

Dr. Robert Darling Fellow, Electrochemical Engineering



Biographical Profile

Rob Darling, Ph.D., is Fellow, Electrochemical Engineering, at United Technologies Research Center (UTRC), where he works to identify and realize business opportunities within the electrochemical engineering sector that will advance the innovation mission of UTRC. Specifically, Darling ensures the highest standards of technical excellence by providing leadership in technical direction, identifying strategic opportunities, executing projects, leveraging external relationships, and mentoring/guiding technical staff.

Darling joined UTRC in 2011 and has since been conducting ongoing research in fuel cell and flow battery development with other technical specialists. During this time, he has provided technical guidance to UTC businesses on applications of Lithium-ion and other types of solid-state rechargeable batteries. He currently works as a Principal Investigator in the joint development of flow battery technology with [Vionx Energy](#).

Previously, he spent 11 years at UTC Power in roles of increasing responsibility. In 2004, he was instrumental in the development of a high power density, freeze tolerant evaporative cooled polymer electrolyte membrane (PEM) fuel cell for a leading automobile manufacturer, for which he was awarded the George Mead Medal, UTC's highest honor for individual achievement in engineering or science. Just prior to joining UTRC, Darling supervised a team developing PEM fuel cells for cars, buses, and submarines. He started his career in 1998 as a Senior Research Engineer with General Motors.

Among his many professional achievements, Darling was the first to author a benchmark publication on the techno-economic (TE) impact of flow batteries, published by the [Joint Center for Energy Storage Research](#). He also has authored or co-authored more than 30 peer-reviewed publications on fuel cells and flow batteries; is an invited author of five book chapters on this topic; and is an inventor on 38 patent applications, 18 of which have been issued.

Darling earned a B.A.Sc. with honors in chemical engineering from the University of British Columbia, Vancouver, Canada in 1993 and a Ph.D. degree in chemical engineering from the University of California, Berkeley, in 1998.