

CV (short version)

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I. CURRICULUM VITAE

Born : yes
 Place of birth : Québec, Canada
 Nationality : Canadian

I.A University Degrees

PERIOD	DEGREE	UNIVERSITY	SUBJECT
1970-1973	B.Sc.	Université Laval May 1973 (Québec, Canada)	Physics
1973-1974	M.S.	Yale University May 1974 (Connecticut, USA)	Theoretical Atomic Physics
1974-1978	Ph.D.	Yale University May 1978 (Connecticut, USA)	Theoretical Atomic Physics ¹
1979-1986	Dr.rer.nat.habil. ²	Universität Freiburg May 1986 (Freiburg, Germany)	Theoretical Physics

1 : Title of thesis : *Theory of Electron Molecule Interactions : Case Studies* under the supervision of prof. ARVID HERZENBERG

2 : Exceptionally, the German doctorate (Dr.rer.nat.) was awarded together with the Habilitation (habil.), an academic degree beyond the Ph.D. that certifies excellence in teaching and research.

I.B Scientific Career

PERIODE	POSITION	UNIVERSITY
May 1974 - Feb. 1978	Research Assistant	Yale University Department of Applied Science
March 1978 - Aug. 1979	Research Associate	Oxford University Theoretical Chemistry Department Atomic Energy Establishment Harwell Theoretical Physics Division
Sept. 1979 - Sept. 1983	Wissenschaftlicher Angestellter	Universität Freiburg Fakultät für Physik
Oct. 1983 - May 1986	Hochschulassistent	Universität Freiburg Fakultät für Physik

I.B Scientific Career (cont'd)

PERIODE	POSITION	UNIVERSITY
March 1986 - April 1986	Professeur Associé	Université de Bordeaux I Laboratoire des Collisions Atomiques
June 1986 - May 1990	Professeur Agrégé	Université Laval Département de Physique
Oct. 1992 - Sept. 1993	Professeur des Universités <i>(titulaire, 2ème classe)</i>	Université de Bordeaux I Unité de Formation et de Recherche (UFR) de Physique
Sept. 2001 - Aug. 2002	Professeur Associé <i>(full time)</i>	Université Pierre et Marie Curie Unité de Formation et de Recherche (UFR) de Physique
Sept. 2002 - Oct. 2008	Professeur des Universités <i>(titulaire, 1ère classe)</i>	Université Pierre et Marie Curie Unité de Formation et de Recherche (UFR) de Physique
Sept. 2009 - Mai 2011 Sept. 2014 - Dec. 2014	Directeur des programmes de 2ième-3ième cycles	Université Laval Faculté des sciences et de génie Département de Physique, de Génie Physique, et d'Optique
Juin 1990 - Août 2017	Full Professor*	Université Laval Département de Physique, de Génie Physique, et d'Optique
Sept. 2017 -	Affiliated Professor	Université Laval Département de Physique, de Génie Physique, et d'Optique

* Research Years (U. Laval) : Sept. 1992 – Aug. 1993; Sept. 1999 – Aug. 2000; Sept. 2008 – Aug. 2009; Sept. 2015 – Aug. 2016
 Leave of Absence (U. Laval) : Sept. 2001 – Aug. 2003; **Active (!) retirement** since Sept. 2017

II. RESEARCH INTERESTS

(chronological from 1st to last publication in each field)

1975-1981 Theory of electron-molecule collisions

(shape and Feshbach resonances, vibrational and rotational excitation, e-polar molecules scattering)

1980-2001 Theory of ion-atom collisions

(perturbation series (Born and CDW), capture, excitation and ionisation, transport in solids)

1997-now Complex Dynamical Systems

(chaos characterisation and control, time series analysis, dynamical reconstruction)

2001-2006 Optical Orientation Dynamics in Nematic Liquid Crystals**2001-now Physics at the Service of Health**

(studies of dynamical diseases : Parkinson tremors, epilepsy, cardiac arrhythmia ; contact network epidemiology : propagation of infectious diseases, containment and intervention scenarios)

2006-2015 Optical Cavity-based Photonics

(chaos in optical systems, ray-wave dualism, micro-lasers and -sensors, e-m wave propagation and optimization in complex medium)

2015-now Laser Plasma Physics

(e-m wave propagation of femtosecond high-intensity laser pulses, laser induced periodic structures, laser plasma formation in dielectrics)

2008-now Theory of Complex Networks

(propagation dynamics on networks, adaptive networks, co-evolution of networks and dynamical processes, percolation on networks, network growth, communities detection)

More details of our present *Research Activities* and *Publications* can be found on the Web page of our research group DYNAMICA : www.dynamica.phy.ulaval.ca

III. REPRESENTATIVE TEACHING (RECENT PAST AND PRESENT)**undergraduate courses :**

Physique mathématique / MATHEMATICAL PHYSICS

Physique statistique / STATISTICAL PHYSICS

Dynamique nonlinéaire, chaos, et complexité / NONLINEAR DYNAMICS, CHAOS, AND COMPLEXITY

Physique numérique / COMPUTATIONAL PHYSICS

graduate courses :

Séminaire de dynamique moderne / MODERN DYNAMICS SEMINAR

Physique statistique avancée / ADVANCED STATISTICAL PHYSICS

Introduction à l'optique quantique / INTRODUCTION TO QUANTUM OPTICS

Processus stochastiques en sciences de la Nature / STOCHASTIC PROCESSES IN THE NATURAL SCIENCES

Théorie des systèmes complexes / THEORY OF COMPLEX SYSTEMS