Electronic Journal of Mathematical and Physical Sciences

## **EJMAPS**

ISSN: 1538-3318 www.ejmaps.org

## **Bayesian Economic Cost Plans II. The Average Outgoing Quality**

Abraham F. Jalbout 1\*8, Hadi Y. Alkahby 2, Fouad N. Jalbout 3, Abdulla Darwish 3

\*Author to whom correspondence should be addressed. \$Speaker at the 16<sup>th</sup> Annual Conference on Applied Mathematics (CAM), University of Central Oklahoma, February 22-23, 2001

Received: 14 December 2001 / Accepted: 5 January 2002/Pubished: 15 January 2002

**Abstract:** In recent years researchers in various quality control procedures consider the possibility of inspection errors as an important issue. The presence of these errors leads to changes in the so-called operational characteristic (O.C.) control curve, and as a result the average outgoing quality of an industrial process. We present a new mathematical model that can be applied to calculate such quantities as the expected number of defective items replaced in an accepted lot, and other functions of this process.

**Keywords:** Inspection Errors, industrial process, Bayesian methods, statistics **AMS Mathematical Subject Classification**: 46N30, 62-06,62P30

<sup>&</sup>lt;sup>1</sup>Department of Chemistry, University of New Orleans, New Orleans, LA 70148-2820 USA, E-mail: <u>Ajalbout@ejmaps.org</u>

<sup>&</sup>lt;sup>2</sup>Department of Mathematics, Dillard University, New Orleans, LA 70112 USA

<sup>&</sup>lt;sup>3</sup>Department of Physics and Engineering, Dillard University, New Orleans, LA 70112 USA