

GILLES FONTAINE (1948-2019)



Gilles Fontaine a fait ses études de premier cycle en physique à l'Université Laval (1969). Il a obtenu en 1974 son doctorat de l'Université de Rochester et il fut professeur titulaire au Département de physique de l'Université de Montréal depuis 1977. Il était également titulaire depuis 2000 de la Chaire de

recherche du Canada en astrophysique stellaire.

M. Fontaine fut le récipiendaire de nombreux prix et distinctions, dont le prix Marie-Victorin en 1999, l'un des 14 Prix du Québec décernés annuellement par le gouvernement du Québec, le Prix Carlyle S. Beals en 2000 décerné par la Société canadienne d'astronomie (CASCA), ainsi que la Médaille de l'Association canadienne des physiciens et physiciennes (ACP) en 2016 pour contributions exceptionnelles à la physique, et en particulier pour ses travaux exceptionnels mondialement reconnus dans les études théoriques et d'observation sur les naines blanches et les derniers stades de l'évolution des étoiles, dont d'importants apports à l'équation d'état des naines blanches et les études sur les étoiles compactes pulsantes, ainsi que la découverte d'une nouvelle catégorie de sous-naines pulsantes. Il fut également élu en 1992 Membre de la Société royale du Canada.

Digne héritier de la tradition d'excellence dans le domaine de l'astrophysique au Canada, M. Fontaine s'est distingué sur la scène internationale pour la qualité exceptionnelle de ses travaux de recherche en astrophysique stellaire, particulièrement dans l'étude des phases finales de l'évolution stellaire (étoiles naines blanches et sous-naines), ces produits ultimes de l'évolution stellaire pour la grande majorité des étoiles. Il a non seulement jeté les bases d'une véritable théorie de l'évolution des naines blanches, mais il est aussi un des pionniers de leur utilisation comme cosmochronomètres indépendants des différentes composantes de notre galaxie. Il s'est également imposé comme chef de file dans le domaine de l'astérosismologie, cette méthode unique permettant de sonder la structure interne des étoiles par l'étude de leurs « tremblements d'étoile », en combinant à la fois observations et modélisation numérique. Auteur prolifique, M. Fontaine s'est aussi consacré de façon remarquable à la formation de scientifiques de grand calibre. Ayant bâti une équipe de recherche de renommée mondiale, M. Fontaine a pu attirer plusieurs étudiants étrangers pour les cycles d'études supérieures. Il a démontré de plus d'une façon être un enseignant hors pair et un excellent communicateur. Par ces actions, il a sans aucun doute suscité de nombreuses vocations scientifiques. Mentionnons finalement que l'astéroïde 2010 GF153, découvert

Gilles Fontaine received his undergraduate degree in physics at the Université Laval (1969). He obtained his Ph.D. from the University of Rochester in 1974 and was a tenured professor in the Department of Physics at the University de Montréal since 1977. He also held the Canada Research Chair in Stellar Astrophysics since 2000.

Dr. Fontaine has been the recipient of many awards and distinctions, including the 1999 Prix Marie-Victorin, one of the 14 Québec Prizes awarded annually by the Government of Québec, and the 2000 Carlyle S. Beals Award from the Canadian Astronomical Society (CASCA), as well as the 2016 Medal for Lifetime Achievement in Physics awarded by the Canadian Association of Physicists (CAP), for his pioneering, world-renowned work in theoretical and observational studies of white dwarf stars and the late stages of stellar evolution, including major contributions to the equation of state for white dwarfs and investigations of pulsating compact stars, as well as the discovery of a new class of subdwarf pulsators. He was also elected in 1992 Member of the Royal Astronomical Society of Canada.

A true follower of the tradition of excellence in the field of astrophysics in Canada, Dr. Fontaine has distinguished himself internationally for the exceptional quality of his research in stellar astrophysics, especially for his study on the final phases of stellar evolution (white dwarfs and subdwarfs, the final products of stellar evolution for most stars). Not only did he build the foundations for an actual theory on the evolution of white dwarfs, he is also one of the pioneers who first used them as cosmochronometers independent from the other components of our galaxy. He also became a true leader in the field of astroseismology, the unique method by which we can examine the internal structure of stars by studying their “starquakes”, using observations and numerical modeling. As a prolific writer, Dr. Fontaine has also made a remarkable contribution by training great scientists. By creating a world renowned research team, Dr. Fontaine has encouraged numerous foreign students in pursuing postgraduate education. He has proven in different ways that he is an incredible teacher and a great communicator. With his actions, he has undoubtedly contributed to building scientific vocations. Lastly, it is worth mentioning that the asteroid 2010 GF153, discovered in April 2010 as part of a deep survey of NASA's Wide Field Infrared Explorer (WISE) telescope, is now known as (400811) Gillesfontaine.

en avril 2010 dans le cadre d'un sondage profond du télescope Wide Field Infrared Explorer (WISE) de la NASA, porte désormais le nom de (400811) Gillesfontaine.

Il fut un collègue exceptionnel et un ami cher pour tous ceux qui l'auront côtoyé.

Pierre Bergeron
Université de Montréal

He was an exceptional colleague and a dear friend to all who knew him.

Pierre Bergeron
Université de Montréal

LI-HONG XU (1957–2019)



Dr. Li-Hong Xu, a prominent and devoted member of the Canadian Physics community, passed away on January 21, 2019 after a short battle with cancer. Li-Hong was born on May 2, 1957 in Suzhou in the People's Republic of China. In 1977, Li-Hong was among a small elite group who got into university

where she graduated in physics with highest honours. She was one of only two from her class of 240 graduates chosen to remain in Suzhou University as an assistant professor.

Li-Hong came to the University of New Brunswick in Fredericton in 1988 as a Visiting Scholar. She earned her PhD in molecular spectroscopy in 1992 and continued at UNBF as a post-doctoral fellow in the Centres of Excellence in Molecular and Interfacial Dynamics. Li-Hong received her Diploma in University Teaching in the first cohort of graduates of the Centre for Enhanced Teaching and Learning.

She then joined Dr. J.T. Hougen as a research associate in the Molecular Physics Division of the National Institute of Standards and Technology. In 1995, Dr. Xu returned to New Brunswick and took up a faculty position at the UNB campus in Saint John where she set up a laboratory for high-resolution gas-phase laser spectroscopy of molecules of environmental and astrophysical importance. Her research lab attracted post-doctoral fellows and visiting researchers and students from Belgium, France, Russia, Iran, the Czech Republic, China and the US. A large number of undergraduate summer and work-study students were given a good start on their careers there.

Dr. Xu gained recognition internationally as a valued visitor and collaborator at centres such as NASA/Goddard, the NASA Jet Propulsion Lab, NIST Boulder, the Institute of Applied Physics in Nizhny Novgorod, the Max Planck Institute for Radio Astronomy and the University of Cologne. From 2002-2005, she was a member of the Canadian Institute

for Photonic Innovations and was also a charter member of the Far-Infrared Beam Team at the Canadian Light Source synchrotron in Saskatoon. She served on the Editorial Board of the Journal of Molecular Spectroscopy and on International Advisory Committees for International Symposia and Conferences, receiving invitations for plenary presentations at the 21st HRMS meeting in 2010 in Poznan, Poland, and the 71st ISMS symposium in 2016 in Urbana, Illinois.

In Canada, Dr. Xu was a loyal P.Phys. member of the CAP, serving from 2003-2009 as Regional Councillor for NB/NL and from 2008-2010 as NB Coordinator for the CAP High School Prize Exam. She had a special interest in promoting women in science and from 2011-2014 served as Chair and Past Chair of the CAP Committee to Encourage Women in Physics (CEWIP), which also involved service on the Annual Congress organizing committees. Regionally, from 2009 on, she served on the Science Atlantic Physics and Astronomy Committee. She was on the Canadian national delegations to the International Conferences for Women in Physics in Korea in 2008, in South Africa in 2011, and in Waterloo in 2014 where she was Team Leader and the lead author of the paper, "Women in Physics in Canada". Notably, she was one of the promoters, organizers and invited speakers for the Canadian Conference for Undergraduate Women in Physics. Colleagues saw Li-Hong as "the spirit of CEWIP" and that's how many women in physics, in Canada and abroad, will remember her.

Li-Hong was a member of GSC29 (General Physics) for the 2004-05 NSERC grant competition, and Committee Chair for the subsequent two years. She served on the NSERC 2009-10 Steacie Fellowship Committee and the Physics Evaluation Group 1505 for the 2011-12 Discovery and RTI (Research Tools and Instruments) grants. In 2013 she was appointed Group Chair for Physics and held a seat on the NSERC Committee on Grants and Scholarships (COGS). In this role, she became a familiar figure at the 2014-2016 CAP Congresses with her annual plenary presentations on the granting picture for physics at NSERC.