APOSTOLOS KANTZAS, PHD, P.ENG

CURRENT POSITIONS

Academia: Professor,

Director Energi Simulation Centre for Geothermal Systems Research Energi Simulation Industrial Research Chair in Energy Transition

Department of Chemical and Petroleum Engineering, University of Calgary, Calgary, Alberta, Canada T2L 1N4

akantzas@ucalgary.ca

Industry: President and CEO

PERM Inc., TIPM Laboratory and PERM Instruments, Bay 3, 2221 $41^{\rm st}$ Avenue NE

Calgary, AB T2E 6P2

akantzas@perminc.com

Education Record

• Diploma, Eng. in Chemical Engineering (1982), Aristotle University of Thessaloniki, Greece

M.A.Sc. in Chemical Engineering (1985), University of Waterloo, Canada

Ph.D. in Chemical Engineering (1988), University of Waterloo, Canada

PROFESSIONAL RECORD

University of Calgary

Department of Chemical & Petroleum Engineering

Adjunct, January 1995; Tenure Track, April 1997 – 2000, Tenured 2000 - present

Department of Geosciences

Adjunct, March 1995 – June 2013

Professor (effective July 1, 2001)

<u>Canada Research Chair in Energy and Imaging Laureate (July 1, 2001 – June 30, 2011)</u>

NSERC AITF/i-CORE Industrial Research Chair in Fundamentals of Unconventional Resources Laureate (July 1, 2012 – June 30, 2018)

- PERM Inc. (effective January 1995)

President and CEO

- PERM Instruments Inc. (effective January 2000)

President and CEO

- Laricina Energy Ltd. (October 2009- December 2014)

External Technology Advisor

- NOVA Research & Technology Corporation, NRTC (previously, NOVA HUSKY RESEARCH CORPORATION, NHRC), Calgary, Alberta (August 1988 - January 1995)

Senior Research Engineer - (February 1990 - January 1995)

Research Engineer - (August 1988 - February 1990)

- <u>University of Waterloo, Waterloo, Ontario (May 1983 - December 1984 (M.A.Sc.), January 1985 - August 1988 (Ph.D.))</u>

Research Assistant

University of Waterloo, Waterloo, Ontario (Summer 1986, Winter 1987, Summer 1987)
 Special Teaching Demonstrator (Session Professor)

- <u>University of Waterloo, Waterloo, Ontario (May 1983 to December 1987)</u>

Teaching Assistant

- Motor Oil Hellas - Corinth Refineries, Agii Theodori, Greece (Summer 1980, Summer 1981)
Student Engineer

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Professional Certification and Memberships in Learned Societies

Society of Petroleum Engineers of AIME American Institute of Chemical Engineers Canadian Society of Chemical Engineers Canadian Well Logging Society Society of Core Analysts APEGA

Areas of Interest

Transport Phenomena, Porous Media, Geothermal Energy, Energy Harvesting Processes, Enhanced Oil Recovery, Non-Destructive Testing of Materials, Computer Assisted Tomography, Radioactive Particle Tracking, Nanoparticles and Nanofluids, Chemical Reactor Engineering, Core Analysis, Polymers, Computer Simulation/Software Development, Magnetic Resonance Relaxometry and Imaging, Soil Remediation.

Graduate Supervision

	Current	Past	Total
M.Sc.	11	82	93
Ph.D.	15	29	44
Co-Supervisor M.Sc.	0	8	8
Co-Supervisor Ph.D.	3	12	15
Supervision M.Eng. Thesis	0	13	13
Total	28	144	172
PDF	4	32	36

Publication Record

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Referreed Journal Published	222
Referreed Journal Under Review	14
Other Referreed	47
Conference Proceedings	243
Books/Chapters	13
Patents	37
Cited (Google Scholar)	10024+
h-index (Google Scholar)	51
i10-index (Google Scholar)	235
Technical Reports	500+

Awards and Distinctions

University of Calgary, Schulich School of Engineering, Outstanding Mentorship Award, 2018. Petroleum Society of CIM, Outstanding Service Award, 2007.

Petroleum Society of CIM, Journal of Canadian Petroleum Technology 2005 Best Paper award (CIPC 2003-107), 2006.

Outstanding Technical Editor Award, Society of Petroleum Engineers, 2006.

Professor of the Year, Oil and Gas Engineering Program, Schulich School of Engineering, 2005-2006.

Best Petrophysical Paper, ICE 2004 CSPG, CHOA, CWLS Joint Conference, Calgary, 2004. University of Calgary, Department of CPE Research Award, 2004.

University of Calgary, Faculty of Graduate Studies, Outstanding Achievement in Supervision Award, 2003.

Outstanding Technical Editor Award, Society of Petroleum Engineers, 2003.

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University of Calgary, Department of CPE Research Award, 2003.

Co-holder of two simultaneous NSERC Strategic Project Awards.

2nd Runner-up, Best Paper Presented at the 2001 Canadian International Petroleum Conference.

Nominee for the NSERC Steacie Award, 1999, 2000.

Nominee for the Entrepreneur of the Year Award, 1999.

Nominee for the ASTEC Awards, 2001, 2002, 2011.

University of Calgary, Department of CPE Research Award, 2000.

Twice awarded CFI New Opportunities Awards, 1998.

UTI Fellowship, 1997.

Current Research Funding (All funds in \$CAN)

- Energi Simulation Industrial Research Chair in Energy Transition

Includes the Directorship of the Energi Simulation Centre for Geothermal Systems Research Project Timeline: July 1, 2024, through June 30, 2027 (with an additional conditional 5-year extension).

Energi Cash Contribution: \$600,000 over three years (additional \$1,000,000 for the second term)

- Energy Harvesting Processes

Industry Partners: Kalina Distributed Power, ConocoPhillips, Remedy Energy Services, Suncor (dropped out is being replaced), Telsec, Alberta Geological Survey, Geological Survey of Canada

Application Type: NSERC Mitacs Alliance

Project Timeline: February 1, 2023, through January 31, 2027

Industry Cash Contribution: \$125,000 over four years per industry partner (\$750,000 total)

NSERC Contribution: \$1,500,000 over four years Mitacs Contribution: \$750,000 over four years

Novel Sensors

Industry Partners: Impossible Sensing Energy, Crescent Point Energy

Application Type: NSERC Mitacs Alliance

Project Timeline: November 1, 2023, through October 31, 2025

Industry Cash Contribution: \$40,000 over two years per industry partner (\$80,000 total)

NSERC Contribution: \$160,000 over two years Mitacs Contribution: \$80,000 over two years

Mass Transfer in Complex Systems

Industry Partners: N/A

Application Type: NSERC Discovery Grant

Project Timeline: April 1, 2023, through March 31, 2028

Industry Cash Contribution: N/A

NSERC Contribution: \$190,000 over five years
Fundamentals of Unconventional Resources II

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Industry Partners: ConocoPhillips, CNRL, Chevron Canada, Enerplus

Application Type: NSERC Alberta Innovates Alliance Project Timeline: June 1, 2021, through May 31, 2026

Industry Cash Contribution: \$20,000 over four years per industry partner (\$400,000 total)

NSERC Contribution: \$800,000 over four years

Alberta Innovates Contribution: \$200,000 over five years

Heavy Oil Emulsions (University of Calgary Component Only)

Industry Partners: PTRC-HORNET (Cenovus, CNRL)

Application Type: Mitacs Alliance

Project Timeline: January 1, 2024, through December 31, 2026

Industry Cash Contribution: \$100,000 over three years

Mitacs Contribution: \$100,000 over three years

Heavy Oil Polymer (University of Calgary Component Only)

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Industry Partners: PTRC-HORNET (Cenovus, CNRL)

Application Type: Mitacs Alliance

Project Timeline: January 1, 2024, through December 31, 2027 Industry Cash Contribution: \$110,000 over four years

Mitacs Contribution: \$110,000 over four years

Previous funding from multiple sources in the last 20 years approximately \$15,000,000

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