

LHD 学术报告 2011 年 7 月 4 日周一 9:00-11:00 所主楼 312

报告题目:

On the Development of a Non-invasive Lipotripter
(非侵入式消脂機之開發)

演讲人:

Dr. Shen-Min Liang (梁勝明)
Department of Computer Application Engineering
Far East University

时间: 2011 年 7 月 4 日 (周一) 上午 9:00

地点: 力学所 1 号楼 312 会议室

邀请人: 姜宗林 研究员

会议主持人: 姜宗林 研究员

报告摘要:

It is a future trend of a noninvasive lipolysis method that will replace traditional invasive negative-pressure

liposuction methods, because of the unsolved problem of side effects associated with the traditional liposuction. For solving this problem, a noninvasive lipolysis idea is proposed and the corresponding machine is in developing. The technology of noninvasive lipolysis is to use underwater shock wave focusing at a small area for rupturing fat cells without a burning problem.

In the first-year project, we have accomplished the following majored items: (1) an electrohydraulic shock wave generator for lipolysis, which is often referred as a “shock cup”; (2) a subsystem of water supply and drainage for the shock cup; (3) an auxiliary laser-assisted localization subsystem for the shock cup; (4) the design and fabrication of a water bag for the shock cup; (5) the design and fabrication of two bronze electrodes; (6) the image processing for the electrode gap and a subsystem of monitoring the electrode gap; and (7) the design, assembling and testing of a high-voltage discharging subsystem by integrating several circuits with optical fibers as signal transmission in order to protect electro- magnetic interference.