

Dr. Arzu Sardarli
Professor of Physics and Mathematics



**Department of Indigenous Science, the Environment, and Economic
Development**

Office: Room 123, Northern Campus, FNUniv

Phone: +1-306-765-3333 ext. 7338

Toll Free: +1-800-267-6303 ext. 7338

Fax: +1-306-765-3330

Email: asardarli@fnuniv.ca

Credentials: Ph.D., Supreme Attestation Commission of Russian Federation, Moscow

M.S. (First Class Honours), Baku State University, Baku

Research Interests: Statistical analysis of socio-economical processes in Indigenous communities

Mathematical modeling of human fertility and mortality dynamics

Use of Indigenous Knowledge in studies of environmental processes

Statistical analysis of physical parameters of Indigenous artefacts

Low dimensional quantum effects in semiconductors with chained and layered crystalline structures

Current Projects: Studies of physical parameters of Indigenous artefacts; collecting and preserving the relating oral stories (in collaboration with Sturgeon Lake First Nation, Pelican Narrows)

First Nation, Royal Saskatchewan Museum and University of Regina); supported by Ministry of Canadian Heritage within the Heritage Museums Assistance Program

[National Science Laboratory Video Lessons for Aboriginal Youth](#) (in collaboration with Saskatchewan Rivers Public School Division); supported within the PromoScience program, by Natural Sciences and Engineering Research Council (NSERC) and Indigenous and Northern Affairs Canada (INAC)

[Addressing homelessness in Prince Albert and surrounding community: A multi-disciplinary, intersectoral approach](#) (Lead by Dr. Anonson); supported by Social Sciences and Humanities Research Council (SSHRC) and Mitacs Canada

Use of Indigenous elements in teaching introductory Statistics courses, President's Teaching and Learning Scholars Program; supported by University of Regina

Role of Environmental Factors in Forming Seasonal Fertility Oscillations

Courses Taught: AMTH 091 – Mathematics I
AMTH 092 – Mathematics II
MATH 101 – Introductory Finite Mathematics I
MATH 103 – Calculus for the Social & Management Sciences
MATH 111 – Calculus II
EMTH 215 – Theory and Practice in Teaching Mathematics in the Elementary School
PHYS 109 – General Physics I
PHYS 119 – General Physics II
STAT 100 – Elementary Statistics for Applications
STAT 160 – Introductory Statistics

Community Work: Coordinator of [Wiseman Mathematics Contest \(Nationwide project\)](#)

Awards: [Regional Centre of Expertise \(Saskatchewan\) recognition award for the project, "First nations University of Canada – Influence of Cultural Water on Waterborne Diseases", 2009](#)

[Regional Centre of Expertise \(Saskatchewan\) recognition award for Wiseman Mathematics Contest, 2016](#)

Selected Publications: Books and chapters of books

Willie Ermine, Arzu Sardarli, Ida Swan, Cree Dictionary of Mathematical Terms for Elementary Classes, Printing Services, University of Regina, 2017, 25 pages

A. Sardarli, Use of Indigenous Knowledge in Mathematical Modeling of Water Quality Dynamics, 152-167, Indigenous Earth: Praxis and Transformations, edited by Ellen Simmons, Theytus Books, 2013, 416 pages, ISBN 978-1-926886-28-2

Peer-reviewed articles

[A. Sardarli \(corresponding author\), T. Ngamkham and A. Volodin, Impact of Education on Family Income in First Nations Communities, Thailand Statistician, 16\(2\), 2018, 213-220.](#)

[M. Ahmadov, F. Humbatov, V. Balayev, A. Sardarli \(corresponding author\), Evaluation of Water Quality and its Suitability for Drinking and Agriculture Use in Azerbaijan, Resources and Environment, 8\(2\), 2018, 73-81.](#)

[R. Sardarly, A. Sardarli \(corresponding author\), F. Salmanov, N. Aliyeva, S. Gahramanova, M. Yusifov, Phase Transition in TIS, TISe and TlInS₂ Crystals Caused by Nanoscale Defects, International Journal of Theoretical and Applied Nanotechnology, 6, 2018, 5-10.](#)

[M. Ahmadov, F. Humbatov, S. Ahmadova, A. Sardarli \(corresponding author\), Investigation of Trace Metals in Water Samples Taken from Kura River, Resources and Environment, 8\(5\), 2018, 217-222.](#)

[A. Sardarli \(corresponding author\), T. Ngamkham, A. Volodin, Centre of Population of Saskatchewan, Canada, Thailand Statistician, 15 \(1\), 2017, 97-103](#)

[A. Pashaev, A. Badalov, R. Sardarly, O. Samedov, N. Alieva, R. Agayeva, A. Orujova, A. Sardarli \(corresponding author\), Prospective Application of A³B³C⁶₂ Type Semiconductors for Developing Nano-size Electronic Devices, International Journal of Theoretical and Applied Nanotechnology, 2 \(1\), 2014, 9-17](#)

[A. Sardarli, Use of Indigenous Knowledge in Modeling the Water Quality Dynamics in Peepeekisis and Kahkewistahaw First Nations Communities, Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health 11\(1\), 2013, 55-63](#)

[A. Sardarli \(corresponding author\), R. Sardarly, O. Samedov, N. Aliyeva, R. Aqayeva, T. Musazade, Superionic Conductivity and Specific Effects Induced by \$\gamma\$ -Radiation in Nanofibrous TlGaTe₂ Crystals, International Journal of Theoretical and Applied Nanotechnology, 1\(1\), 2012, 20-28](#)

[K. Budsaba, S. Chaimongkol, S. Pete, A. Sardarli \(corresponding author\), and A.Volodin, "Estimation of Prosperity and Depression Periods in a Labour Market", Thailand Statistician, July 2008, 6\(2\), 37-46.](#)