



presented and discussed according to two levels. The first is development a complete system, which allows realization of practical work of physic and remote scientific experience via the web, in this project we propose an architecture that will allow us to have a more flexible system and offers several services begin with the management of access to the laboratory and control and order laboratory equipment, arriving to behavioral study and evaluation of students. Second is comparison between data mining algorithms for classification and Assessment the students

## DOUBLE PHASE CONNECTION OF CÚK CONVERTER WITH SMOOTHING REACTORS

Walidemar<sup>1</sup> and Omar A. Saraereh <sup>1</sup>

<sup>1</sup> Faculty of Engineering/Electrical Dept./Isra University, Amman, 11622, Jordan,

[Walidemar@yahoo.com](mailto:Walidemar@yahoo.com)

<sup>1</sup> Faculty of Engineering/Electrical Dept./The Hashemite University, Zarqa, 13115, Jordan,

[Eloas2@hu.edu.jo](mailto:Eloas2@hu.edu.jo)

### Abstract

In this paper, a double phase connected Cúk converters with uncoupled inductors is introduced. The main attention is focused on the analysis and the simulation of the double-phase parallel connection of Cúk converter with uncoupled inductors.

Detailed analysis has been done to investigate the benefits of uncoupled inductors, compared to conventional single phase connection. In general, multiphase connection of Cúk converters with uncoupled inductors has inherent benefits such as excellent current sharing characteristics, immunity to component tolerance and reduction in current control complexity. Specifically, by employing double phase connection with uncoupled inductors for these converters, overall current ripple can be effectively reduced, compared to that of simple connection. Computer simulations using Simpler 7 have been done to validate the concepts.

## USABILITY TESTING OF "CHISEL": CULTURAL HERITAGE INFORMATION SYSTEM EXTENDED LAYERS OF INTERACTIVE 3D COMPUTER GENERATED IMAGES AND RELATIONAL DATABASE

J. Chowdhury<sup>1</sup>, J.C. Torres<sup>2</sup> and J.G. Tromp<sup>1,2,3</sup>

<sup>1</sup>State University of New York, Oswego, NY, USA

<sup>2</sup>University of Granada, Granada, Spain

<sup>3</sup>Duy Tan University, Da Nang, Vietnam

### Abstract

CHISEL is a cultural heritage information system that supports the extensive organization, tracking, and implementation of data on 3D computer generated models of archaeological artefacts and site features, in order to assess the efficiency, user satisfaction, memorability, learnability, and accuracy. These qualities are particularly crucial to software like CHISEL, which has a high learning curve for accuracy and inexperienced users, involves professional, field-specific users, requires high-precision program to work as an apt integrative system.