

## A Study on Handling Constraints in Optimizing problem using Evolutionary Algorithms

류준형\*

동국대학교

(jhryu@dongguk.ac.kr\*)

Many chemical and process systems engineering (PSE) practices should be optimized in order to improve performances and raise profitability. In order to do that, existing process operations should be transformed into optimization problems or optimization implementation-ready models. In computing the solutions of the model, it often turned out that these problems involve multiple optimal solutions. In order to search the best desirable solutions, various methodologies have been investigated. A well-known computation methodology is evolutionary algorithm in the context of stochastic search. Various applications of the algorithmic approaches have been reported in the literature. In practice, many chemical and process systems engineering (PSE) optimization problems involving inequality and equality constraints. There has been not much attention on how to efficiently handle these challenging issues of constraints in computation procedure. In this presentation, a number of constraints handling methods will be investigated to gain insight on developing an efficient computation methodology with illustrating examples.