1067-49-449   **Agnieszka B. Malinowska*** (`abmalinowska@ua.pt`), Department of Mathematics, University of Aveiro, 3810-193 Aveiro, Portugal, and **Delfim F. M. Torres** (`delfim@ua.pt`), Department of Mathematics, University of Aveiro, 3810-193 Aveiro, Portugal. *Generalized time scales and the Hahn quantum variational calculus.*

We introduce the Hahn quantum variational calculus. Necessary and sufficient optimality conditions for the basic, isoperimetric, and Hahn quantum Lagrange problems, are studied. We also show the validity of Leitmann's direct method for the Hahn quantum variational calculus, and give explicit solutions to some concrete problems. To illustrate the results, we provide several examples and discuss a quantum version of the well known Ramsey model of economics. (Received September 04, 2010)