

# CURRICULUM VITAE - M.J. GOOVAERTS

**Place of birth** Hoboken  
**Date of birth** 7 april 1946  
**Address** Zeedijk 512-513 ,B8300 Knokke-Heist

**Functions** Professor K.U.Leuven (BELGIUM)  
Extraordinary Professor (Insurance chair of non-life) at the University of Amsterdam (THE NETHERLANDS)

## Degrees

- Mathematics Degree (1968) (Great distinction)
- Aggregaat H.S.O. R.U.G. (1968) (= Post-graduate Teaching Diploma) (Distinction)
- Ph.D. in Mathematics (1971) (Greatest distinction)  
Thesis: Perturbatietheorie in het Pad-Integraal formalisme van de niet-relativistische quantummechanica met toepassing op het waterstofatoom en de harmonische oscillator (Perturbation theory of the path-integral formalism of the non relativistic quantum mechanics with application to hydrogen atom and the harmonic oscillator).
- Actuarial Degree K.U.Leuven (1973) (Great distinction)
- Aggregatie Hoger Onderwijs R.U.G. (1976) (= High Level Teaching Diploma) (Without grades)  
Thesis: Bijdrage tot het pad-integraalformalisme van de niet relativistische quantummechanica (Contribution of the path-integral formalism of the non-relativistic quantum mechanics).

## Honorary Doctor Degree (Ankara University), 6 May, 2008

The honorary degree of the Ankara University was given:  
"In recognition of the fact that he has made outstanding contributions to the science of probability, statistics and mathematics and has applied the theories and methods of these basic sciences in a manner that has had direct influences on human life, and in recognition of his numerous activities that has been of great benefit to scientists, individuals, and societies." (Prof. Dr. Nusret Aras, Rector, Ankara University)

## Honorary Promotor

- Promotor of the honorary degree of Prof. H. Bühlmann (University of Amsterdam), January, 1992
- Promotor of the honorary degree of Prof. H. Gerber (K.U.Leuven), February, 2001

## Fellowships

- For the academic year 1968-1969 he obtained a fellowship of the Francqui-Foundation.
- For the academic year 1969-1970 he obtained a fellowship of the I.W.O.N.L.

## Research Grants

- Apart from some OT-grants from K.U.Leuven and some FWO-Vlaanderen grants he got two major research grants from the Research Council of K.U.Leuven together with Prof. Dr. J. Dhaene (AFI – Faculty of Business and Economics, K.U.Leuven), Prof. J. Beirlant and Prof. J. Teugels:  
GOA 2002/01: Actuarial, financial and statistical aspects of dependencies in insurance and financial portfolios.  
GOA 2007/01: Risk modelling and valuation of insurance and financial cash flows, with application to pricing, provisioning and solvency
- Together with Prof. J. Dhaene, he is chairholder of the Fortis-Chair 2006-2011.

### **Scientific Awards**

- The Winkler Prins Prize Award for Astronomy and Mathematical Physics (1978)
- Royale Belge Award (1979)
- Award organisation of a NATO ASI on Insurance Premiums (1983)
- Award organisation of a NATO ASI on Insurance and Risk Theory (1985)
- Francqui Chair UA (1997-1998)

### **Memberships**

Member of the council of the International Actuarial Association (1987-1996)  
 Vice president of KVBA-ARAB (1987-1991)  
 President of KVBA-ARAB (1992-1995)  
 Corresponding member of Schweizerischer Vereinigung Versicherungsmathematiker  
 Corresponding member of the Instituto Italiano della Actuari  
 IAA Member of the direction committee (1987-1996)  
 Member of the Research Council of K.U.Leuven (1995-2001)  
 Fellow of Tinbergen Institute  
 Lecturer of Duisenberg School of Finance, Amsterdam  
 Member of “Actuarieel Genootschap”, the Netherlands

### **Promotor or co-promotor of several Ph.D students**

1978 P. Van Goethem (docent VUB)  
 1979 N. De Pril (gewoon hoogleraar K.U.Leuven, TEW)  
 1979 R. De Groot (emeritaatsprofessor EW UFSIA)  
 1983 M. Van Wouwe (hoogleraar UA, TEW)  
 1987 R. Kaas (hoogleraar UvA, Fac. Actuarial & econometrie)  
 1987 R. Heijmans (docent UvA)  
 1988 H. Wolthuis (emeritus UvA, Fac. Actuarial & econometrie)  
 1988 B. Heijnen (deeltijds docent UA)  
 1991 A. Van Heerwaarden (deeltijds docent UvA)  
 1992 T. Bauwelinckx (lector K.U.Leuven)  
 1993 A. Steenackers  
 1993 B. Kling  
 1994 L. Teunen  
 1995 A. De Schepper (hoogleraar UA)  
 1996 D. Dannenberg  
 1999 J. Spreeuw (docent Cass Business School, City University London)  
 2003 D. Vyncke (docent UGhent, economic Faculty)  
 2005 G. Darkiewicz  
 2005 S. Vanduffel (deeltijds docent VUB)

2005 R. Laeven (docent U.Tilburg & deeltijds Princeton).

R. Laeven was awarded the “Christiaan Huygens Wetenschapsprijs” (2007) for his thesis “Essays on Risk Measures and Stochastic Dependence” (University of Amsterdam , September, 2005).

2005 M. Decamps

2009 F. Mierzejewski

Forthcoming: Xinliang Chen, Slimane Grine, Zhaoning Shang, Koen Van Weert

## Journals

- Journal of Computational and Applied Mathematics (K.V.I.V. 1975-1982) (North-Holland - 1982 -), Principal editor – Founder together with R. Piessens (K.U.Leuven) and F. Broeckx (UvA)
- Technische Management (De sikkel) Adviesredactie, 1975 -1984
- Bulletin van de Koninklijke vereniging voor Belgische Actuarissen Lid redactieraad, 1979 -1987
- ASTIN Bulletin (E.J. Brill) Member Editorial Board, 1981 - 2008
- Insurance: Mathematics and Economics (North-Holland) Editor - Founder together with H. Gerber (HEC, U. Lausanne), J. Haezendonck\* (UvA), E. De Vylder\* (UCL), 1982
- Insurance: Abstracts and Reviews (North-Holland) Correspondent, 1982 - 1993
- Mathematical Reviews Reviewer 1976 –
- Editor e-journal Elsevier 'Financial Mathematics and Economics' 2002-2005 together with J. Dhaene (K.U.Leuven)

## Books and Proceedings

- North-Holland Insurance Series (1984- ): series editor
- "Insurance Premiums", North-Holland (1984), pp. 406 + XI in cooperation with F. De Vylder & J. Haezendonck
- "Premium calculation in insurance", D. Reidel (1984), pp. 564 + XI editor in cooperation with F. De Vylder & J.Haezendonck (Proceedings of the Nato ASI on Insurance Premiums, held in Leuven 1983)
- "Proceedings of the International Congress on Computational and Applied Mathematics", North-Holland (1985), in cooperation with F. Broeckx, L. Wuytack, R. Piessens (Proceedings of the I.C.C.A.M. meeting, held in Leuven 1984) pp. 1-668 + XVIII (1985)
- “APL, the language and its actuarial applications“, North-Holland (1986) in cooperation with D. Stiers and J. De Kerf.
- "Proceedings of the second International Conference on Computational and Applied Mathematics" July 21-26, 1986 Leuven in cooperation with Broeckx, Piesens, Wuytack (North-Holland).
- "Insurance and Risk Theory" D. Reidel 1986 pp. 487 editor in cooperation with F. De Vylder & J. Haezendonck. (Proceedings of the Nato ASI on Insurance and Risk Theory, held in Maratea 1985).
- “APL, een taal voor rekenkundige toepassingen“, in cooperation with D.J.W. Stiers, F.C.M. Broeckx.

- "Proceedings of the Symposium on Risk Theory" Leuven, July 19-21 (1988), in cooperation with H. Gerber, V. Mammitzsch, J. Haezendonck.
- "Proceedings of the third ICCAM" July 23-28, 1988, Leuven, in cooperation with Broeckx, Piessens, Wuytack, North-Holland.
- "On effective actuarial models" North-Holland Insurance Series, June 1990 in cooperation with R. Kaas, A. Van Heerwaarden, T. Bauwelinckx..
- "Liber Amicorum W. Kok & J. van Klinken, in cooperation with H. Wolthuis, R. Kaas and B. Altling von Gesau.
- "Proceedings of the fourth ICCAM", July, 1990, Leuven, Belgium, in cooperation with Broeckx, Piessens, Wuytack, North-Holland.
- "Reserving and Solvency in the EC", H. Wolthuis, M. Goovaerts, CAIRE Insurance and Finance Series, Ceuterick 1993.
- "Proceedings of the fifth ICCAM", July 1992, Leuven, Belgium, in cooperation with F. Broeckx, R. Piessens and L. Wuytack, North Holland.
- "Ordering of Actuarial Risks", R. Kaas, A.E. Van Heerwaarden, M. Goovaerts, , Caire Education Series 1 pp. 144.
- "Basic Credibility models", D. Dannenburg, R. Kaas, M. Goovaerts, Ceuterick (1996) pp. 153.
- "Proceedings of the sixth ICCAM", July 1994, Leuven, Belgium, in cooperation with F. Broeckx, R. Piessens and L. Wuytack, North Holland.
- "Praktijkgids 1997 Aanvullende bedrijfspensioenen", as editor, in cooperation with T. Bauwelinckx pp. 529.
- "Praktijkgids 1998 Aanvullende bedrijfspensioenen", as editor, in cooperation with T. Bauwelinckx.
- "Proceeding of the seventh ICCAM", July 1996, Leuven, Belgium, in cooperation with F. Broeckx, R. Piessens and L. Wuytack, (1998) (North Holland).
- "Praktijkgids 1999 Aanvullende bedrijfspensioenen", in cooperation with T. Bauwelinckx.
- "Praktijkgids 2002 Aanvullende bedrijfspensioenen", in cooperation with T. Bauwelinckx, pp. 1-829.
- "Modern Actuarial Risk Theory", in cooperation with R. Kaas, M. Goovaerts, J. Dhaene, M. Denuit, Kluwer (2001 December) (fourth edition 2003) and Student edition (2004) translated into Chinese (2007), Russian (2008), Turkish (2010). An earlier version is available in Dutch.
- "Proceedings of the eighth ICCAM, July 1998 Leuven, Belgium in cooperation with F. Broeck, R. Piessens and C. Wuytack (2000) North-Holland
- "Proceedings of the ninth ICCAM, July 2000 Leuven", Belgium, in cooperation with P. Broeck, R. Piessens, L. Wuytack (2002) North-Holland, pp. 1-903.
- "Praktijkgids 2002 Aanvullende bedrijfspensioenen", in cooperation with T. Bauwelinckx.
- "Proceedings of the tenth ICCAM", July 2002 Leuven, Belgium, in cooperation with L. Wuytack and S. Vandewalle (2004) pp. 1-817
- "A Global Framework for Insurer Solvency Assessment", Report of the IAA, pp. 1-179, as member of the working party
- "Actuarial Theory for Dependent Risks", M. Denuit, J. Dhaene, M. Goovaerts, R. Kaas, Wiley (2005) 1-437.
- "Proceedings of the 11<sup>th</sup> ICCAM", July 2004 Leuven, Belgium, in cooperation with L. Wuytack and S. Vandewalle, July 2006.
- "Proceedings of the 12<sup>th</sup> ICCAM", in cooperation with S. Vandewalle and M. Van Daele, July 2006, Leuven, Belgium.
- (verplaatsen) "Modern actuarial risk theory: using R.". Springer. XV+381 pp.
- "Proceedings of the 13<sup>th</sup> ICCAM", in cooperation with S. Vandewalle and M. Vanmaele, July, 2008, Ghent, Belgium.

- "Proceedings of the 14th ICCAM", in cooperation with O. Gebizlioglu, Sept-Oct, 2009, Ankara, Turkey.
- "Modelling and Measurement of Multivariate Risk in Insurance and Finance", C. Genest, H. Gerber, M. Goovaerts, R. Laeven, IME 44 (2009), 2.
- "Selected Papers in Honour of Hans Gerber", M. Goovaerts, R. Kaas, E. Shiu, IME 44

### **Organization of International Congresses**

- 1983 Nato ASI on Insurance Premiums - Leuven, 17-31 July Director (together with J. Haezendonck & F. De Vylder)
- 1984 International Congress on Computational and Applied Mathematics - Leuven, 24-27 July
- 1985 Nato ASI on Insurance and Risk Theory - Maratea (Italy) Director (together with J. Haezendonck and F. De Vylder)
- 1986 2<sup>nd</sup> International Congress on Computational and Applied Mathematics, Leuven, 21-26 July.
- 1988 Symposium on Risk Theory, Leuven, 19-21 July
- 1988 3<sup>rd</sup> International Congress on Computational and Applied Mathematics, Leuven, 25-28 July.
- 1990 4<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven, 23-27 July.
- 1992 5<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven 27 July - 1 August
- 1994 6<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven July, 25 - 30.
- 1995 26<sup>th</sup> Astin Colloquium Leuven
- 1995 25<sup>th</sup> ICA President of the scientific committee (International Congress of Actuaries)
- 1996 Seventh International Congress on Computational and Applied Mathematics, Leuven, July 21-26, 1996.
- 1997 1<sup>st</sup> IME Conference Amsterdam, August 21-24, 1997.
- 1998 8<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven, 25 July - 1 August 1998.
- 2000 9<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven, July 4 – July 30, 2000.
- 2002 10<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven, July 22 – 27, 2002.
- 2002 6<sup>th</sup> IME Conference, Lisbon, member of the scientific committee
- 2002 2<sup>nd</sup> Conference in actuarial Science and Finance, Samos, September, member of the scientific committee
- 2003 First Brazilian Conference on Statistical Modelling in Insurance and Finance, Ubatuba Brasil, member of the Scientific Committee
- 2004 11<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven, July 24-30
- 2004 3<sup>th</sup> Conference in actuarial Science and Finance, Samos, September, member of the scientific committee
- 2005 9<sup>th</sup> IME Conference, Quebec, member of the scientific committee
- 2005 Second Brazilian Conference on Statistical Modelling in Insurance and Finance, Maresias, Brazil
- 2006 10<sup>th</sup> IME Conference, Leuven, chairman Organising committee
- 2006 12<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven, July
- 2006 4<sup>th</sup> Conference in actuarial Science and Finance, Samos, September, member of the scientific committee
- 2007 11<sup>th</sup> IME Conference, Piraeus, member of the scientific committee

- 2009 13<sup>th</sup> International Congress on Computational and Applied Mathematics, Ghent, member of the scientific committee
- 2008 12<sup>th</sup> IME, Dalian, chairman of the scientific committee
- 2009 13<sup>th</sup> IME Conference, Istanbul, member of the scientific committee
- 2009 14<sup>th</sup> International Congress on Computational and Applied Mathematics, Antalya, chairman of the scientific committee
- 2010 15<sup>th</sup> International Congress on Computational and Applied Mathematics, Leuven

### **Member of the Jury of the following scientific awards**

- Winterthur Prize
- Boleslaw Monic Prize Award
- ICA-award Montreal (1992)
- ICA-award Brussels (1995)
- Actuarieel Genootschap (2009)
- Best paper awards (IME Dalian, IME Istanbul, IME Toronto)

### **Visiting Professorships**

- University of Amsterdam (1985)
- ETH Darmstadt (1992)
- University of Hong Kong (2005)
- University of Ljubljana (2005) Honorary title.
- HEC Lausanne (2006)
- Duisenberg School of Finance, Amsterdam (2009)
- Collegio Carlo Alberto, University of Torino (2009)

### **Member of several doctoral committees**

G. van Brussel (Twente U.), Lluís Bermúdez (U. Barcelona), E. Cosette (UCL), E. Marceau (UCL), F. Michaud (HEC Lausanne), D. Stoica (HEC Lausanne), C. Ribas (U. Barcelona), K. Antonio (K.U.Leuven), P. Sercu (K.U.Leuven), S. Ladoucette (K.U.Leuven), D.F. Schrager (U.V.Amsterdam), B. Avanzi (U.Lausanne), N. Smith (U.Lausanne).

### **Professional Activities**

- Head of Actuarial division of K.U.Leuven Research and Development
- Founder of the Actuarial Contact Program (ACP) with insurance industry
- Different projects of applied actuarial research within LRD with several insurance companies and pension funds
- Spin-off activities in the framework of LRD

### **Scientific committee member (see also Organization of International Congresses)**

- 1995 Chairman scientific committee ICA 1995 Brussels
- 1998 – 2010 Member of scientific committee of the IME Conferences of Amsterdam, Lausanne, London, Barcelona, Penn State, Lisbon, Lyon, Rome, Quebec, Leuven, Piraeus, Dalian, Istanbul, Toronto
- Member scientific committee of the Samos meeting on Second Conference on Finance and Actuarial Sciences, September 2002, 20-22, September 2004, 1-7 September

- Member of scientific committee of the First Brazilian Conference on Statistical Modelling in Insurance and Finance, September 1-6, 2003
- Member of the scientific committee of the International AFIR Colloquium, Maastricht, 2003

## Publications

1. M.J. Goovaerts and J.T. Devreese, "Analytic Treatment of the Coulomb Potential in the Path Integral Formalisms by Exact Summation of a Perturbation Expansion", J. Math. Phys., Vol. 13, No. 7, July 1972, pp. 1070-1082 and J. Math. Phys., Vol. 14, No. 1, January 1973, pp. 153.
2. M.J. Goovaerts, J.M. De Sitter and J.T. Devreese, "Numerical Study of Two-Phonon Sidebands in the Optical Absorption of Free Polarons in the Strong-Coupling Limit", Phys. Rev. B, Vol. 7, No. 6, March 1973, pp. 2673-2684.
3. J. Devreese, J. De Sitter and M. Goovaerts, "Theoretical Evidence for the possible Observation of relaxed excited States of Fröhlich Polarons for polar Crystals with  $\alpha > 3$ ", "Solid state Communications", Vol. 9, (1971), pp. 1383-1385.
4. M.J. Goovaerts and J.T. Devreese, "A note on Feynman's Path-Integrals", Physica, 60 (1972), pp. 97-113.
5. M.J. Goovaerts, A. Babenco and J.T. Devreese, "A new expansion method in the Feynman path-integral formalism: Application to a one-dimensional delta function potential", J. Math. Phys., Vol. 14, No. 5, May 1973, pp. 554-559.
6. M.J. Goovaerts and F. Broeckx, "On a generalization of the modified perturbation expansion for the density matrix in path-integral formalism", Physica 62 (1972), pp. 267-277.
7. M.J. Goovaerts and F. Broeckx and P. Van Camp, "Evaluation of the even wave functions of the hydrogen atom in the path-integral formalism", Physica 64 (1973), pp. 47-62.
8. J. Devreese, J. De Sitter and M. Goovaerts, "Optical Absorption of polarons in the Feynman-Hellwarth-Iddings-Platzman Approximation", Phys. Rev B, Vol. 5, No. 6 (1972), pp. 2367-2381.  
J. Devreese, J. De Sitter, M. Goovaerts, "Optical absorption of polarons in the F.H.I.P. approximation", Phys. Rev. Abstracts 2, 16 (1971).
9. J.M. De Sitter and M.J. Goovaerts, "On two inequalities satisfied by Bessel Functions", Simon Stevin, 46e Jaargang (1972-1973) Afl. IV (april 1973), pp. 159-164.
10. C.C. Grosjean and M.J. Goovaerts, "A perturbational calculation relative to the energy states of the linear harmonic oscillator in the path-integral formalism of nonrelativistic Quantum Mechanics", Physica 70, 2 (1973), pp. 243-256.
11. F. Broeckx, M. Goovaerts, "Bayesiaanse statistiek met toepassing op het schatten van parameters", Het Ingenieursblad, Nr. 1-2/1974, pp. 26-29.
12. K.K. Bajaj, M.J. Goovaerts and J.T. Devreese, "Ground State Energy of a Bound Piezoelectric Polaron", Solid State Comm., Vol. 12 (1973), pp. 1197-1199.
13. M.J. Goovaerts, W. Meeusen and J. De Kerf, "Solving the non-homogeneous first order linear differential-difference equation with constant coefficients", Utilitas Mathematica, Vol. 6 (1974), pp. 75-86.
14. C.C. Grosjean, F. Broeckx and M.J. Goovaerts, "Some New Transformation formulae for certain types of integrals with a product of a periodic and a non-periodic function as integrand", Bulletin de la Société Mathématique de Belgique, t. XXV, (1973), pp. 359-388.
15. F. Broeckx, M. Goovaerts, J. Van den Broeck, "On the prior density functions proposed by Jeffreys and Haldane in a Bayesian framework", Belgisch tijdschrift voor statistiek, informatiek en operationeel onderzoek, Vol. 15, No. 1, april 1975, pp. 19-33.

16. M.J. Goovaerts, "Path-integral evaluation of nonstationary Calogero model", *J. Math. Phys.* Vol. 16, No. 3, March 1975, pp. 720-723.
17. P. Breesch, J. De Kerf, M. Goovaerts, "A note on the numerical evaluation of integrals over strongly oscillating functions", *Journ. Comp. Applied Math.*, Vol. I, No. 1 (1975), pp. 47-49.
18. F. Broeckx, M. Goovaerts, "Bayesiaanse Concepten bij het probleem van de estimatie van parameters", *Omega*, Vol. 2, No. 3 (1974), pp. 24-28.
19. M.J. Goovaerts, "A new method for evaluating Gaussian Path-Integrals", *Physica* 77, No. 2, (1974), pp. 379-389.
20. L. D'Hooge and M.J. Goovaerts, "Bayesian Inference in credibility theory", *The Astin Bulletin*, Vol. VIII, part 2 (1975), pp. 164-174.
21. N. De Pril, L. D'Hooge and M.J. Goovaerts, "Continued Fractions as a tool for approximate quadrature formulae", *Liber Amicorum*, H. Florin (1975), pp. 95-107.
22. W. Huybrechts and M.J. Goovaerts, "Optical absorption of piezoelectric polarens", *Solid State Communications*, V17, pp. 1263-1265 (1975).
23. F. Broeckx, L. D'Hooge, M.J. Goovaerts, "An expansion method for a function as a sum exponentials", *Proceedings of the first European Congress on Operations Research* (edited by J.L. Brans), North-Holland, pp. 23 (1975).
24. L. D'Hooge and M.J. Goovaerts, "Numerical Treatment of the determination of a Structure function of a tariff class based on the theory of continued fractions", *Proceedings of the 20th International Congress of Actuaries*, Tokyo, Oct. 1976, Vol. 1, pp. 53-65.
25. M.J. Goovaerts, L. D'Hooge, N. De Pril, "On a class of generalized Convolutions, Part I", contribution to the 12th Astin Colloquium Portimao, Oct. 1975, *Scandinavian actuarial Journal* 1977, pp. 1-30.
26. M.J. Goovaerts, "Bijdrage tot het pad-integraal formalisme van de niet relativistische quantummechanica, met inbegrip van de behandeling van enkele klassieke modellen", *Thesis Aggregaat Hoger Onderwijs*, pp. 1-266.
27. F. Broeckx, L. D'Hooge, M. Goovaerts, J. Vanden Broeck, "Numerical evaluation of bounded Bayesian parameters in case of auto-correlated errors and multicollinearity in Data", *Statistische Hefte*, VII, Nr. 3, (1975), pp. 130-143.
28. N. De Pril, L. D'Hooge, M.J. Goovaerts, "A bibliography on credibility theory and its applications", *Journ. comp. Applied Math.*, Vol. II, No. 1, pp. 55-62.
29. L. D'Hooge, J. De Kerf en M.J. Goovaerts, "Aanpassing van stertetafels door middel van Spine functions", *Het Ingenieursblad*, Nr. 24 (1975), pp. 538-540.
30. M.J. Goovaerts, L. D'Hooge en N. De Pril, "Some new results on infinite divisibility", *Proceedings of the 20th International Congress of Actuaries*, Tokyo, Oct. 1976, Vol. 4, pp. 539-543.
31. F. Broeckx, M. Goovaerts, J. Vanden Broeck, "Numerical estimation of Bayesian parameters involving uniform priors", *Belgisch tijdschrift voor Statistiek, Informatiek en Operationeel Onderzoek*, Vol. 16, Nr. 1, (1976).
32. W. Huybrechts and M.J. Goovaerts, "Free Polaron absorption in piezo-electric semiconductors", *Physica*, 82 B (1976), pp. 216-226.
33. W. Huybrechts, M.J. Goovaerts, J. De Kerf, "Optical absorption by piezo-polarons in an external static electric field", *Sold State Communications*, Vol. 19, pp. 1119-1121 (1976).
34. M.J. Goovaerts, L. D'Hooge & N. De Pril, "On the Infinite Divisibility of the Product of Two  $\Gamma$ -distributed Stochastical Variables", *Applied Mathematics and Computation* 3, pp. 127-135 (1977).
35. W.J. Huybrechts, M.J. Goovaerts and J. De Kerf, "Dependence of the optical absorption by a piezo-electric polaron on an external static electric field", *Physica*, 92 B+C, 1, pp. 33-78 (1977).

36. M.J. Goovaerts, L. D'Hooge, P. Van Goethem, "An analytical Approach to the Generalized Poisson Process in case of claim distributions with infinite skewness", *Mitteilungen der Vereinigung Schweiz. Versicherungsmathematiker Heft*, 1, 77 (1977), pp. 59-69.
37. R. De Groot, J. De Kerf and M.J. Goovaerts, "Algebra der schakelingen", *Eclectica*, 7de Jaargang Nr. 1, pp. 1-84.
38. L. D'Hooge, J. De Kerf, M.J. Goovaerts, "Adjustment of mortality tables by means of smoothing splines", *Bulletin Kon. Ver. Belg. Act.* 71, pp. 78-93 (1977).
39. M.J. Goovaerts and P. Van Goethem, "On a Berry-Esseen theorem for compound Poisson Processes", *Proceedings of the 10th European Meeting of Statisticians*, Leuven August 22-26 (1977), pp. 109.
40. F. Broeckx, M. Goovaerts, J. Van den Broeck, "A Bayesian Approach to some specific business problems". *Revue Belge de Statistique, d'informatique et de recherche opérationnelle*, 17, 2 pp. 1-14 (1977).
41. L. D'Hooge, J. De Kerf, M.J. Goovaerts, "Adjustment of mortality tables by means of smoothing splines", *Proceedings of the Vith International Conference of Social Security Association, Helsinki (1975) Vol. II, pp. IV.b)95 - IV.b/117 (1977)*.
42. M.J. Goovaerts & P. Van Goethem, "On a Berry-Esseen theorem for compound Poisson Processes", *Journal Comp. Applied Mathematics*, 4, 2, pp. 93-100 (1978).
43. M.J. Goovaerts, L. D'Hooge, N. De Pril, "On the Infinite divisibility of the ratio of two gamma-distributed variables", *Stoch. Processes and Applications*, 7, 3, pp. 291-297 (1978).
44. P. Van Goethem and M.J. Goovaerts, "Approximation formulae for compound Poisson processes in case of claim distributions having infinite variance or infinite mean", *Bull. Kon. Ver. Belgische Actuarissen*, pp. 132-143, (1978).
45. P. Van Goethem and M.J. Goovaerts, "Approximation formulae for compound Poisson processes for some kind of claim distributions having a prescribed asymptotic behavior", *Applied Mathematics and Computation*, V 5(4), pp. 243-252 (1979).
46. L. D'Hooge en M. Goovaerts, "Enkele actuariële bedenkingen bij de veralgemeende controle op de aanvullende pensioenstelsels" *Liber Amicorum, Hulpiau*, pp. 263-280 (1978).
47. M. Goovaerts, N. De Pril, L. D'Hooge, "On the infinite divisibility of the ration of two gamma-distributed variables", *Proceedings on the 11th European Meeting of Statisticians, Oslo, August 14-18*, pp. 111 (1978).
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## Key Note Lectures, Lectures and Contributions to Congresses

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17. V.V.A. 26 April 1977, "De betekenis van het bonus-malus systeem in de automobielverzekering".
18. 13th Astin Colloquium Washington 15-21 May 1977,  
- An analytical approach to the generalized Poisson Process in case of claim distributions with infinite skewness.  
- Approximation formulae for compound Poisson processes in case of claim distributions having variance or infinite mean.
19. U.I.A. 26.5, 2.6, 9.6, 16.6.1977, "Over de ontwikkeling van momentgenererende functies voor verdelingen met divergente momenten".
20. 10th European Meeting of Statisticians, Leuven, 22-26.8.1977, "On a Berry Esseen theorem for compound Poisson processes".
21. 11th European Meeting for Statisticians, Oslo, 14-18.1978, "On the infinite divisibility of the ratio of two gamma-distributed variables"; "A Berry Esseen inequality for the stop-loss premium".
22. 14th Astin Colloquium Taormina, 4-7 October 1978.
23. K.V.I.V. 28 February 1979, "Niet parametrische testen".
24. Second meeting of the contact group on Actuarial Sciences, Premium calculation Principles, Leuven, 19.10.1979.
25. Univ. Copenhagen "On a partial ordering among intensities", 11 december 1979.
26. Univ. Oslo, 12-13 december 1979, "On a Berry Esseen inequality for stop-loss premiums"; "On a partial ordering among intensities"; "Edgeworth expansions for claim

- distributions with infinite skewness"; "Upper bounds on stop-loss premiums based on convex analysis".
27. K.V.I.V. 11 February 1980, "Premieberekening en aanverwante problemen".
  28. 16 June 1980, E.T. Zürich, "Some properties of the Swiss premium principle".
  29. 19-26 June 1980, Zürich-Lausanne, 21th J.C.A., "On an extension of some Stop-loss inequalities based on convex analysis".
  30. 12-18 October 1980, Oberwolfach conference on Risk Theory "Upper bounds for ruin probabilities in a new general risk model by the martingales method".
  31. 5 December 1980, Contactgroep Actuarial Sciences, "An attempt to combine credibility theory and premium calculation principles".
  32. 18 February 1981, lasted Symposium on Modelling, Identification and control, "Modelling of Insurance Premiums".
  33. 14 May 1981, Institut des Hautes Etudes de Belgique, "Some remarks on the numerical evaluation of ruin probabilities".
  34. 22 May 1981 "Congrès de la Société Mathématique de Belgique", "On a mixture of Issher Principles".
  35. 30 May.1981, University of Copenhagen, Research meeting in insurance mathematics. "On ordering and danger of claim frequency distributions".
  36. 31 May-4 June 1981, XV Astin Colloquium, Leon, "Some further results on ordering among risks".
  37. 23 July 1981, Hamburg, Ifors '81 meeting. "Some characterization theorems for the exponential premium calculation principle".
  38. 24 August 1981, Montreal, "Stochastic Processes and their Applications, 10th Conference", Upper bounds for ruin probabilities in a new general risk model, by the Martingales methods.
  39. 9 December 1981, Brussels, "Orbel 1", Upper bounds on stop-loss premiums under constraints on claim size distributions as derived from representation theorems for distributions functions.
  40. 7 May.1982, Louvain, "European Meeting on Insurance Mathematics and Economics" On the approximation of the distribution of a heterogeneous risk portfolio.
  41. 1 July 1982, Second Lasted International Symposium on applied modelling and simulation, "Upper and lower bounds on stop-loss premiums in case of known expectation and variance of the risk variables", F. De Vylder, M. Goovaerts.
  42. 19- 25 September 1982, Mathematisches Forschungsinstitut Oberwolfach "Stop-loss dominance".
  43. Rapporteur at the Astin colloquium Liège on premium rating in non-life actuarial work, 26-30.9.1982.
  44. 18 May 1983, Astin Werkgroep Nederland, "Praktische toepas-baarheid van theoretische herverzekeringsformules" (Utrecht).
  45. 18 July 1983, NATO ASI on Insurance premiums, "On ordering of risks" (Leuven).
  46. 28 September 1983, "New trends in Insurance", "The application of risks to insurance problems connected with infinite time ruin probabilities".
  47. XVII Astin Colloquium, A stable recursive algoritm for calculating the ultimate ruin probability.
  48. 11 November 1983, University of Trieste, "Some new results in risk classification", "On the practical applicability of some theoretical premium formulae"
  49. 25 May 1984, Contactgroup Actuarial Sciences, "A characterization of the class of credibility matrices corresponding to a certain class of discrete distributions".
  50. 24-27 July 1984, ICCAM, Leuven, "On the series expansion of certain types of integrals".
  51. E.M.S. Hamburg, September 3-7, 1984, "Premium Principles" (invited lecture).
  52. Oberwolfach meeting on risk theory, September 16-22, 1984, "A characterization of the class of credibility matrices corresponding to a certain class of discrete distributions".

53. Akersloot Astin Symposium (Nederland), 28-29 September 1984,
  - Report on Rate Making.
  - Some numerical results on semi-linear credibility.
  - A note on a formula for profit return.
  - Best bounds for positive distributions with fixed moments.
54. Macquarie General Insurance Meeting, 18-19 October 1984.
  - Application of the problem of moments to derive bounds on integrals with constraints.
  - Ordering of risks and ruin probabilities.
55. 22nd International Congress of Actuaries (Sydney), 22-29 October 1984
  - Dangerous distributions and ruin probabilities in the classical risk model.
  - Claim size constrained bounds on ruin probabilities.
56. 6 February 1985, Utrecht, Actuarieel Genootschap, "Credibiliteit met toepassing op leven en -niet-leven".
57. RUCA, 12 February 1985, Premiestelling bij schadeverzekeringen.
58. Erasmus Universiteit Rotterdam, 2 april 1985, Risico Analyse en onvolledige informatie.
59. Univ. Amsterdam, Inaugurale Rede 22 april 1985, "Actuarieel: Theorie en Toepassingen".
60. University of Amsterdam - Departement of Mathematics
  - 10 May 1985 - Premieberekening in risico-theorie
  - 13 May 1985 - Ordenen van Risico's
  - 20 May 1985 - Optimale grenzen voor integralen met integraalbeperkingen.
61. NATO ASI Maratea - Insurance and Risk Theory, Invited lecture: Application of the problem of moments to various insurance problem in Non-Life.
  - Short communications:
    - Ruin probabilities when exponential moments do not exist.
    - Additivity and premium calculation principles
    - Some numerical methods for calculating semilinear credibility estimators.
    - Probability bounds on compound distributions with given moments on claim severities.
62. 4 October 1985, Management Center Europe. Brussels. "Pensions in the Benelux: Proposed new legislation and its effects".
63. XVIII Astin Colloquium, Biarritz 6-10 October 1985. "Bounds on stop-loss premiums for compound distributions".
64. 31 October. 1985, Fan Universitat Hagen, "Bounds on compound distributions, stop-loss premiums and ruin probabilities".
65. 19 November 1985 "Dotaties aan Pensioenfondsen" in het colloquium "De nieuwe Reglementering" van de privé-pensioenfondsen in België. Wat nu ?" Georganiseerd aan de K.U.Leuven.
66. 21 November 1985 "APL als Actuariële Programmatietaal" in APL. A Programming Language" Sofitel Brussels.
67. 29 April 1986 "Credibility Theory and its applications" University Marburg.
68. 30 April 1986 "Application of ordering of risks to actual calculation of reinsurance premiums" Technische Hochschule Darmstadt.
69. 30 May 1986 Univ. Rotterdam Finbelldag "Verzekeringsmodellen bij onvolledige informatie".
70. 5 June 1986 "Zurich Astin Group" APL and its actuarial applications.
71. 6 June 1986, Univ. de Lausanne "APL: Un langage de programmation actuariel?".
72. 23 July 1986, ICCAM Leuven "The analytical evaluation of Gausman path-integrals".
73. 21 August 1986 Vliebergh-Stencie-Leergang "Pensioensparen" UFSIA Antwerpen.
74. 1-3 September 1986, Darmstadt, IISOR
  - Numerical evaluation of compound distributions
  - Bounds on modified stop-loss premium in case of unimodal distributions
  - Numerical inequalities for tails of compound distributions.
75. 20-24 September 1986 Tel Aviv "Astin Colloquium"

- On the use of Quadpack for the calculation of risk theoretical quantities.
- Some elementary stop-loss inequalities.
- 76. 23 October 1986 "Brugse tandheekkundige kring over pensioen-sparen".
- 77. 15-16 December 1986 "Recent Actuarial Models" Brussels Some actuarial applications in APL.
- 78. 21 January 1986 "Ontwikkelingen in het schade-actuarieel KMG Klynveld Kraayenhof & Co symposium over de nieuwe verslaglegging in Nederland.
- 79. 24 February 1987, KU Leuven - Pensioenformules voor directie, kaders en bedrijfsleiders: een nieuwe lente. Kleine pensioenfondsen.
- 80. 17 March 1987, Erasmus Universiteit Rotterdam. Voorzieningen bij grote schaden.
- 81. 3 April 1987, Financieringsmethoden van private pensioenfondsen. Studiedag "Welke financieringsmethode voor welk pensioenfonds", Leuven.
- 82. 24 April 1987, "Over de grenzen van de verzekeraarbaarheid", Vereniging Verzekeringwetenschap, Utrecht.
- 83. 12 May 1987, "On APL software for credibility theory", APL 87.
- 84. 4 June 1987, "Storm en Verzekering", Studiedag Secura.
- 85. 18 August 1987, "Het nieuwe Belgische bonus-malus systeem", Utrecht, Astin Actieven Nederland.
- 86. 31 August 1987, Astin Colloquium Scheveningen, "Rapporteur subject Rate Making".
- 87. 2 September 1987, Astin Colloquium Scheveningen Risk 1) Aversion and order of underwriting of risks. 2) The numerical evaluation of compound distributions.
- 88. 8-12 September 1987, 12th SOR Passau Invited lecture, "Ordering of risks and practicals insurance models".
- 89. 20-24 September 1987, "Risk Theory Oberwolfach", Recursive calculation of finite time ruin probabilities.
- 90. 25 September 1987, Colloquium Groupe Cumulatif des associations d'actuaire des pays des communautés européennes" Voorzitter.
- 91. 17 March 1988, R.U. Groningen, Colloquium Econometrie: "Actuarieel toepasbare wiskundige modellen".
- 92. 20 April 1988, Bunnik - Astin Groep Nederland "Produktaansprakelijkheid: een credibiliteitsmodel ter meting van de effecten van de nieuwe wetgeving".
- 93. 15 June 1988, City Club of Antwerp "Aktuarieel: een discipline in bruisende evolutie".
- 94. 10 July 1988, IAA congres Helsinki "The security of ruin in case of complete monotone claim distributions".
- 95. 20 July 1988, Leuven, Symposium on Risk Theory, "Credibility in Practice".
- 96. August 21-26, 1988 "Summer School on Risk Theory and Insurance Mathematics".
- 97. October 4, 1988, ASTIN NEDERLAND, 25-jarig bestaan "De praktische toepassing van credibiliteitstheorie".
- 98. 7 March 1988, Colloquium, "Maatschappelijke structuren en solidariteit in verzekeringen. Actuariële metingsmethoden van solidariteit."
- 99. 24 January 1989 "Actuariël Beheer voor niet-actuarissen". Vereniging van Pensioenfondsen.
- 100. 8 September 1989, Zürich, "On some effective actuarial models", Assemblée générale d'Association Suisse des actuaire.
- 101. 10 November 1989, U.L.B. seminar on Pensionfunds, "Les possibilités de l'informatique pour la gestion des fonds de pensions".
- 102. 16 November 1989, New York Astin Colloquium, "An algorithm for multi-level hierarchical model".
- 103. 12 October 1989, Breda, "Alternatieve financieringsmethoden van pensioenfondsen", op studiedag georganiseerd door CONSULTASS BV.
- 104. 3 April 1990, Astin Group, "Optimal Reinsurance Structure", Actuarieel Genootschap (The Netherlands)
- 105. 16-20 April 1990, Lisboa, "A course on Credibility", Formacao de Seguros.

106. 13 June 1990, Knokke Heist, "Stop-loss Premiums", Restin Group, Invited Lecture.
107. 6 September 1990, Knokke, "Seminar on Credibility Theory", Software CRAC, Actuarieel Contact Programma.
108. 8 September 1990, Bern, "Applied Hierarchical Credibility", General Assemblée of the Association of Swiss Actuaries.
109. 10 September 1990, Montreux, "Bounds on Stop-loss Premiums and Ruin Probabilities for Given Values  $\mu$  and  $\sigma$ ", XXII Astin Colloquium.
110. 17 September 1990, Oberwolfach, "Ruin Probabilities", Mathematisches Forsingsintitut Oberwolfach.
111. 3 October 1990, Copenhagen, "Actuarial Applications of Ordering of Risks", University of Copenhagen, Insurance Seminar.
112. 12 October 12, 1990, Brussels, "Tarification Crédit Entreprises", COBAC Internal Seminar.
113. 17-18 October 1990, Brussels, "Life Insurance & 1992", President of the Seminar.
114. 19 October 1990, Antwerp, "Actuariaat voor Niet-Actuarissen", Seminar.
115. 28 March 1991, Paris, "Ordering of Risks and its applications", Invited Lecture GAN-Paris.
116. 24 April 1991, Granada, "A review of the numerical calculation of ruin probabilities by means of recursions", Applied Stochastic Models and Data Analysis.
117. 31 May 1991, Rotterdam, "A recursive evaluation of the finite time ruin probability", Third International Solvency Conference.
118. 29 May 1991, "Effective Actuarial Methods", Oudstudenten-vereniging Actuarieat Leuven.
119. 19 June 1991, De gevolgen van het nieuwe voorgestelde Bonus-Malus Systeem", Studiedag georganiseerd door SURE N.V.
120. 3 July 1991, Astin Colloquium Stockholm, "Maximizing Compound Poisson Stop-loss Premiums numerically with given Mean and Variance".
121. 26-30 August 1991, 9th International Summer School Lausanne, "APL and its actuarial applications".
122. 11-13 September 1991, "Nascholing schade-actuarieat, credibiliteit en veralgemeende lineaire modellen", Renaissance.
123. 9 Januari 1992, Amsterdam Astin Seminar "Bühlmann's bijdrage aan de Actuariële Wetenschap", "A new analytical approach to Solvency and Egalization".
124. 17 februari 1992, Leuven, Contactdag Actuariële Wetenschappen "A stochastic approach to insurance cycles"
125. 20 februari 1992, Amsterdam, Landelijke Econometristen Dag, "Het nut van en het modelmatige hoe van verzekeren".
126. 3 juni 1992, Montreal 24th I.A.A. Congress: "Optimal reinsurance from the viewpoint of the cedent"
127. 20 mei 1992, Utrecht Oasis, "APL bij schadeverzekeringen"
128. 21 mei 1992, Brussel, Journées de statistique, "Estimateurs ponctuels optimaux sous des conditions d'excès nul"
129. 26 mei 1992, U.I Antwerpen Medi-ius, "Actuariele aspecten evaluatie menselijke schade"
130. 25 november 1992, Universiteit Amsterdam, "Egalisation reserves"
131. 3 december 1992, 3e cycle romand de statistique, "The distribution function of annuities certain with random interest rates"
132. 4 december 1992, University of Lausanne, "Loaded credibility premiums"
133. 21-26 March 1993, Monte Verita (Switzerland) 'A Path Integral approach to actuarial problems', Invited lecture
134. 27 april, A.R.A.B - K.V.B.A., (Brussels) 'The distribution of annuities certain with random interest rates'.

135. 3-6 May 1993, Chania, Sixth International Symposium on Applied Stochastic Models and Data Analysis, 'The Laplace transform of annuities certain with random interest rates'.
136. 4-5 June 1993, Lausanne, Colloque Actuariel International, 'Présentation des systmes de tarification en R.C. Automobiles
137. 25-29 July 1993, Astin Colloquium Cambridge.
138. 4-8 September 1993, Prague, 'On the distribution of annuities certain'.
139. 21 September 1993 Schiermonnikenoog, Nascholingscursus Schade-Actuariaat
140. October 18-19, 1993, Copenhagen, 'Asian Life Options'
141. December, 4, 1993, Utrecht, Astin Groep Nederland, Discussions on ICRFS.
142. March, 15, Brussels, 'Distribution of annuities', (presented by L. Teunen)
143. May, 5, 1994, Leuven, 'Application of Neural Networks in the insurance sector'
144. June 21, 1994, Rome, 'Interest Randomness and IBNR methods'.
145. September 11 - 15, 1994, Cannes, ASTIN Colloquium
146. September 18 - 24, 1994, Oberwolfach, 'Stochastic loss reserves based on the separation method'
147. ICA 95, "Evaluation of Interest Randomness due to Growth Factors for Reserving in Liability Insurance".
148. ICA 95, "Evaluation of Randomness due to Growth Factors for Reserving in Liability Insurance".
149. ICA 95, "Distribution of Actuarial Functions with Random Interest".
150. Astin Leuven 95, "A Recursive Scheme for perpetuities with random positive interest rates".
151. Apeldoorn, 17 nov 1995, "Solvabiliteit vanuit theoretisch standpunt", 'Solvabiliteit tegen het licht' - symposium.
152. Amsterdam, 23 februari 1996, "Actuariële methoden voor schadeverzekeringen", Werkgroep Mathematisch Financiering
153. Noordwijk, 25 april 1996, "Europese aspecten in technische benadering pensioenfondsen", Actuariel spitsuurseminar georganiseerd door Zurich Leven.
154. Madrid, IBN meeting 15-16 april 1996, "Actuarial Evolution of non-life in Belgium".
155. Amsterdam, 22 Augustus 1996, "Dependent Riks", Summer School on Ordering of Risks, Group consultatif.
156. Kopenhagen, Sept 1996, "Exact Credibility for weighted observations", Astin Colloquium (Sept 1-5)
157. Amsterdam, 30 september 1996, "Uitdagingen voor het schadeactuarieel", AKE Seminar.
158. Lausanne, 19 december 1996, "Stochastic models for IBNR calculations", Seminar Université Lausanne- Lyon.
159. Breda Studiedag Practis, 9 maart 1997, "Toegepast actuariaat in relatie met informatica".
160. Aarhus, International workshop on the Interplay between Insurance, Finance and Control, 27 Februari 1997, "A straightforward analytical calculation of the distribution of an annuity certain with stochastic interest rate"
161. Brussel- Ced Samson 15 april 1997, "De nieuwste ontwikkelingen inzake pensioenen: een overzicht"
162. Zandvoort, 10 July 1997, Groupe Consultatif Education Seminar
163. Cairns (Australia), Astin Colloquium, 10-13 Aug. 1997, "IBNR reserves under stochastic Interest Rates"
164. Amsterdam, First IME congress, 25-27 Aug. 1997  
 "Solvency margins and equalisation reserves" (F. De Vylder)  
 "The Garch (1,1) Model for the densities of the variances and the mean" (A. De Schepper)  
 "Prediction of claim numbers based on proportional hazard" (J. De Spreeuw)

- 165 FCNA-seminar Financiële Herverzekering, Den Haag 30 sept. '97, Voorzitter Studiedag  
 166 Moscow actuarial conference 28 okt. 1997, "Perpetuities with Positive random interest rates".
- 167 10 dec 1997, Astin Nederland, Utrecht, "Stochastische modellen van IBNR berekeningen.
- 168 9 maart 1998, UIA Francquileerstoel, "Actuariële Wiskunde Retro- en Prospectief, Antwerpen.
- 169 16 maart 1998, UIA Francquileerstoel, "Credibiliteitstheorie en Segmentatie", Antwerpen.
- 170 23 maart 1998, UIA Francquileerstoel, "Actuariële en Financiële modellen", Antwerpen.
- 171 7-12 June 1998, ICA Birmingham, "On the characterization of Wang's class of premium principles".
- 172 20-22 July 1998, IME meeting Lausanne, "Homogeneous risk models with equalized claim amounts".
- 173 ICCAM 98 Leuven, "Supermodular ordering and stochastic Annuities.
- 174 23 September 1998, "Supermodulariteit en financiële modellen", Permanente educatie, Actuarieel Instituut.
- 175 3 November 1998, "Stochastic interest rates and annuities", Actuarial meeting university of Copenhagen.
- 176 7-10 October 1998, "Supermodular ordering and stochastic annuities. ARTIN Colloquium Glasgow.
- 177 30 October 1998, Bijdrage tot het symposium: "Het temmen van risico's in de 21ste eeuw." 50-jarig jubileum Act. Opl. Univ. Amsterdam.
- 178 13 november 1998, "Stochastische in actuarische toepassingen: illustratie op IBNR-berekeningen. Seminarie ACP.
- 179 24 november 1998, "Visual Actuarial Systems: Loss reserving calculations, Studiedag Leuven over Actuarische Software.
- 180 8 maart 1999 "Stochastische annuïteiten AKE Lunch seminar
- 181 10 maart 1999, "Afhankelijkheden bij verzekeringen", Statistische dag Utrecht.
- 182 21 april 1999, "Financieringsmethoden voor pensioenfondsen", Studiedag CED-SAMSON.
- 183 27 april 1999, "Afhankelijkheid van risico's", Permanente educatie AG.
- 184 6 mei 1999, "Afhankelijkheid van risico's met toepassing op IBNR berekeningen", ASLK seminar.
- 185 19-21 juli 1999, "Stochastic upperbounds for actuarial quantities", IME meeting City University London in samenwerking met J.D'Haene.
- 186 22-27 augustus 1999, "Stochastic upperbounds for present value functions", Artin/Afir colloquium Tokyo in samenwerking met J. D'Haene.
- 187 5-11 september 1999, "On the distribution of annuities", Mathematisches Forschungsinstitut Oberwolfach.
- 188 4 november 1999, Lisboa "Modern Actuarial Financial Problem"
- 189 17 november 1999, Utrecht Astin Nederland Impressie Astion Papers
- 190 20 december 1999, London City University Dependencies in Risk Theory
- 191 16 mei 2000, "Studiedag CED SAMSON naar aanleiding verschijnen Praktijkgids Aanvullende Pensioenen. De nieuwe boekhoudkundige normen.
- 192 22-23 juni 2000, Dev. Institute International "Exploiter les meilleurs outils d'évaluation des provisions et engagements".
- 193 24-27 july 2000, "Upper and lower bounds for sums of random variables" IME 2000 Barcelona
- 194 17-19 september 2000 Astin Colloquium Chairman Speakers Corner
- 195 25 januari 2001 Lausanne 3L "The distribution of annuities with random interest-rates"
- 196 13-14 februari 2001 Bloemfontein "Dependencies in Insurance: Financial Applications"
- 197 1 februari 2001 Actuarieel onderzoek en opleiding Academische zitting.

- 198 1 februari 2001 The distributors of present value of cash-flows – in Insurancial Mathematics
- 199 2 februari 2001 Laudatio Honorary Degree for Prof.dr. H. Gerber
- 200 9 July 2001 Washington Astin Colloquium "The valuation of cash-flows for dividend paying securities.
- 201 23 July 2001 Application of comonotone risks: Theory, State College IME International Conference, Keynote
- 202 Schulich School of Business York, Finance Seminar Services 5 September 2001. "Applications of comonotone risks in financial cash-flows"
- 203 AFIR Colloquium 6-7 September 2001 Toronto "Stable laws and the distributions of cash flows"
- 204 Brussels 17 October 2001 Fair Value and Risk based solvency seminar KVBA
- 205 Brussels 29 November 2001 "How to successfully integrate the financial analysis in insurance modeling" DIR
- 206 Lausanne 30 November 2001 3L seminar "Risk measures and allocations of economic capital
- 207 ICA Cancun 17-22 March 2002 Mexico. "Risk and Saving Contracts"
- 208 12 maart 2002 VSAE Actuaríaatsdag Panel "Catastrofes en de overheid"
- 209 9 april 2002: 13th Annual Conference Groupe Consultative Europeen, Issues of Solvency
- 210 AFIR themabijeenkomst 13 mei 2002 Hotel Golden Tulip Figi Zeist. IAA Working party on Solvency
- 211 Eurandom 23-25 May 2002 Eindhoven "Risk measures and economical capital allocation"
- 212 IACA Biennial Conference "The Consulting Actuary in a Changing Environment" Managing risks for insurance companies and pension funds" 24 June 2002.
- 213 Lisbon, IME meeting 2002 Hoedemakers Tom, Beirlant Jan, Goovaerts Marc, Dhaene Jan "Confidence bounds for discounted loss reserves"
- 214 Lisbon, IME meeting 2002 Dhaene Jan, Vanduffel Steven, Goovaerts Marc, Rob Kaas "The hurdle-race problem"
- 215 Lisbon, IME meeting 2002 Goovaerts Marc, Kaas Rob, Dhaene Jan "Economic Capital allocation derived from risk measures"
- 216 Lisbon, IME meeting 2002 "Optimal portfolio selection for cash-flows with bounded capital at risk"
- 217 Lisbon, IME meeting 2002 Goovaerts Marc, De Schepper Ann, Decamps Marc "Transition probabilities for diffusion processes by means of path-integrals.
- 218 ICCAM Leuven July 26, 2002 Decamps, Goovaerts, De Schepper "Transition probabilities for diffusion processes by means of path-integrals"
- 219 Hong Kong December 17-19, 2002 "A unifying approach for Risk Measures"Keynote
- 220 Leuven meeting on Risk Theory, 15 March 2003 "Incoherent aspects of coherence"
- 221 IME 2003 Lyon "Some New Classes of Consistent Risk Measures"
- 222 First Brazilian Conference on Statistical Modelling in Insurance and Finance. Invited Speaker "Consistent Risk Measures" 1-6 September 2003, Keynote
- 223 Afir colloquium Maastricht "Risk Measures vs. Insurance Premiums" 17-18 september 2003
- 224 Jan. 5, 2004 Beijing, Institute of Applied Mathematics, Academica Sinica Beijing "Actuarial Risk Measures"
- 225 Jan. 6, 2004 Beijing, Department of Financial Mathematics Beijing University, Workshop on Actuarial Ordering of Risks
- 226 Jan. 7, 2004 Hangzhou, Department of Mathematics Zhejiang University, Xixi Campus Hangzhou Actuarial Risk Measures
- 227 Jan. 8, 2004 Suzhou, Department of Mathematics Suzhou University, Suzhou Actuarial Risk Measures

- 228 Jan. 9, 2004 Shanghai, Department of Statistics East China Normal University  
Shanghai "A Comonotonic Image of Independence for Additive Risk Measures"
- 229 Jan. 12, 2004 Xi'an, School of Science Xi'an Jiaotong University "Actuarial Risk  
Measures"
- 230 Jan. 15, 2004 Hong-Kong, Department of Statistics and Actuarial Sciences, University  
of Hong-Kong "Actuarial Risk Measures"
- 231 2L, Lausanne, 2004, 5 March "The comonotone image of additivity"
- 232 Athens, IWAP, 2004, 22 March, "Actuarial Risk Measures" Key-note speaker
- 233 Astin Colloquium, Bergen, Norway 2004, 7<sup>th</sup> June "Economic and virtual Economic  
Capital"
- 234 IME-meeting Rome, 13<sup>th</sup> June 2004, A comonotonic image of independence for  
additive risk measures"
- 235 Puebla, Congres on Stochastics and and Applied stochastic Processes, Mexico, 13<sup>th</sup>  
June
- 236 Hong-Kong 28<sup>th</sup> June, Actuarial Risk Measures, Conference on Finance, Actuarial  
sciences and simulation
- 237 Third Samos meeting on Actuarial, financial and Statistical methods, 4<sup>th</sup> September  
2004, Actuarial Risk Measures for financial derivative pricing
- 238 University of Ljubliana 4<sup>th</sup> October: Financial derivative pricing
- 239 2005, Februari 19, Hong-Kong University, Risk measures and decision principles",  
Patrik Poon Lecture
- 240 2005, Lyon, Friday March 4, ISFA: Risk measures and valuation principles
- 241 2005, 2/3/2005 - 9/3/2005 Leerstoel ARAB-KVBA, Brussels
- 242 2005, Darmstadt 27.04.2005, Risk measures and valuation principles
- 243 243, Ljubliana Raziskovalni center Ekonomske fakultete, Decision principles derived  
from risk measures
- 244 2003, May 9-11, Eurandom, Decision principles derived from risk measures;
- 245 IME-meeting Quebec, Universté de Laval, Decision principles derived from risk  
measures
- 246 2005, May 8, Toronto university, Risk measures
- 247 August 22 (2005), University of Sao Paulo "Risk Measures"
- 248 August 24 (2005) University of Bello Horizonte "Application of Risk Measures"
- 249 August 29 (2005) Second Brazilian Conference on Statistical Modelling in Insurance  
and Finance Hierarchical Risk Measures.
- 250 Zurich September 5 (2005) Astin Colloquium Decision Principles derived from risk  
measures
- 251 Ljubliana, 29 sept. 2005, Capital allocation in Insurance companies, on the meeting on  
Risk Management in Insurance and Finance
- 252 M. Goovaerts: "IFRS en prudentieel toezicht" op 'De impact van IFRS op de bank- en  
verzekeringsector: stand van zaken' seminarie 21 feb. 2006, Leuven
- 253 M. Goovaerts, R. Kaas, S. Vanduffel: "Comonotonic approximations for optimal  
portfolio selection" Netspar Feb. 16, 2006.
- 254 M. Goovaerts: "Solvency II: Onvermoede kansen" Financieel Forum Antwerpen, 19  
april 2006, Antwerpen
- 255 M. Goovaerts, J. Dhaene, R. Laeven, G. Darkiewicz: "Can a coherent risk measure be  
too subadditive?" ICA June 1, Paris (2006)
- 256 M. Goovaerts, R. Laeven, R. Kaas: "Worst Case Risk Measurement: Old Ideas and  
new Insight" 21st European Conference on OR, Reykjavik 2-3 July, 2006.
- 257 M. Goovaerts, R. Laeven: "Transition densities for diffusion processes 18-20 July 2006,  
Leuven
- 258 M. Goovaerts & R. Laeven: "On transition densities for general diffusion processes", 4<sup>th</sup>  
conference in Actuarial Science and Finance, Samos, 14-17, 2006

- 259 M. Goovaerts “Risk measurement with equivalent utility principles” April 5, 2007  
University of Pretoria
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