



# Asian Institute of Technology

Academics Thailand University

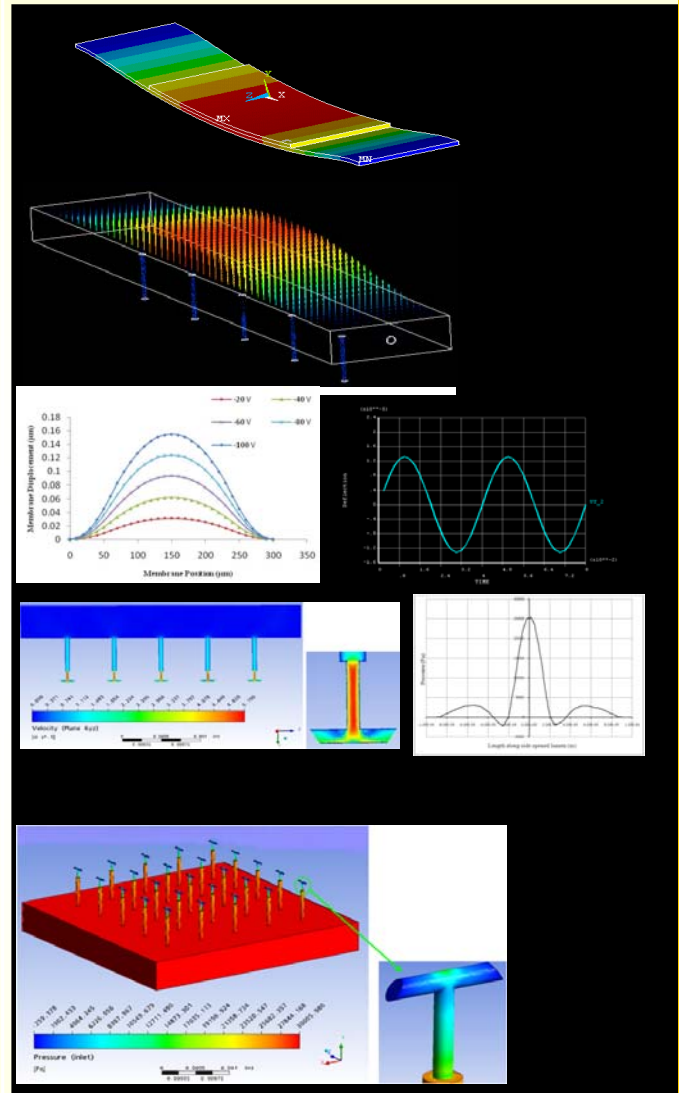
Thailand

[www.ait.ac.th](http://www.ait.ac.th)



## Overview

The Asian Institute of Technology (AIT) is an autonomous, international institute established in 1959 to help meet the growing need for advanced engineering education in Asia. Since that time, AIT has become an active partner in the promotion of technological change and development in the region. Academic programs at AIT are conducted at the doctoral, master, diploma and certificate levels by three schools: the School of Engineering and Technology, the School of Environment, Resources and Development, and the School of Management.



## Testimonial

We used Ansys for the MEMS applications. We designed and analyzed the micro pumps and microneedles in Ansys. Structural, CFD and multifield analysis is used to get the results. We developed and analyzed Transdermal Drug Delivery system using multifield code coupling technique. Ansys MFX module helped us to simulate the phenomenon of drug transport into the human body.

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## Challenges

- To investigate the suitable examples about AC piezoelectric actuator
- To solve the problem with huge number of nodes and boundary conditions
- To analyze the specific results

## Solution

ANSYS Multifield analysis (MFX)

MFX module provides us to find the solution of the MEMS based Transdermal Drug delivery system with piezoelectric actuator using AC voltage source. The results we got were successful and comparable to other results from different research in the field.

## Benefits

- It Helped to get correct solution s for analysis
- It Reduces the time of analysis and cost
- It Increases the benefits of getting practical results without any practical tastings.