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DR. MICHA BRUNSTEIN NAMED CHAIRMAN OF THE BOARD OF DIRECTORS OF NOVA MEASURING INSTRUMENTS

Rehovoth, Israel – June 20, 2006 - Nova Measuring Instruments, Ltd. (Nasdaq: NVMI), the market leader in integrated metrology and process control for the semiconductor industry, today announced that the board of directors has named Dr. Micha Brunstein Chairman of the Board of Directors, replacing Barry L. Cox who resigned in April 2006.

Dr. Brunstein has been a director of Nova since November 2003. Dr. Brunstein serves on the board of several Israeli companies after having served as a Managing Director of Applied Materials Israel Ltd., President of Opal Inc., and as Director of New Business Development at Optrotech Ltd. Dr. Brunstein holds a B.Sc. in Mathematics and Physics from Hebrew University and M.Sc. and Ph.D. in Physics from Tel Aviv University.

"I am pleased to take on the role of Chairman and am honored that my fellow directors have named me to this position," said Dr. Brunstein. "I look forward to my new role in support of Nova's continued growth and development."

About Nova

Nova Measuring Instruments Ltd. Develops, designs and produces integrated process control systems in the semiconductor manufacturing industry. Nova provides a broad range of integrated process control solutions that link between different semiconductor processes and process equipment. The Company's website is www.nova.co.il.

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding Nova's anticipated future growth and development. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward-looking statements. These risks and other factors include but are not limited to: changes in customer demands for our products, new product offerings from our competitors, changes in or an inability to execute our business strategy, unanticipated manufacturing or supply problems, changes in tax requirements or the applicability of those requirements to Nova and changes in customer demand for our products. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading "Risk Factors" in

Nova's Annual Report on Form 20-F/A for the year ended December 31, 2004 filed with the Securities and Exchange Commission on June 12, 2006. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any obligation to update the forward-looking information contained in this press release.