some pointed out to me by my students, thanks!). I include all of the errors, even the tiniest forgotten dot, for the sake of completeness and to help correction in the next reprinting. If you found an error that has not been mentioned, please let me know.

- page 97, line 7 above the figure: insert ‘of A_{22} ’ after ‘matrix data’, for clarity.
- pag 125 line 1: The subscripts of the A and B matrices are incorrect. They should be $A_{s,(s+t+r) \bmod q}$ and $B_{(s+t+r) \bmod q,t}$. Also on line 6. To number the supersteps accordingly, on line 1 change ‘ $(2r)$ ’ into ‘ $(2r + 1)$ ’ and on line 2 change ‘ $(2r + 1), 1 \leq$ ’ into ‘ $(2r), 0 \leq$ ’. Remove the sentence ‘Superstep (0) does not need to obtain data ... already available locally’.
- page 131, Algorithm 2.11, line 5: ‘ $Q_1 T Q_1^T = A^{(0)}$ ’ should be ‘ $Q_1^T T Q_1 = A^{(0)}$ ’, so with the transpose sign moved.
- page 193, line 3 from below: insert ‘(or 1 in case of a dangling node)’ after ‘ $1 - \alpha$ ’. In line 2 from below: change ‘The resulting Google matrix is thus’ to ‘The Google matrix for the case without dangling nodes equals’.

- page 194, Algorithm 4.1, lines 6 and 7: the indenting is wrong. The two **for**-loops should be aligned. The correct algorithm is:

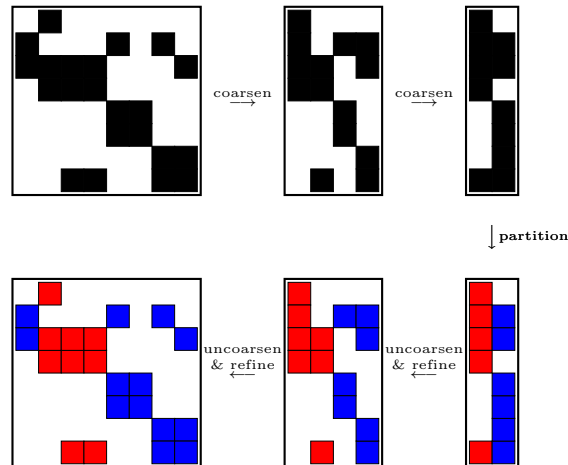
input: A : sparse $n \times n$ matrix,
 \mathbf{v} : dense vector of length n .
output: \mathbf{u} : dense vector of length n , $\mathbf{u} = A\mathbf{v}$.

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for  $i := 0$  to  $n - 1$  do
     $u_i := 0$ ;
for all  $(i, j) : 0 \leq i, j < n \wedge a_{ij} \neq 0$  do
     $u_i := u_i + a_{ij}v_j$ ;

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- page 199, Algorithm 4.3, line 5: ' u_i ' should be ' $u[i]$ ' to be consistent.
- page 200, Algorithm 4.4, line 7: ' u_i ' should be ' $u[i]$ '.
- page 224, Fig 4.12. In the bottom row of matrices, the middle matrix and the right matrix have an error in the blue part. In the middle matrix, the blue nonzero in position (2,2) has to move up to (1,2). In the right matrix, the white zero in position (6,1) has to become a blue nonzero. (Note that we number rows and columns starting from 0.) The correct figure is the following:



- page 319, line 9 from below: ' $\mathbf{u} := A\mathbf{v}$ ' should be ' $\mathbf{u} := (A + I)\mathbf{v}$ '.
- page 368, ref. [58], line 1: after the ' \ddot{U} ' there should be a dot.