

MATH & SCIENCE ALL-ACCESS

THE FACULTY NEWSLETTER

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5th Annual Celebration of Excellence

The accomplishments and efforts of faculty and staff were recognized at the Faculty's fifth annual Celebration of Excellence, Jan. 25, 2019.

"I am extremely proud of the work that is being done both here at Brock and in the Scientific Community", stated Dean Ejaz Ahmed. "The Faculty would not be what it is today without all of your hard work and dedication. It gives me great pleasure seeing you gain the recognition you deserve in front of everyone here today."

In total, 11 deserving recipients took home awards in eight different categories. [Read more here.](#)

Distinguished Teaching Award

Rick Cheel

Department of Earth Sciences

Distinguished Research Award

Alexandre Odesski

Department of Mathematics and Statistics

Distinguished Staff Award

Donna Phelps

Department of Computer Science

Lifetime Achievement Award (Faculty)

David Hughes

Department of Computer Science

Student Experience, Recruitment and Outreach Award

Steve Trussler

Cool Climate Oenology and Viticulture Institute

Paul Zelisko

Department of Chemistry

Lifetime Achievement Award (Staff)

Beulah Alexander

Dean's Office

Peter Barclay

Department of Earth Sciences

Experiential Education Leadership Award

Jacinta Dano

Department of Biological Sciences

Dorina Szuroczki

Department of Biological Sciences

Math & Science Council Excellence in Teaching & Student Engagement Award

Amanda Lepp

Department of Biological Sciences

Around the Faculty

VISITING SCHOLARS

The following individuals are currently being hosted by members of the Faculty as visiting international scholars or through university mentorships.

Chemistry

Amin Rostami

University of Kurdistan

Helen Dela Paz

TDC Research Foundation

Brandon Corbett

Cardiff University

Jinyu Sun

East China University of Science and Technology

Peng Yang

Sichuan University

Earth Sciences

Kerrie Pickering

University of Sunshine Coast

Mathematics and Statistics

Chao Liu

Nankai University

Jiangtao Peng

Civil Aviation University of China

Huijun He

Sun Yat-Sen University

Bahareh Yavarizadeh

Shahid Chamran University of Ahvaz

Janjira (Piw) Piladaeng

Thammasat University

Pannipa (Pam) Rintara

Thammasat University

Siwaporn (Pang) Phukongtong

Thammasat University

Computer Science

Kengo Shimizu

Kobe University

Biological Sciences

Ruben Javier Mur Torrento

Escuela Superior Politecnica de Chimborazo

Caio Jr B. C. Rodrigues

Federal Rural University of Rio de Janeiro

Physics

Elaheh Aawani

Semnan University



2018-19 BROCK INTERNATIONAL STUDENT AMBASSADORS



MARCELO MUNIZ CORREA (BRAZIL)

Bachelor of Science

Biotechnology

Third Year



**PRABHJOT KAUR
(KINGDOWN OF BAHRAIN)**

Biomedical Sciences

Fourth Year



SANTIAGO NEGRET RAY (COLOMBIA)

Game Programming

Second Year

RECENT RETIREES



Beulah Alexander

Graduate Officer

Dean's Office



Peter Barclay

Senior Store Keeper

Department of Earth Sciences

IN REMEMBRANCE

The Faculty was saddened to learn of the passings of Babak Farzad and Richard Hiatt.

Farzad began his career at Brock University in 2007 as an assistant professor in the Department of Mathematics. Farzad was granted tenure as an associate professor in 2011, which was followed by his appointment as Director of Brock's Mathematics graduate program in 2016.

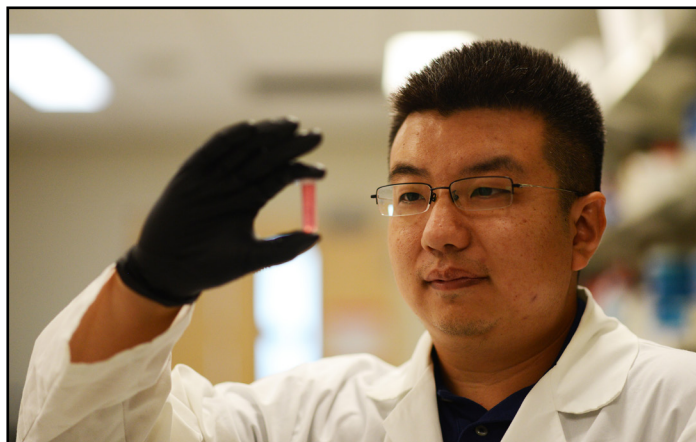


Hiatt was hired as an associate professor of Chemistry in 1965. He was then promoted to full professor in 1969. He served two terms as chair of the department from 1972 to 1975 and again from 1988 to 1991. Hiatt also served roles on Brock Senate and in the Brock University Faculty Association.



Featured Researcher

Feng Li Department of Chemistry & Centre for Biotechnology



What is the primary focus of your research?

My research lab works at the interface of bioanalytical chemistry and DNA nanotechnology. Our goal is to develop novel analytical tools to address meaningful chemical, biological, and biomedical questions. One current research focus is to develop simple, inexpensive, and portable technologies for rapid disease diagnosis and screening at resource-limited environments, such as patient home, doctor's office, remote areas, and impoverished countries or regions.

What inspired your research?

My research was inspired by an old Chinese saying that "One must first sharpen their tools if they are to perfect their work". Also, my favorite molecule is "DNA" and we love to make use of DNA as a unique class of "programmable" material to create new tools and technologies. I am also a big fan of 3D printing. A lot of our ideas in medical device fabrication have been successfully prototyped using 3D printing.

What were some of your key findings?

Some of the recent achievements in my research lab include 1) the

construction of a series of nano-sized DNA-based machines that can detect infectious diseases and drug resistances in liquid biopsies such as human serum samples; 2) the fabrication of low-cost, paper-based analytical devices capable of detecting and quantifying genetic disease markers of soil-transmitted helminth infection, a parasitic disease that affects one third of the world's population; and 3) the development of novel DNA computing elements that can be integrated into large-scale DNA-based artificial neural networks.

What kind of response have you gotten from your study/findings?

Many of our research findings have attracted attention from both the research community and the public. Because of our contribution to the analytical research community, I was recognized as one of the "Emerging Investigators in Analytical Sciences" by *Analyst* (a RSC journal) in 2016 and recently recognized as one of the "Young Investigators in Analytical and Bioanalytical Sciences" by *Analytical and Bioanalytical Chemistry* (a Springer journal) in 2019. I also received an Ontario Early Research Award in 2018. Some of our research work have been featured in local, national and international media, such as Brock News, Newsweek, Popular Science, Lab Manager and

India Today. We have also established extensive research collaborations with researchers nationally and internationally in the fields of chemistry, biology, health science, and biomedical engineering.

What impact do you hope your research will have? Who will benefit?

I hope that we can eventually translate all of our research findings into practically useful technologies that will benefit other researchers and the public. For example, the simple, portable diagnostic platforms currently under development in my lab may bring the sophisticated diagnosis currently performed in centralized laboratories to the bedside of the patients, which will effectively reduce the time to treatment and improve the therapeutic outcome.

Any interesting/significant facts that haven't been covered by the other questions?

Our research program has also led to a health and inspiring training environment. I am very fortunate and proud to have trained and been training a group of very talented students and postdoctoral fellows.

Upcoming Events



Mark Your Calendars

Brock Go-tournament

March 2, 2019

The Brock Go-Club invites everyone to their 9th annual tournament.

More information: brocku.ca/goclub.

Exploring Careers in Biology

March 6, 2019

Students will engage with industry professionals at this round table networking event to gain insight and advice from people who are currently working in the field.

Spring Open House

April 7, 2019

- Tour our beautiful campus
- Visit our exceptional residences
- Meet with faculty, staff and students at our Information Fair
- Attend presentations or Experience Brock opportunities
- On-the-spot admissions for college/transfer students

Scientifically Yours

May 9-10, 2019

Students will learn about career opportunities from professionals who have careers in the sciences, including medicine, university research and industry. Everyone will participate in six science and mathematics projects, gaining hands-on laboratory experience.

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YOUR AD HERE

Need volunteers for an event? Looking to promote your conference? Whatever your advertising needs are we are here to help.

Contact:

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Outreach and Communications Officer

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Call for Nominations

Faculty and staff are encouraged to nominate **Math and Science** alumni for **Distinguished Alumni** and **Distinguished Faculty Graduate Awards**.



These awards are presented annually at the Alumni Recognition Reception at Homecoming weekend.

Distinguished Faculty Graduate Award Faculty of Mathematics and Science

Past Three Winners

David Grimes (BSc '77) Physics
Tony Abou-Asseleh (BSc '01) Computer Science
Peter Putnam (BSc '77) Geology

For more information please visit:
brocku.ca/alumni/recognition/awards

Have a story you want to share?

Send your news to our Outreach and Communications Officer, Devon Gribble, at dgribble@brocku.ca to have your story shared on our communication channels.