



סמינר - SEMINAR

הנך מוזמנת להרצאה סמינריונית של הפקולטה להנדסת מכונות, שתתקיים ביום ב' 14.11.16 (יג' בחשוון, תשע"ז), בבניין דן-קאהן, קומה 0, אודיטוריום 1, 14:30.

ירצה:

Adi Livneh B.Sc, MBA



על הנושא:

Hemodynamic Navigator

A novel technology for cardiovascular management by engineering principles body-conductivity, Signal processing and Fluid Mechanics

להלן תקציר ההרצאה:

Hemodynamics is the fluid dynamics of blood flow. The circulatory system is controlled by homeostatic mechanisms, much as hydraulic circuits are controlled by control systems. Hemodynamic response continuously monitors and adjusts to conditions in the body and its environment. Thus hemodynamics explains the physical laws that govern the flow of blood in the blood vessels. The relationships can be challenging because the pump (heart) and the blood vessels are complex, with many ways for blood to enter and exit under changing conditions.

In many clinical conditions (such as in hypertension, hypotension, heart failure, distributive shock and more) hemodynamic management plays a critical role.

Today, hemodynamic management is based on the measurement and trending of heart rate and blood pressure. Although trending of cardiac output, in addition to blood pressure, is important, this parameter is not monitored due to lack of non-invasive instrumentation.

Current clinical outcomes, of the above conditions, are compromised. e.g. only 50% of people with hypertension in the US have their condition under control (<140/90).

NI Medical developed a technology for non-invasive monitoring of cardiac output and a new methodology for hemodynamic management (Hemodynamic Navigator). The technology is based on the measurement of bio-impedance of the blood vessels, signals processing, algorithms and fluid mechanics and was developed by a team of Cardiologists, Intensivists and Electrical, Mechanical and software engineers.

The presentation will describe the non-invasive technology to measure cardiac output as well as the Hemodynamic Navigator methodology including examples. A demonstration will be provided during the presentation – hemodynamic measurement and trending of 1 or 2 volunteers will be done in front of the audience.

Adi Livneh graduated the Technion in Mechanical Engineering, Summa Com Laude (1987) and Bar-Ilan University in Master of Business administration (1994). Prior to graduation, Adi served as a pilot in the Israeli Air force. Adi worked in development and project management in Elbit Systems and Israeli Aerospace Industries. Prior to joining NI Medical, Adi served as a CEO of several industrial companies.

בברכה,

המארח: פרופ' יצחק בוכר

19/11/16 א.א.א.א.

מרכז הסמינרים