Outline of "Engineering Experience" since Graduating with B.Sc.

May 1982 - August 1984: research assistant with Prof. D. J. McEwen

Data Processing and Analysis:
- meridian photometer data
- rocket-borne electron spectrometer
- rocket-borne 3-axis magnetometer
- rocket trajectory
- comparison of electron flux and auroral emission brightness

Field operation of experiments:
- meridian photometer at Southend

September 1984 - November 1987: M.Sc. student with Prof. D. J. McEwen

Data Processing and Analysis:
- meridian photometer data
- satellite-borne electron spectrometer
- satellite-borne nadir photometer
- satellite-borne 3-axis magnetometer
- comparison of electron flux and auroral emission brightness
- comparison of electron energy and auroral emission brightness ratios
- analysis of MSIS model atmosphere composition calculations

Practical Experience:
- laboratory calibration of meridian photometer (engineerng system)
- creation of computer software to accomplish a variety of analyses
- performance testing of stepper motor for use as spectrometer grating drive

Field operation of experiments:
- meridian photometer at Rabbit Lake (included visit to Eldorado uranium mill at Rabbit Lake)

Oral and Written Communication:
- two conference presentations
- composition of M.Sc. thesis

November 1987 - March 1991: Ph.D. student with Prof. D. J. McEwen

Data Processing and Analysis:
- satellite-borne electron spectrometer
- satellite-borne CCD-based ultraviolet imager
- satellite orbit trajectory and 3-d orientation data
- viewing conditions from orbit
- analysis of MSIS model atmosphere composition calculations
- analysis of model calculations of auroral emission brightness
- analysis of model calculations of auroral radiative transfer
- comparison of observed and modelled UV imager responses
- modelling of UV imager response to incident photons

Practical Experience:
- creation of computer software to accomplish a variety of analyses

Oral and Written Communication: three conference presentations
composition of Ph.D. thesis
generation of various technical reports
and meeting proceedings
publication of scientific research paper

April 1991 - March 1995: Research Associate, University of Calgary