

## Curriculum Vitae

**Nume:** Gigel Militaru

**Data si locul nasterii:** 23.06.1966, Corabia, jud. Olt

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### Educatia:

- 1994                      Doctor in matematica, titlu conferit de Universitatea din Bucuresti (UB) pentru teza "*Transfer de proprietati in algebra necomutativa si aplicatii la teoria inelelor graduate*".
- 1989-1990            anul V de specializare (Master) la grupa de "Algebra si Geometrie", Facultatea de Matematica (UB)
- 1985-1989            Facultatea de Matematica (UB)
- 1980-1984            Liceul industrial din Corabia

### Experienta didactica:

- oct. 2002-prezent    **Profesor dr. la Catedra de Algebra, Facultatea de Matematica si Informatica, Universitatea din Bucuresti**
- oct. 1999-oct. 2002    Conferentiar dr. la aceiasi Catedra
- oct. 1996-oct.1999    Lector dr. la aceeasi Catedra
- oct. 1994-oct.1996    Asistent dr. la aceeasi Catedra
- feb. 1991-oct.1994    Preparator la aceeasi Catedra
- sep. 1990-febr.1991    Profesor de matematica la Colegiul National "Sf. Sava", Bucuresti

**Domenii de interes stiintific:** algebre Hopf si grupuri cuantice, module Hopf generalizate, functori Frobenius, coringuri, algebra necomutativa, categorii, inele graduate.

Am peste 30 de articole stiintifice publicate din care **peste 20 sunt publicate/acceptate in reviste cotate ISI. Sunt citat in peste 290 de articole stiintifice**, monografiile sa teze de doctorat publicate in staintate de peste 90 de matematicieni.

### Granturi detinute:

- « Grupuri, grupuri cuantice, coringuri si teoria reprezentarii, programul IDEI – PN II, perioada 2007—2010, Director de proiect nr. 24/28.09.07. Buget 847 666 RON.
- “Hopf algebras in algebras, topology, geometry and physics”, (2001 - 2003) al programului bilateral al guvernelor Flamand si Roman (MTC) am fost co-promotor din partea romana alaturi de domnul Constantin Nastasescu.
- Grant de cercetare al I.N.D.A.M. (*Italia*) la Univ. of Ferrara, (o luna in septembrie 2002):
- Grant de cercetare al *Royal Society London* la Univ. of Walles Swansea (doua luni in 2000)
- Grant de cercetare al *CNR-Italia* la Univ. Ferrar (noiembrie 1999).
- Membru in diverse alte granturi ale CNSIS, Academia Romana.

### Vizite de cercetare la universitati din strainatate:

feb - apr 1995	trei luni bursa de mobilitate individuala <i>Tempus</i> la Free Univ. Brussels obtinuta prin concurs la Uniunea Europeana.
mai - iun 1998	doua luni visiting profesor la Free Univ. Brussels in cadrul grantului “ <i>Hopf algebras and co-Galois Theory</i> ” al guvernelor Flamand si Roman.
nov. 1999	o luna visiting profesor al <i>CNR-Italia</i> la Univ. Ferrara; am tinut un curs de 4 ore / saptamana « Grupuri cuantice »
oct – dec 2000	doua luni grant de cercetare al <i>Royal Society –London</i> la Univ. of Walles Swansea
sep. 2002	o luna visiting profesor al <i>I.N.D.A.M.-Italia</i> la Univ. Ferrara; am tinut un curs de 4 ore / saptamana: „Special classes of functors for generalized modules categories”

*Vizite scurte de cercetare* ( 10-14 zile) la Univ. Antwerp UIA (1996, 1997), Free Univ. of Brussel VUB (2000, 2001, 2002, 2007).

### Prezentari la Conferinte Internationale:

*Unifying crossed and bicrossed products*, Conferinta prezentata la International Conference on Noncommutative Rings and Geometry, Almeria, septembrie 2007..

*Factorization problems for finite groups*, Conferinta prezentata la Al 6-lea Congres al Matematicienilor Romani, Bucuresti, iunie 2007

*The pentagon equation for algebras*, Conferinta prezentata la Conferinta Internationala de Algebra, Venetia, Iunie 2002.

*On the structure of finite Hopf algebras*, Hopf algebras in Noncommutative Geometry and Physics, Brussels, Mai 2002.

*Integrals, quantum Galois extensions and the affineness criterion for quantum Yetter-Drinfel'd modules*, Conferinta prezentata la London Math. Soc. Workshop on Quantum Groups and noncommutative geometry, Queen Mary Univ. of London, Nov 2000.

*Heisenberg double, pentagon equation, structure and classification of finite dimensional Hopf algebras*, Conferinta prezentata la North British Quantum Groups Collectiv Meeting, Univ. of Manchester, Nov. 2000.

*Hopf algebras techniques for solving non-linear equations*, Invited Lecturer la Conferinta Hopf algebras and Quantum Groups, Free Univ. of Brussels, Iunie 1998

*Frobenius type properties for Doi-Hopf modules*, Conferinta prezentata la AMS-Benelux Joint Meeting, Univ. of Antwerp UIA, Mai 1996.

*Quantum Yetter-Drinfel'd modules and Doi-Hopf modules*, Conferinta prezentata la Meeting on representation theory of group algebras, Constanta, Septembrie 1995.

Am prezentat expuneri la seminariile de matematica la urmatoarele Universitatii: Antwerp (1995, 1998), Ferrara (1999, 2002), Swansea (2000), Brussel (VUB, 2007)

**Premii:** "IN HOC SIGNO VINCES" acordat prin concurs de MEN-CNCSIS in anul 2002 la sectiunea Matematica si Stiintele Naturii (fizica, chimie).

**Limbi straine:** engleza (scris/vorbit).

## **Lista de lucrari**

A) **Teza de doctorat** : "*Transfer de proprietati in algebra necomutativa si aplicatii la teoria inelelor graduate*", Universitatea din Bucuresti, octombrie 2004.  
Conducator stiintific : prof. Dr. C. Nastasescu, membru corespondent al Academiei Romane.

### **B) Carti/Monografii publicate:**

[1] *Frobenius and separable functors for generalized module categories and nonlinear equation*, Springer Lecture Notes in Mathematics, 1787 (2002), 354 pagini (cu S. Caenepeel and S. Zhu). ISBN 3-540-43782-7.

[2] *Bialgebras: homology and dequantisation*, Editura Univ. Bucuresti, 1998, 156 pg. (cu D. Stefan). ISBN 973-575-241-7

**C) Articole stiintifice publicate:**

[1] *Rings with finite quotients*, Bull. Math. Soc. Sci. Math. Roumanie, Tome 37(85), Nr. 1-2(1993), 29-39 (wiht Ion D. Ion).

[2] *From graded rings to actions and coactions of Hopf algebras*, Ann. Univ. "Ovidius" Constanta, 2(1994), 106-111.

[3] *When is  $HOM(M,-)$  equal to  $Hom(M,-)$  in the category  $R\text{-gr}$ ?*, Communications in Algebra, 8(1994), 3171-3181 (cu J.L. Gomez-Pardo & C. Nastasescu).

[4] *Extending modules for Hopf-Galois extensions*, Communications in Algebra, 14(1994), 5657-5678 (cu D. Stefan).

[5] *Simple objects in  $(G,A,R)\text{-gr}$* , Communications in Algebra, 10(1995), 3855-3866.

[6] *Functors for relative Hopf modules. Applications*, Revue Roumaine de Math. Pure and Appl., 41(1996), 501-517.

[7] *Crossed coproducts and cleft coextensions*, Communications in Algebra, 4(1996), 1229-1243 (cu S. Dascalescu & S. Raianu). Citat la

[8] *A Maschke type theorem for Doi-Hopf modules. Applications*, Journal of Algebra, 187(1997), 388-412 (cu S. Caenepeel & Shenglin Zhu). Citat la

[9] *Crossed modules and Doi-Hopf modules*, Israel Journal of Mathematics, 100(1997), 221-247 (cu S. Caenepeel & Shenglin Zhu). Citat la

[10] *Coalgebra deformations of bialgebras by Harrison cocycles, coparings of Hopf algebras and double crosscoproducts*, Bull. Belgium Math. Soc- Simion Stevin, 4(1997), 647-672 (cu S. Caenepeel, S. Dascalescu & F. Panait).

[11] *Doi-Hopf modules, Yetter-Drinfel'd modules and Frobenius type properties*, Transactions of the Amer. Math. Soc. 349(1997), 4311-4342 (cu S. Caenepeel & Shenglin Zhu).

[12] *The Hopf modules category and the Hopf equation*, Communications in Algebra, 10(1998), 3071-3097

[13] *New types of bialgebras arising from the Hopf equation*, Communications in Algebra, 10(1998), 3099-3117.

[14] *A class of solutions for the integrability condition of the Knizhnik-Zamolodchikov equation: a Hopf algebra approach*, Communications in Algebra, 27(1999), 2393-2407

[15] *The Long dimodules category and nonlinear equations*, Algebras and Representation Theory, 2(1999), 177-200.

[16] *Separable functors for the category of Doi-Hopf modules. Applications*, Advances in Mathematics, 145(1999), 239-290. (cu S. Caenepeel, Bogdan Ion, S. Zhu).

[17] *The factorization problem and the smash biproduct of algebras and coalgebras*, Algebras and Representation Theory, 3(2000), 19-42 (cu S. Caenepeel, Bogdan Ion, S. Zhu)

[18] *The structure of Frobenius algebras and separable algebras*, K-Theory, 19(2000), 365-402 (cu S. Caenepeel, Bogdan Ion).

[19] *Integrals, quantum Galois extensions and the affineness criterion for quantum Yetter-Drinfel'd modules*, Journal of Algebra, 247(2002), 467-508, (cu C. Menini).

[20] *Doi-Koppinen modules for quantum groupoids*, Journal of Pure and Applied Algebra, 175(2002), 46-62 (cu S. Caenepeel si T. Brzezinski).

[21] *Bialgebroids, x-bialgebras and duality*, Journal of Algebra, 251(2002), 279-294, (cu T. Brzezinski).

[22] *Frobenius functors of the second kind*, Communications in Algebra, 30(2002), 5357-5389, (cu S. Caenepeel si E. De Groot).

[23] *Maschke functors, semisimple functors and separable functors of the second kind. Applications*, Journal of Pure and Applied Algebra, 178(2003), 131-157 (cu S. Caenepeel).

[24] *Heisenberg double, pentagon equation, structure and classification of finite dimensional Hopf algebras*, Journal of the London Mathematical Society, 69 (2004), no. 1, 44—64.

[25] "Frobenius functors of the second kind" (Errata and addenda), [Comm. Algebra 33 \(2005\), no. 12](#), 4735—4736 (cu S. Caenepeel si E. De Groot).

[26] *Naturally full functors in nature*, Acta Mathematica Sinica (Springer) 22(2006), no. 1, 233--250 (cu A. Ardizzoni, S. Caenepeel si C. Menini).

#### **D) Articole stiintifice publicate in volumele unor conferinte internationale**

[27] *Separable functors for the category of Doi-Hopf modules II*, in "Hopf algebras and quantum groups" (Eds. S. Caenepeel and F. Van Oystaeyen), Lectures Notes of Pure and Applied Mathematics, Marcel Dekker, New York, 209 (2000), 69-103 (cu S. Caenepeel, Bogdan Ion, S. Zhu)

[28] *Frobenius and Maschke type theorems for Doi-Hopf modules and entwined modules: a unified approach*, in Ring Theory and Algebraic Geometry (Eds. A. Granja, A. Alonso Hermida and A. Verschoren), Lectures Notes of Pure and Applied Mathematics, Marcel Dekker, New York, 221(2001), 1-32 (cu T. Brzezinski, S. Caenepeel and S. Zhu ).

[29] *The affineness criterion for Doi-Koppinen modules*, in „*Hopf algebras in noncommutative geometry and physics*”, 215--227, [Lecture Notes in Pure and Appl. Math., 239](#), Dekker, New York, 2005 (cu C. Menini).

**G) Alte articole stiinfitice (recenzate MathSci Net)**

[30] *Morita duality and graded rings*, Proc. 9-th National Conference on Algebra, Cluj-Napoca, 1991, 93-98.