SORIN V. SABAU

Contact : Hokkaido Tokai University, Minamisawa, Minamiku, Sapporo, 005-8601, Japan
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Profile ——————————————————————————————————————

Associate Professor at Hokkaido Tokai University in the Computer Science Department, holding a PHD degree in Science (Tokyo Metropolitan University, Japan) and a PHD degree in Mathematics (University Al. I. Cuza, Iasi, Romania) with a number of internationally published research papers and publications.

Research interests include differential geometry, particularly Higher Order Geometries, Finsler Geometry, Differential Geometry of Differential Equations and Life Science, particularly Bioinformatics, and Computational Biology.

Education ——————————————————————————————————————

September 1987 - June 1991

Institution: Babes-Bolyai University, Cluj-Napoca, Romania

Major field: Differential Topology

Degree Received: ***Bachelor of Science in Mathematics (June 1991)***

Institution: Al. I. Cuza University, Iasi, Romania

Major field: Differential Geometry

Degree Received: ***Doctor in Mathematics; June 1998,***

Supervisor Acad. Prof. Dr. Radu Miron

Ph.D. Thesis: " Higher order Finsler spaces. Generalizations and Applications.", (155 pages thesis)

April 1996- March1998

  (*For the above mentioned period I was awarded a Mombusho Scholarship from the Japanese Government)

Institution: Hokkaido Tokai University

Major field: Differential Geometry

1998-2001

Institution: Tokyo Metropolitan University

Major field: Differential geometry (doctor degree course),

Degree received: ***Doctor in Science, specialty Mathematics,***

(March 2001, Supervisor Prof. Dr. Yoshihiro Ohnita)

Ph. D. Thesis: "Path geometries on Finsler manifolds", (186 pages thesis)

Employment History——————————————————————————————————

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1991-1993

Institution: Elementary School No. 29, Brasov, Romania

Position: Instructor of Mathematics

Institution: Transylvania University, Brasov, Romania

Position: Part time instructor

Subject taught: Differential Geometry, Analysis, and Differential Equations

1993-1996

Institution: Transylvania University, Brasov, Romania

Position: Assistant professor

Subject taught: Differential Geometry, Analysis, Linear Algebra, and Differential

Equations, Computer Science

April 1997-June 1997

Institution: Hokkaido Tokai University, Sapporo, Japan

Position: Part time instructor

Subject taught: Differential and Integral Calculus (in Japanese)

March 1999- March 2001

Institution: International Christian University, Tokyo, Japan

Position: Part time instructor

Subject taught: Geometry, Analysis, Linear Algebra, Differential Equations

(in English and Japanese)

April 2000-March 2003

Institution: Hitachi, Ltd., Life Science Group, Tokyo, Japan

Position: Researcher

Subject: Bioinformatics and Computational Biology

June 2001- March 2004

Institution: Tokyo Metropolitan University, Tokyo, Japan

Position: Visiting Researcher

Subject: Finsler spaces of constant curvature, Protein production

Stability

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2003-Present

Institution: Hokkaido Tokai University, Sapporo, Japan

Position: Associate Professor, Dept. of Computer Science, Research
and Education, Research Institute for Earth Environmental studies
Subject: Fundaments of mathematics, Linear algebra, Operating systems
theory, Statistical analysis, Introduction to numerical computational
methods, Introduction to Bioinformatics (master course).
(*All classes taught in Japanese.)

Research Projects————————————————————————————————————

The Geometry of Higher Order Finsler spaces (1997-1998)

Higher Order Relativistic Optics (1995-1998)

Path Geometry on Finsler manifolds (1998-2000)

Gene interaction prediction model (1999-2000)

Cell simulation. Simulation of Drosophila's circadian rhythm (2000-2001)

Cell cycle. Study of cell development by means of Jacobi stability (2001-2002)

Microarray data analysis. Statistical analysis of the gene expression microarray data (2001-2002)

Toxicogenomics project initiative (2003).

Simulation of biological systems. A system biology approach to simulate interaction of TNF-alpha with NFkB and its influence on the gene expression (2003-2004)

Randers metrics of constant flag curvature (2003-2004).

Factor analysis in diabetes. Statistical analysis of metabolic factors in diabete pacients comparative with normal persons, joint work with Paulescu Institute, Bucharest (2004-2005).

Genetic switch. Development of a mathematical model and a simulation software for the gene switch mechanism in *E-coli* and *yeast* (work in progres).

Ascidians development cicle. An analysis of developmental stages of *Ciona intestinalis* using microarrays (work in progres).

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Educational Projects————————————————————————————————

Mathematics in the Genome Era, Special course for High school teachers,

Tokyo University of Science, March 2001

Promotion of Knoppix based education, National project of the Ministry

Of Science and Education, Japan, 2005,

(See http://www.alpha.co.jp/knoppix/osse/case/un htokai/

for a report in Japanese, and http://xcast6.alpha.co.jp/ipa/movie/htokai_interview.mpg

for a project evaluation reportage).

Awards——————————————————————————————————

Hitachi Prize for Excellence, 2001, for the project "Microarray Analysis

software development"

Hitachi Prize for Excelence, 2002, for the project "Toxicogenomics"

Romanian Academy Prize "Gh. Titeica", 2003, for the book "The

Geometry of Hamilton and Lagrange spaces"

Current Memberships—————————————————————————————————

Member of Mathematical Society of Japan

Member of Japan Society for Bioinformatics

Member of Tensor Society

Member of Japanese Society for Finsler Geometry

Personal Information————————————————————————————————

Date of Birth: December 7th, 1967

Nationality: Romania

Marital Status: Married.