

NILS R. POKRUPA

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Education

- 2004-2006 **Masters of Science in Space Engineering**
Department of Space Science, Umeå University, Kiruna, Sweden
- Bengt Hultqvist Prize for top student in the class, Canadian-Scandinavian Foundation Study Grant
 - Participated in the European Space Agency moon-mars habitat workshop and the Bexus student stratospheric balloon project
- 1995-2000 **Bachelor of Aerospace Engineering with High Distinction**
Structures and Vehicle Design, Carleton University, Ottawa, Canada
- Chancellor's Scholarship recipient, Dean's Honour List 1996 & 2000, Engineer's Wives Bursary recipient 1997
- 1992-1995 **High School Diploma**
International Bacculaureate, Miles Macdonell Collegiate, Winnipeg, Canada
- Governor General's Medal, Canadian Merit Scholarship Foundation Regional Award, Scholar Athlete Award

Work Experience

- 2006-present **Spacecraft Systems Engineer**
Swedish Space Corporation, Space Systems, Stockholm, Sweden
- Spacecraft systems manager and mission engineer for Proba-3 mission team:
 - International team design coordination (Spain, Belgium, France, UK, Sweden)
 - Orbit + launcher trade-offs, analysis and selection
 - Preliminary design and requirements analysis
 - Thermal subsystem manager for the Prisma technology demo mission:
 - Spacecraft level thermal analysis, design, correlation and flight predictions
 - Thermal hardware design, procurement and flight integration
 - Designed and performed complete spacecraft level solar simulation testing
 - Launcher study and trade-off for the Sentinel-2 mission
 - Thermal studies for Premier mission, Smart-OLEV, ECAPS and Nanospace AB
 - Proposals, planning and budgeting for future programs
- 2000-2004 **Mechanical / Thermal Design Engineer**
Bristol Aerospace Limited, Space Systems, Winnipeg, Canada
- Cassiope mission spacecraft level preliminary thermal analysis
 - Involved with SciSat-1 mission thermal control materials procurement, assembly, integration and TVAC testing
 - Performed thermal / mechanical analysis for the preliminary and detailed design of the GyroWheel development project
 - Designed, authored and performed all GyroWheel environmental tests (static load, vibration, TVAC)
 - Involved in AIT of prototype, qualification and flight GyroWheel units
 - Bearing friction, power and temperature trade-off studies
 - Lead for bearing design and manufacture contracts
 - Blast analysis for rocket exhaust plume deflector design

1998-1999	<p>Student Engineer (16 month Internship) TransCanada Pipelines, Compressor Operations, Calgary, Canada</p> <ul style="list-style-type: none"> • Assisted in performance analysis / monitoring of industrial gas turbine/compressor fleets, and other related studies and projects • Served as “first point of contact” for field personnel in the areas of control settings and air intake filtration studies • Field testing of turbine/compressor units and aerial gas coolers • Modeled compressor station flow, head loss and efficiency • Trained senior engineers to use a new performance monitoring program
Spring, 1998 (part-time)	<p>Student Engineer (4 month Internship) Canadian Space Agency, Space Sciences, Ottawa, Canada</p> <ul style="list-style-type: none"> • Performed thermal analysis on the Canadian Thermal Plasma Analyzer for the Japanese Nozomi mission to Mars • Became acquainted with and used I-DEAS for thermal FEA • Attended sub-orbital test launch of component in Churchill, Manitoba
1993-2003 (summers & part-time)	<p>Head Mechanic and Sales Person Olympia Cycle and Ski, Winnipeg, Canada</p> <ul style="list-style-type: none"> • Matured from assistant mechanic to head mechanic and sales person • Managed service area, repairs, inventory control, opening and closing, cash, deposits, sales and public relations

Skills Profile

- Languages: English, French and Swedish
- Toolset: DOORs, I-DEAS TMG, Thermica, ESATAN, Pro-E, UniGraphics, Spensiv, Flowmaster, MATLAB, Simulink, C++, MS Office
- NATO Secret security clearance (valid to June 2012)
- Trained in clean room environment and nitrogen line procedures
- “Fundamentals of Vibration and Shock for Test Applications” course
- “UniGraphics CAD User Training and V15-V18 Transition training” course
- Ground School training for private pilot’s license
- Avalanche Safety Awareness & Mountain Travel training
- Photography & Dark Room Developing courses
- Member of the Association of Professional Engineers and Geoscientists of Manitoba
- Leader; organized; responsible; quick learner; active; enthusiastic

Activities & Interests

- Volunteer speaker at the Rotary Club Career Symposium
- Volunteer judge for the Red Rover Goes to Mars Essay contest
- Team Leader in the Calgary “Paint the Town” volunteer project
- 1998 Canadian Engineering Competition Corporate Design director
- Involvement in volleyball, including: provincial team member and captain, high school captain, provincial All Star, coach
- Enjoy traveling, cycling, skiing, camping, mountaineering, team sports
- Member of SpaceArch and on the Mars Society Nordic board