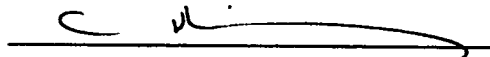
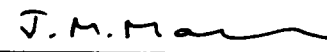
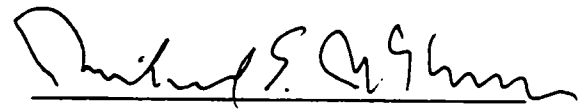


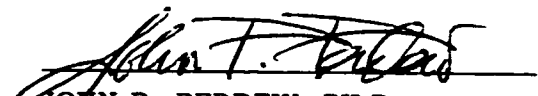
THEORETICAL INVESTIGATIONS OF CO/PT ALLOYS AND SUPERCELLS

A DISSERTATION  
SUBMITTED ON THE TWENTYEIGHTH DAY OF MARCH, 2003  
TO THE DEPARTMENT OF PHYSICS  
OF THE GRADUATE SCHOOL OF  
TULANE UNIVERSITY  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
BY

  
SHANNON D. WILLOUGHBY

APPROVED:   
JAMES M. MACLAREN, PH.D.  
CHAIRMAN

  
MICHAEL E. MCHENRY, PH.D.

  
JOHN P. PERDEW, PH.D.

## Biography

Shannon Deidre Willoughby was born in San Diego, California to Brent and Sherry Willoughby in 1974. As a child, she lived in Colorado, Utah and Idaho, graduating from Coeur d'Alene High School in 1992. She stayed in Idaho for one year and attended North Idaho College before moving to Eugene, Oregon. There she worked as a line cook while attending Lane Community College for two years. After moving to New Orleans in 1995, she enrolled at the University of New Orleans to finish her BS in Physics and work managing a bar in Metairie. Her father died of cancer in 1996 at his home in Utah. She started graduate school at Tulane University in 1999, and is still happy to wake up every day and learn more about physics.