It is a privilege for me to have been invited to give these opening remarks in honor of George Leitmann, who has contributed so much to our area of research. I believe that I can speak with knowledge, because I have known George for at least 30 years and I have been aware of his work for almost 40 years. He has been one of the main engines of the advances that have occurred in optimal control, differential games, and engineering applications. His work has been impressive, original, varied, and above all thorough. His professional achievements and his influence have been considerable. But let me proceed in order.

Born on May 24, 1925 in Vienna (Austria), but conceived in Venice (Italy), the only child of Josef Leitmann and Stella Fisher, George Leitmann attended grammar school and then the Realgymnasium (technical preparatory school). He emigrated to the United States in April 1940, accompanied by his mother and his two grandmothers.

He attended the technical high school in Queens, New York. After graduation, he joined the US Army in February 1944, arriving in the European theater of operations in the fall of 1944, where he served in the reconnaissance unit of a Combat Engineer Battalion attached to the French First Army. For his combat service, France awarded him the "Croix de Guerre avec Palmes" and Belgium awarded him the "Décoration Fourragère". In 1945, he was transferred to the Counterintelligence Corps (CIC), becoming its youngest special agent. After a brief period of service at the
Nuremberg War Trials, George was discharged in May 1946 and began college studies at Columbia University. There, he received the BS and MA Degrees in Physics in 1949 and 1950.

In the fall of 1950, George accepted a position as Physicist at the US Naval Ordnance Test Station, China Lake, California, where he eventually became Head of the Aeroballistics Section. During the seven years at China Lake, there was a two-year parenthesis to obtain the PhD Degree in Engineering Science at the University of California at Berkeley (UCB); more importantly, he met and in 1955 married Nancy Lloyd. The Leitmanns' first child, Josef, was born at China Lake; he now works for the World Bank and is completing the PhD Degree in Regional Planning at UCB. In 1957, George joined the Mechanical Engineering Faculty at UCB as an Assistant Professor; he was promoted to Associate Professor in 1959 and to Professor in 1963. The Leitmanns' second child, Elaine, was born in 1959; both Elaine and her husband Bob graduated from the University of California at Davis and now live in Napa Valley.

In the early 1950's, while still at China Lake, George Leitmann together with Pierre St. Amand wrote the first proposal for a US satellite. George's work on rocket ballistics led him first into flight mechanics and then into trajectory optimization. His early aerospace papers were of considerable interest. In particular, this statement applies to his treatment of the optimal burning program for a sounding rocket, which he presented at the Astronautical Congress in Rome in 1956. It also applies to his treatment of the optimal trajectories for a rocket in a vacuum and a uniform gravitational field; for this problem, he proved that the occurrence of singular arcs is to be excluded.