

It is a tradition of our journal to make members of the Editorial Board acquainted with the authors and readers. Now, we introduce our colleague Günter Pilz on the occasion of his 60<sup>th</sup> anniversary. His decisive contribution to the development and progress of near-ring theory has been acknowledged world-wide. His rich career will be presented here briefly, in a condensed style, focusing only on the main events.

We wish Günter Pilz to continue his activity for the benefit of the international mathematical community for many more decades.

The Editors

## BRIEF LIFE AND CAREER HISTORY OF PROFESSOR GÜNTER PILZ

Born on March 19, 1945 in Bad Hall, Austria.

Elementary and Secondary Schools in Linz, Austria. 1963–1967 studies of Mathematics and Physics at the University of Vienna. Dissertation “Über geordnete Kompositionsringe” (supervisor W. Nöbauer). Promotion to Dr. phil. on Dec. 19, 1967.

Married in 1969; 2 children (born in 1971 and 1974).

Interests: javeline throwing, shot put, etc. (winner of the throwers world cup of his age group in 2001), heavy weight lifting, acupuncture.

### Scientific career

1966–68: Wiss. Hilfskraft and Assistant Prof. at the Dept. of Mathematics, Univ. of Vienna.

1968–69: Assistant Prof. at the Dept. of Statistics, Univ. of Technology, Vienna.

1969–70: Research Associate, Dept. of Mathematics, Univ. of Arizona, USA.

1970–74: Assistant Prof., Dept. of Mathematics, Univ. of Linz. Habilitation 1971.

1974– : Professor of Mathematics, Johannes Kepler Univ. of Linz.

1980–83 and 1987–93: Head of the Department of Mathematics, Univ. of Linz.

1996–2000: Dean of Studies, Faculty of Science and Technology.

2000– : Vice Rector for Research at the University of Linz.

2001– : Head of the Austrian Vice Rectors for Research.

**Visiting Professor** (1 semester each) at the University of Louisiana, Texas A& M University, and Univ. of Klagenfurt. Visiting positions (2 weeks – 2 months) at the Mathematics Departments of the Universities in Auckland (New Zealand), Budapest (Hungary), Clausthal (Germany), Edinburgh (Scotland), (Ekaterinburg, Russia), Hobart (Tasmania), Hong Kong (China), Moscow (Russia), Parma (Italy), Stellenbosch (South Africa), Taichung (Taiwan), Teesside (England), and Zibo (P. R. China). Many shorter visits at other places.

**Invited Talks:** “Summer Research Institute”, Hobart, Tasmania, 1981; “Near-rings and near-fields”, San Benedetto, Italy, 1982; “Summer School in Algebra”, Tainan, Taiwan, 1984; “General Algebra”, Salzburg, Austria, 1985; “Frontiers in Mathematics”, College Station, Texas, 1991; “International Conference on Applied Mathematics”, Constanța, Romania, 1995; “World Conference on Geometry”, Graz, Austria, 1995; “Conference on Algebra”, Hong Kong, 1999; Asian-European Conference on Algebra, Tainan, Taiwan, 2001, and many others.

**Publications:** 7 books, almost 80 articles in (refereed) international mathematical journals since 1968, editor and coeditor of 7 Proceedings volumes.

**Honorary Doctorate** (Ekaterinburg, Russia, 2003); Honorary Professorship at the Shandong University of Technology (Zibo, P. R. China), 2004.

**Member** of the Austrian Math. Soc., American Math. Soc. and Edinburgh Mathematical Society.

**Member** of the Editorial Boards of the journals *Mathematica Pannonica* (Austria/Hungary/Italy) and *Algebra and Discrete Mathematics* (Ukraine).

## List of publications

### 1. Books

- 1) Near-Rings; The Theory and its Applications, North-Holland-American Elsevier, Amsterdam, 1977. 2nd (substantially enlarged and updated) edition: 1983.
- 2) Angewandte Abstrakte Algebra, Bibliogr. Inst. Mannheim, 2 volumes, 1982 (with R. Lidl).
- 3) Einführung in die Mathematik, Trauner-Verlag, Linz, Austria, 1981 (7th edition: 1989).
- 4) Algebra – ein Reiseführer durch die schönsten Gebiete, Trauner-Verlag, Linz, Austria, 1984 (2nd edition: 1989).
- 5) Applied Abstract Algebra, Springer-Verlag, UTM-Series, New York, 1984 (Paperback-edition 1985) (with R. Lidl); New Print 1994. 2nd edition 1997; Russian edition (Ural Publications): 1997.
- 6) Endliche Strukturen, Trauner-Verlag, Linz (Austria), 1988.
- 7) The Concise Handbook of Algebra (with A. V. Mikhaev), Kluwer, Dordrecht/Boston/London, 2002.

### 2. Journals etc.

- 0) Ordnungstheorie in Kompositionsringen, Dissertation, Univ. Wien, 1967.
- 1) Ordnungstheorie in Fastringen, Oberwolfach, 1968.
- 2) Über geordnete Kompositionsringe, *Monatsh. Math.* **73** (1969), 159–169.
- 3)  $\Omega$ -groups with composition, *Publ. Math. Univ. Debrecen* **17** (1970), 313–320.
- 4) Geordnete Fastringe, *Abh. Math. Sem. Univ. Hamburg* **35** (1970), 83–89.
- 5) Parallelism in near-rings, *Rocky Mountain J. Math.* **1** (1970), 483–487.
- 6) On direct sums of ordered near-rings, *J. Algebra* **18** (1971), 340–342.
- 7) Über geordnete Faltungshalbgruppen abstrakter Verteilungsfunktionen, *Z. Wahrscheinlichkeitsth. verw. Geb.* **17** (1971), 156–162.
- 8) Characterization of all order relations in direct sums of ordered groups, *Coll. Math.* **23** (1972), 3–8.
- 9) Zur Charakterisierung der Ordnungen in Fastringen, *Monatsh. Math.* **76** (1972), 250–253.
- 10) On the construction of near-rings from a  $Z$ - and a  $C$ -near-ring, Oberwolfach, 1972.

- 11) A construction method for near-rings, *Acta Math. Acad. Sci. Hungar.* **24** (1973), 97–105.
- 12) Primitive near-rings with one-sided zero, *Techn. Report, Univ. Linz*, 1976.
- 13) Free near-rings and  $N$ -groups, *Techn. Report, Univ. Linz*, 1976.
- 14) Completely decomposable near-rings, *Techn. Report, Univ. Linz*, 1976.
- 15) Radicals of related near-rings, *Techn. Report, Univ. Linz*, 1976.
- 16) On the endomorphism near-rings  $E(G)$ ,  $A(G)$  und  $E(G)$ , *Techn. Report, Univ. Linz*, 1976.
- 17) Affine near-rings, *Techn. Report, Univ. Linz*, 1976.
- 18) Prime ideals in near-rings, *Techn. Report, Univ. Linz*, 1976.
- 19) Constructing distributively generated near-rings, *Techn. Report, Univ. Linz*, 1976.
- 20) Modular left ideals of near-rings, *Techn. Report, Univ. Linz*, 1976.
- 21) On the theory of near-rings radicals, Oberwolfach, 1976.
- 22) On the structure of planar near-rings, *Techn. Report, Univ. Linz*, 1977.
- 23) Quasi-anelli: teoria ed applicazioni, *Rend. Sem. Mat. Fis. Milano* **48** (1978), 79–86.
- 24) Near-rings of compatible functions, *Proc. Edinb. Math. Soc.* **23** (1980), 87–95.
- 25) Near-rings of polynomials and polynomial functions, *J. Austral. Math. Soc.* **29** (1980), 61–70 (with Y. S. So).
- 26) Quasi-anelli per tutti, *Proc. Conf. San Benedetto*, III–VII, 1981.
- 27) Polynomial near-rings, *Proc. Conf. San Benedetto*, 193–195, 1981.
- 28) Generalized d.g. near-rings, *Arch. Math.* **73** (1981), 150–153 (with Y. S. So).
- 29) Near-rings of polynomials over  $\Omega$ -groups, *Monatsh. Math.* **91** (1981), 73–76 (with Y. S. So).
- 30) Near-rings and their applications, *Math. Chronicle (Auckland)* (1982), 97–99 (with S. D. Scott).
- 31) Embedding near-rings into polynomial near-rings, *Proc. Edinb. Math. Soc.* **25** (1982), 73–79 (with J. D. P. Meldrum and Y. S. So).
- 32) Near-rings: what they are and what they are good for, *Contemp. Math. (Amer. Math. Soc.)* **9** (1982), 97–119.
- 33) On the structure of near-rings of small order, *Lecture Notes in Computer Science # 144* (1982), 57–64 (with J. Angerer).

- 34) Near-rings and automata, *Proc. Conf. Univ. Alg., Klagenfurt* (1982), 153–162 (with G. Hofer).
- 35) Polynomial algebras and polynomial maps, *Proc. Conf. Univ. Alg., Klagenfurt* (1982), 263–272 (with J. D. P. Meldrum).
- 36) Is the enemy of a friend the friend of an enemy? A note on social networks, to appear (with R. Lidl).
- 37) Universal algebra, automata, and near-rings, *Proc. Conf. Near-Rings and Near-Fields, Harrisonburg, Virginia* (1983), 50.
- 38) Near-Rings of polynomials over groups, *Proc. Edinb. Math. Soc.* **28** (1985), 1–7 (with J. D. P. Meldrum und Y. S. So).
- 39) Ultraproducts and ultralimits of near-rings, *Monatsh. Math.* **100** (1985), 105–112 (with P. Fuchs).
- 40) Near-rings determined by fibered groups, *Arch. Math.* **44** (1985), 311–318 (with C. J. Maxson).
- 41) Near-rings of dynamical systems, *Techn. Report, Univ. Linz*, 1985.
- 42) On separable systems, *Techn. Report, Univ. Linz*, 1985.
- 43) Kernels of covered groups, *Res. d. Math.* **9** (1986), 70–86 (with C. J. Maxson and H. Karzel).
- 44) Near-rings and non-linear dynamical systems, in: *Near-rings and near-fields* (ed.: G. Betsch), North-Holland Publ. Comp., Amsterdam, 1987, 211–232.
- 45) On the structure of tame near-rings, *J. Austral. Math. Soc.* **50** (1991), 316–319 (with H. E. Heatherly)
- 46)  $H$ -integral near-rings, *Math. Pannon.* **3** (1992), 43–50 (with H. E. Heatherly and H. Olivier)
- 47) Simple subrings of matrix rings, *Linear and Multilinear Algebra* **21** (1987), 271–275 (with C. J. Maxson).
- 48) Kernels of covered groups, II, *Res. Math.* **16** (1989), 140–154 (with C. J. Maxson).
- 49) Algebraische Gleichungssysteme über universellen Algebren, *Techn. Report, Univ. Linz*, 1986 (with H. Hule).
- 50) Equations over abelian groups, in: *Contributions to general algebra 4*, Teubner, Stuttgart–Wien, 1987, 197–212 (with H. Hule).
- 51) Strictly connected group automata, *Proc. Royal Irish Acad.* **86A** (1986), 115–118.
- 52) What near-rings can do for you, in: *Contributions to general algebra 5*, Teubner, Stuttgart–Wien, 1987, 11–29.
- 53) Equations over varieties of abelian groups, *Sitzungsber. Österr. Akad. d. Wissenschaften, Math-naturw. Kl.* **196** (1987), 389–398 (with H. Hule).

- 54) Direct products of varieties, in: *Contributions to general algebra 6*, Teubner, Stuttgart–Wien, 1987, 111–116 (with H. Hule).
- 55) Endomorphisms of fibered groups, *Proc. Edinburgh Math. Soc.* **32** (1989) 127–129 (with C. Maxson).
- 56) Near-rings; 5 lectures, *2<sup>o</sup> Sem. Alg. non. Comm., Siena*, 1987, 1–35.
- 57) A new density theorem for primitive near-rings, *Proc. Intern. Conf. on Near-rings and Near-Fields, Tübingen*, 1985; Thales Verlag, Essen, 1995 (with P. Fuchs).
- 58) Codes from planar near-rings, *IEEE Transactions on Information Theory* **36** (1990), 647–651 (with P. Fuchs and G. Hofer).
- 59) Codes, Block Designs, Frobenius Groups, and Near-Rings, in *Combinatorics '90* (ed.: A. Barlotti), North-Holland, Amsterdam 1992, 471–476.
- 60) Near-rings generated by semi-endomorphisms of groups, *Contributions to General Algebra 7*, Hölder–Pichler–Tempsky/Teubner, Wien/Stuttgart, 1991, 159–168 (with Y. Fong).
- 61) On rings for which homogeneous maps are linear, *Proc. Amer. Math. Soc.* **112** (1991), 1–7 (with P. Fuchs and C. J. Maxson).
- 62) On polynomial near-ring codes, *Contributions to General Algebra 8*, Hölder–Pichler–Tempsky/Teubner, Wien/Stuttgart, 1992, 221–226.
- 63) Strange polynomial near-rings, *Contributions to General Algebra 9*, Hölder–Pichler–Tempsky/Teubner, Wien/Stuttgart, 1995, 257–260.
- 64) Near-rings have many connections to Computer Science, *Analele Șt. Univ. Constanța* **3** (1995), 157–166.
- 65) Near-rings and near-fields, in *Handbook of Algebra* vol. 1, North-Holland, Amsterdam (ed.: M. Hazewinkel); 1996, 463–498.
- 66) Categories of near-rings, *Proc. Conf. Near-rings and Near-fields, Hamburg 1995*, Kluwer 1997, 373–375.
- 67) Homomorphisms of groups I. Distributive and d.g. near-rings, (with G. F. Birkenmeier and H. E. Heatherly), *Communications in Algebra* **25** (1997), 185–211.
- 68) Embedding distributive near-rings in endomorphism near-rings (with G. F. Birkenmeier and H. E. Heatherly), *Proc. Conf. Near-rings and Near-fields, Hamburg 1995*, Kluwer 1997, 199–210.
- 69) Rings with FZP, *Transactions of the Amer. Math. Soc.* **349** (1997), 1269–1283 (with P. Fuchs und C. J. Maxson).

- 70) The Useful World of One-Sided Distributive Systems, in: *Contemporary Mathematics*, Vol. 264, American Math. Society, 2000, 127–138.
- 71) Applications of Semigroups, *The Concise Handbook of Algebra*, A.17, Kluwer Academic Publishers, Dordrecht, The Netherlands, 66–70, 2002 (with L. N. Shevrin and P. G. Trotter).
- 72) Near-Rings and Near-Fields, *The Concise Handbook of Algebra*, C.47, Kluwer Academic Publisher, Dordrecht–Boston–London, 322–326, 2002.
- 73) Applications of Rings, *The Concise Handbook of Algebra*, C.55, Kluwer Academic Publishers, Dordrecht–Boston–London, 350–354, 2002.
- 74) Groups in 2D/3D vision problems, *The Concise Handbook of Algebra*, E.9, Kluwer Academic Publishers, Dordrecht–Boston–London, 409–411, 2002 (with K. Kanatani).
- 75) Boolean Algebras, *The Concise Handbook of Algebra*, F.6, Kluwer Academic Publishers, Dordrecht–Boston–London, 432–436, 2002 (with C. J. Maxson).
- 76) Constructions in Universal Algebras, *The Concise Handbook of Algebra*, G.1, Kluwer Academic Publishers, Dordrecht–Boston–London, 451–455, 2002 (with V. A. Artamonov)
- 77) Linear Codes over fields, *The Concise Handbook of Algebra*, I.3, Kluwer Academic Publishers, Dordrecht–Boston–London, 526–530, 2002.
- 78) A survey on polynomials and polynomial functions, *Proceedings of The Third International Algebra Conference, Chang Jung University, Tainan, Taiwan*, in Y. Fong, L.-S. Shiao, E. Zelmanov, Kluwer, 2003, 1–16 (with E. Aichinger).

### 3. Editor of

*Proc. Intern. Conf. on Near-Rings and Near-Fields (Linz, 1991)*, Hölder–Pichler–Tempsky and Teubner, Wien and Stuttgart, 1992.

### 4. Coeditor of

*Near-Ring Newsletter* (up to now, 21 editions), with H. E. Heatherly (Lafayette, USA), A. Oswald (Teesside, England) and Y. Fong (Taiwan).

*Proc. Intern. Conf. on Near-Rings and Near-Fields (Tübingen, 1985)*, North-Holland Publ. Comp., with G. Betsch (Tübingen, BRD).

*Proc. Intern. Conf. on Near-Rings and Near-Fields (Tübingen, 1989)*, Thales-Verlag, Essen, 1995, with G. Betsch and H. Wefelscheid.

*Proc. Intern. Conf. on General Algebra 9 (Linz, 1994)*, Hölder-Pichler-Tempsky and Teubner, Wien and Stuttgart, 1995, with H. Kaiser und W. Müller.

*Proc. Intern. Conf. on Near-Rings and Near-Fields (Fredericton, 1993)*, Kluwer, Dordrecht, 1995, with H. E. Bell, Y. Fong, W. F. Ke, and G. Mason.

*Proceedings of the Conference on Near-Rings and Near-Fields, Stellenbosch, South Africa, July 9-16, 1997*, 2001, with Y. Fong, C. Maxson, J. Meldrum, A. van der Walt, and L. van Wyk, ISBN: 0-7923-6706-5.