

**FIRST REMARKS ABOUT MANUSCRIT: MS BJUST 31213.
ON THE INVERTING OF A GENERAL HEPTADIAGONAL
MATRIX**

1. Page 8,9,10. I'd want the Maple procedure (SINVHEPTA p. 8) originally written in Maple -and not a PDF copy- When I copy on my Maple18 your PDF program, it does not work. Add an example of how to use the procedure hepta inv.
2. Page 1, lines -11,-10,-9. Give explicitly at least one (interesting) example where the heptagonal matrices are used. The interest of tridiagonal matrices is well known but this is not the case for heptadiagonal matrices.
3. Page 2, Main Result. NINVHEPTA is valid on any field K of characteristic 0. Yet, the algorithm use $O(n^2)$ elementary operations in K . Indeed, the multiplication of a vector by an element of K needs n multiplications in the field. Anyway, H^{-1} contains n^2 distinct elements; consequently, the number of required elementary operations (in order to calculate the inverse of H) is at least n^2 .
3. Page 3. You use C_i as scalar. Page 2, C_i represents a vector...
4. Page 4. SINVHEPTA is not really a symbolic algorithm. You consider t , a non-zero variable; in a second step, t tends to 0. You use the continuity of the application $X \rightarrow X^{-1}$ in an invertible matrix H .
5. Page 5, line 7. The cost $103n + 69$ is false. cf. Point 3.
6. It must be made clear from the introduction that SIN resolves by continuity all the cases that escape to NIN.
7. Page 7, line -2. $|i - j| \leq 3$ (???)
8. Abstract. Remove the reference to a symbolic algorithm. Replace the cost $O(n)$ with $O(n^2)$.
9. Abstract, line 1. ..., the author presents a new algorithm computing the inverse of any ... Remove the second sentence.
10. Page 2, line 3. ... the inverse of a general invertible heptadiagonal ...
11. Page 7. Detail what is CHEPTA. Does it work on a general heptadiagonal ? Anyway, its calculation times are the same as those of SIN.
12. You must give a reference for Maple.