David A. Krebes

CONTACT
INFORMATION

Home phone (voice mail): (403) 281-6626
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Place of Residence: Calgary, AB

EDUCATION

PhD	math	University of Illinois at Chicago	1997
MSc	math	University of Toronto	1991
BSc	math	University of Alberta	1990

EMPLOYMENT HISTORY

- Private mathematics tutoring - exposition and problem-solving - high school and post-secondary — 2002 – present

- Mathematics, Language, Study Skills tutoring – Oxford Learning Calgary West — 2014 – 2015

- Mathematics teaching – Sylvan Learning Centre Bannister Road, Calgary — 2010 – 2012

- Contract Academic Staff (Sessional Instructor) University of Alberta Math Department Math 222 (Problem Solving), Math 120 (Linear Algebra), Math 114 (Calculus I), Math 322 (Graph Theory) and Math 209 (Calculus III for Engineers) — 2006 – 2009

- Sessional Instructor — University of Calgary Introduction to Topology — Fall 2000

- Lecturer – Southern Illinois University — 1999 – 2000

- Visiting Assistant Professor University of South Alabama — 1998 – 99

- Post-Doctoral Fellow University of British Columbia — 1997 – 98

- working together for the past 5 years

- currently in Grade 12

- accepted into University of Toronto computer science program

- weekly sessions of duration (since July 2023) 3 hours

- solved 143 challenge problems from journal Crux Mathematicorum published by the Canadian Mathematical Society. More recently problems from past math contests held by the University of Waterloo. Problem numbers available upon request.

- challenge problems with mathematical solutions

- high degree of ingenuity required

- collaborative effort – teamwork

- strong rapport

- fun sessions!

- extensive pencilwork

- proofs and counterexamples

- follow-up notes after each session

- algebra, geometry, word problems, inequalities, manipulation of integers, functions and relations (including equivalence relations), mathematical induction, trigonometry, Cartesian plane, diagrams, solving equations and systems of equations, polynomials, radical and rational functions, recurrence relations and much more

- one-off 90-minute run-down of calculus. More in the future.

PRESENTATIONS	• "Factoring a Quadratic Polynomial into a Product of Binomials" (21 minutes; Grade 11 material) Teaching Sample - YouTube video	2014
	• "An Invariant of Systems of Loops Immersed in the Plane" 2013 North-South Dialogue, University of Calgary	May 2013
	• "An Obstruction to Embedding 4-Tangles in Links" Math Department, University of Calgary	September 2012
	• "Units of the String Link Monoids" Canadian Mathematics Society Summer Meeting, Regina, Saskatchewan	June 2012
	• "Introduction to Knot Theory" presentation for Undergraduate Math Sciences Society, University of Alberta	October 2007
	• Outreach mathematical presentations to students in the Edmonton Public School System, University of Alberta	2007
TRAINING	• Pastoral Care Program, Catholic Diocese of Calgary	June 2015
	• Bereavement Visitation Program, Catholic Diocese of Calgary	November 2014
	• Full-day JUMP Math Workshop with Mary Jane Moreau	2014
	• Cario-pulmonary Resuscitation for Health Care Providers, Canadian Red Cross	October 2013

COMMUNITY INVOLVEMENT	• Poetry events at various seniors' residences – reciting and discussing metered verse by eg. Keats, Tennyson, Shakespeare	2004 – present
	• Volunteer, weekly Catholic mass, AgeCare Nursing Home, 90th Ave. S.W. Calgary	2014 – present
	• Pastoral Care Visitor, CareWest Glenmore Nursing Home, Rockyview General Hospital	2015 – 2020
	• Board Member, Schizophrenia Society of Alberta	2013 – 2018
	• Late Overnight Shift "Inn from the Cold" 30+ events on "as needed" basis	2004 – 2016
	• "Math Minds" program for elementary schoolchildren at Calgary Public Library implementing John Mighton's "JUMP" method	July 2014, 2015
	• Volunteer computer assistance, The Kerby Centre	2014
	• University of Calgary Math Outreach Program for students in grades 6-12 - Bill Sands and Robert Woodrow, organizers – Volunteer	2012 – 2013
	• President, Y Toastmasters Club, Edmonton	2009 – 2010
	• Teaching knots to boyscouts, Edmonton	2008
	• Administrative Co-ordinator for "Inn From the Cold" homeless society at parish level	2004 – 2006
	• "Arithmetic Using Rulers" – Workshop conducted at Potential Place, Calgary AB	2006
	• Group Leader for University of Calgary High School Science Enrichment Project	Winter 2001
	• Shad Valley Program for gifted students	1983

TECHNICAL CAPABILITIES	• Microsoft Office Suite • Unix/Linux Operating Systems • Emacs Text Editor • C, Pascal, Fortran Programming Languages

PUBLICATIONS   "Units of the String Link Monoids," 8 pages, 5 figures. "Knots in Poland III – Part III," *Banach Centre Publications*, Vol. 103 (2013) pp. 233-240 http://front.math.ucdavis.edu/1304.4684

(with Daniel Silver and Susan Williams) "Persistent Invariants of Tangles," Journal of Knot Theory and its Ramifications 9 (2000), 471-478.

"An Obstruction to Embedding 4-Tangles in Links", 32 pages, 17 figures. Journal of Knot Theory and its Ramifications Vol. 8 No. 3 (May 1999), 321-352. http://front.math.ucdavis.edu/9902.5119

REFERENCES   "I have been working with David for around 5 years and he has always been a great tutor. He is always very professional and very respectful to me. He always strives to make me feel comfortable and confident about my math skills. When it comes to math, he is very passionate and versed about the topic. When teaching, he is always very thorough and concise about his explanations. Overall, he is a very caring and knowledgeable teacher that is good at explaining a variety of math subjects." - J.

"I was taking MATH 431 Algebra II (University of Calgary), a course which was considered one of the most difficult in the math undergrad curriculum. And I didn't take any pre-requisites. David was able to help me navigate through the whole semester and I successfully passed the course. David is very knowledgeable: I'm always amazed by how much he knows in algebra, topology, etc, at an advanced level! Dave is also patient and thorough, never cut a corner when solving a problem – which is the only way to learn math for the long run. David's enthusiasm in teaching was so encouraging when I was doubting myself in the studying and boosted my confidence. The last but not the least, his dedication to mathematics is also inspiring – you won't find many people love math more than he does. I will recommend David as your mathematics teacher without hesitation. In my opinion, you cannot find better than him!" JoJo

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find better than him! JoJo"I am a current student at the University of
Calgary, and needed to take a diagnostic math exam to get into a calculus
class for my degree. After already failing the exam once, I found David on
Kijiji and he was confident in his ability to help me pass the exam. With
his help I aced the test and also learned many fundamental math skills
that will help me in the future. I definitely recommend David's tutoring
services to anybody considering it, and thank him again for his help!" -
Dean

"I've been tutored by David for the past few months for calculus. He has
a different approach than most, David figures out your strong and weak
points and creates a way of teaching from there. He also relates the material
to the student and gets to a level in which you understand. I recommend
seeing David for any help with math." -Eric

"I am a current student at SAIT and am enrolled in Welding Engineering
Technology. As part of that program we a required to take two calculus
courses, and the first time I took the course I was struggling and ended
up failing it. Then I met David and found out about his tutoring skills. I
then took the course again, but this time working with David. This time
I passed the course and passed it with ease. Now on to summer and I had
to take the next course, this time it was a no brainer to ask for David's
tutoring skills again. I was working full time doing 10-12 hour days while
attending the class in the evenings. But with David's skill I was able
to start succeeding in my classes and I even started enjoying math. In
the end I finished the class with a high 70's, which for me was quite an
accomplishment. He is a very skilled teacher and does everything one on
one. He takes his time to explain concepts and makes sure you understand
them fully. When working through practice problems he is very patient
and never rushes his students, and always lets the students figure it out.
That way they are truly learning it, instead to being told what to do and
how to do it. I have nothing but good things to say about David and his
math and teaching skills. If you need a math tutor without hesitation or a
second thought I would recommend David, and thank him over and over

for all his help." -Jeffrey

"Both (my children) were struggling to find consistency in maths and we were worried that their grades would deteriorate. David took on the task of helping our children through this difficult period and without question he has helped guide them and given them additional skills to do better. Since David has been giving one on one help to our both our children their grades have improved with the consistency that we were looking for. David has a unique gift, not only does he know math's he is a great teacher and developed very quickly a positive bond with our children." -Martin

Other references available upon request.