

## PREFACE

The national conference “Design and Application of Technology 2004” is held on 30<sup>th</sup> August 2004. This annual meeting is conducted by the Faculty of Engineering Widya Mandala Catholic University to mediate the ideas of electrical, chemical and industrial engineers, researchers in universities, institutions, as well as industries.

The topics addressed in the meeting are in various field of engineering. There are 25 papers in electrical engineering topics, 41 papers in chemical engineering topics and 27 papers in industrial engineering topics will be discussed and presented in this conference.

The organizing committee hopes that the information shared in the proceeding will give a valuable contribution on the science and technology development and application. We would like to acknowledge the authors and co-authors to share their knowledge, and all participants in this conference.

Surabaya, August 2004

Organizing Committee

