

## PERTURBATION OF PARALLEL ASYNCHRONOUS LINEAR ITERATIONS BY FLOATING POINT ERRORS \*

PIERRE SPITERI <sup>†</sup>, JEAN-CLAUDE MIELLOU <sup>‡</sup>, AND DIDIER EL BAZ <sup>§</sup>

**Abstract.** This paper deals with parallel asynchronous linear iterations perturbed by errors in floating point arithmetic. An original result is presented which permits one to localize the limits of perturbed parallel asynchronous linear iterations. The result is established by using the approximate contraction concept. Simple examples are studied.

**Key words.** approximate contraction, parallel algorithms, asynchronous iterations.

**AMS subject classifications.** 65F10, 65G05, 65Y05, 68Q22, 68Q10.

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<sup>†</sup>ENSEEIH-IRIT/LIMA, 2 rue Camichel, B.P. 7122, F-31071 Toulouse-Cedex, France. E-mail: Pierre.Spiteri@enseeiht.fr

<sup>‡</sup>Département de Mathématiques, UFR Sciences et Techniques, 16 route de Gray, F-25030 Besançon-Cedex, France. E-mail: miellou@erdos.univ-fcomte.fr

<sup>§</sup>LAAS du CNRS, 7 avenue du Colonel Roche, F-31077 Toulouse-Cedex 4, France. E-mail: elbaz@laas.fr