

## **LIST OF PUBLICATIONS (\*\* indicates student author)**

### **TEXT-BOOKS**

- (1) Schwab, E. D., Silberberg, G., **(2003)**. Problems in Finite Group Theory. (pp. 90 pgs). Tempe, Arizona: Scholargy-Tempe.
- (2) Schwab, E. D., Schwab, E. H., **(1997)**. Algebraic Structures. Modules. Homological Methods. (pp. 201 pgs.). Crican, Romania
- (3) Schwab, E. D., **(1994)**. Algebraic Structures. Rings. (pp. 103 pgs). Multiprint, Romania

### **BOOK (in preparation)**

- (4) Schwab, E. D., **(2012)**. Mobius Categories and Combinatorial Inverse Monoids.  
[http://www.math.utep.edu/lecture\\_notes/](http://www.math.utep.edu/lecture_notes/)

### **JOURNAL ARTICLES PUBLISHED (IN PRESS)**

- [1] Schwab, E. D., **(2012)**. The Reduced Clifford Category of the Kachel Semigroup on n Letters (in press) *To appear in Journal of Algebra and its Applications*
- [2] Schwab, E. D., **(2012)**. The Free Monogenic Inverse Semigroup and the Bicyclic Multiplication (in press). *To appear in Annales des Sciences Mathématique du Québec*
- [3] Schwab, E. D., Schwab, E., **(2011)**. Quantum Logic, Dagger Kernel Categories and Inverse Baer\*-Categories (in press). *To appear in Order / Springer, published online at*  
<http://www.springerlink.com/content/100324/?Content+Status=Accepted>
- [5] Schwab, E. D., **(2011)**. Binary Matrices as Morphisms of a Triangular Category. *Journal of Combinatorics and Number Theory.*, vol 3 ( no.2), 113–122.
- [6] Schwab, E. D., Stoianov, G.\*, **(2011)**. A Dirichlet Analogue of the Free Monogenic Inverse Semigroup via Mobius Inversion. *Rocky Mountain Journal of Mathematics*, vol 41 ( no.5), 1701 - 1710.
- [7] Schwab, E. D., Macedo, A.\*, **(2011)**. Maximal elements and their group-like set. *Annals. Computer Science Series, Tibiscus University*, vol 9 (No.1), 107-114.
- [8] Schwab, E. D., **(2010)**. On Fibonacci and Thue-Morse Words. *Journal of Automata, Languages and Combinatorics*, vol 15 (no.3/4), 285-295.
- [9] Schwab, E. D., **(2010)**. Generalized Arithmetical Functions of Three Variables. *Int. Journal of Number Theory*, vol.6 (no.7), 1689-1699.
- [10] Schwab, E. D., **(2010)**. On Incidence Algebras of Combinatorial Inverse Monoids. *Communications in Algebra*, vol.38 (no.5), 1778-1789.
- [11] Schwab, E. D., **(2009)**. The Möbius Category of a Combinatorial Inverse Monoid with Zero. *Annales des Sciences Mathématiques du Québec*, vol.33 (no.1), 93-113.
- [12] Schwab, E. D., **(2009)**. A partial order on bipartite graphs with n vertices. *Annals. Computer Science Series, Tibiscus*, vol 7 (no.1), 315-324.
- [13] Schwab, E. D., Bede, B., Nobuhara, H., Rudas, I.J., **(2009)**. Approximation by Shepard type pseudo-linear operators and applications to Image Processing. *Int. Journal of Approx. Reasoning, Elsevier*, 50, 21-36.
- [14] Schwab, E. D., Haukkanen P., **(2008)**. A unique factorization in commutative Möbius monoids. *Int. Journal of Number Theory, World Scientific*, vol.4 (no.4), 549-561.

- [15] Schwab, E. D., Mendez, O., Popescu, L., **(2008)**. Inner Separation Structures for Topological Spaces. *Balkan Journal of Geometry and its Appl*, vol 13(no.2), 59-65.
- [16] Schwab, E. D., **(2008)**. Strictly Increasing Sequences of Integers and the Möbius Inversion Formula. *JP J. of Algebra, Number Th.& Appl.*, vol 11 (no.1), 1-14.
- [17] Schwab, E. D., **(2008)**. The Möbius Category of a Semilattice of Groups. *Italian Journal of Pure and Appl. Math*, 24, 121-134.
- [18] Schwab, E. D., Romero E.\*, **(2006)**. On the Combinatorial Inverse Monoid  $IO_3$ . *Anale Univ. Tibiscus*, vol.4 (tome 1), 213-227.
- [19] Schwab, E. D., Romero E.\*, **(2005)**. Abstract Möbius-Division Categories are Reduced Standard Division Categories of Combinatorial Inverse Monoids. *Anale Univ. Tibiscus*, vol.3 (tome 1), 21-29.
- [19] Schwab, E. D., **(2004)**. Characterizations of Lambek-Carlitz Type. *Archivum Mathematicum*, 40 (no.3), 295-300.
- [20] Schwab, E. D., **(2004)**. Möbius Categories as Reduced Standard Division Categories of Combinatorial Inverse Monoids. *Semigroup Forum, Springer-Verlag*, 69, 30-40.
- [21] Schwab, E. D., **(2004)**. The Möbius Category of Some Combinatorial Inverse Semigroups. *Semigroup Forum, Springer-Verlag*, 69, 41-50.
- [22] Schwab, E. D., **(2003)**. On Triangular Categories. *Houston Journal of Mathematics*, 29 (no.1), 25-40.
- [23] Schwab, E. D., Schwab, E., **(2002)**. The Inverse Baer-Category of a Chain, *Radovi Matematicki*, 11, 7-11.
- [24] Schwab, E. D., Silberberg, G., **(2001)**. The Valuated Ring of the Arithmetical Functions as a Power Series Ring. *Archivum Mathematicum*, vol.37 (no.1), 77-80.
- [25] Schwab, E. D., Silberberg, G., **(2000)**. A Note on Some Discrete Valuation Rings of Arithmetical Functions. *Archivum Mathematicum*, vol.36 (no.2), 103-109.
- [26] Schwab, E. D., **(1999)**. Bemerkungen mit bezug auf die Anzahl der zyklischen Untergruppen von gegebener Ordnung im Falle einer endlichen Gruppe. *Bul. St.of Univ. "Politehnica" - Timisoara*, 44 (58)(1), 1-6.
- [27] Schwab, E. D., **(1999)**. Characterization of A-multiplicative functions via the Haukkanen's functions,. *Journal of Natural Sciences and Mathematics*, vol. 39 (no.1), 1-5.
- [28] Schwab, E. D., **(1998)**. Complete multiplicativity and complete additivity in Möbius Categories. *Italian Journal of Pure and Applied Math.*, 3, 37-48.
- [29] Schwab, E. D., Silberberg, G., **(1998)**. Über die Anzahl der zyklischen Untergruppen gegebener Ordnung im Falle einer endlichen Gruppe. *Nieuw Archief voor Wiskunde*, vol. 16 (IV), 143-151.
- [30] Schwab, E. D., Silberberg, G., **(1997)**. Aplicatii ale teoriei numerelor in studiul grupurilor finite (Applications of number theory in the study of finite groups). *Seminar Arghiriade / Univ.of Timisoara*, 28, 1-22.
- [31] Schwab, E. D., Schwab, E., **(1996)**. Multiplicativite dans les categories de Möbius. *Bull. for Appl Math./Budapest*, 147-164.
- [32] Schwab, E. D., **(1996)**. Regular convolutions and A-additive arithmetical functions. *Pure Math and Appl.*, vol.7 (no.1-2), 183-190.
- [33] Schwab, E. D., **(1995)**. Dirichlet product and completely additive arithmetical functions. *Nieuw Archief voor Wiskunde, Vierde serie Deel/Amsterdam*, vol. 13 (no.2), 187-193.
- [34] Schwab, E. D., **(1994)**. On a completely additive incidence functions. *Pure Math. and Appl.*, vol.5 (no.2), 201-204.
- [35] Schwab, E. D., **(1994)**. On completely multiplicative incidence functions in triangular categories, *Analele Univ. Oradea. Vol 4*, pp. 30-32.

- [36] Schwab, E. D., (1993). On Regular Convolutions, *Analele Univ. Oradea.vol 3*, 16-21
- [37] Schwab, E. D., (1993). Multiplicative and Additive Elements in the Ring of Formal Power Series, *Pure Math and Appl.,vol 4*, (no.3), 339-346.
- [38] Schwab, E. D., (1992). Completely Additive Incidence Functions , *Analele Univ. Oradea.vol 2*, 124-127
- [39] Schwab, E. D., (1991). Completely Additive and Discriminative Convolutions, *Analele Univ. Oradea.vol 1*, 143-148
- [40] Schwab, E. D., (1990). Total Additivity and Summation Function. *Seminar Arghiriade/Univ. of Timisoara*, 25, 1-7.
- [41] Schwab, E. D., Toth, L., (1990). On Some Elementary Number Theoretic Inequalities Involving the Dirichlet Convolution. *Seminar Arghiriade/Univ. of Timisoara*, 24, 1-5.
- [42] Schwab, E. D., (1989). Asupra functiei de sumare a unei functii aritmetice (On the Summation Function of an Arithmetic Function). *G.M./Bucharest*, 9, 321-325.
- [43] Schwab, E. D., Schwab, E.,(1989). Elements multiplicatifs d'une algebre incidente. *Seminar Arghiriade / Univ.of Timisoara*, 18, 1-27.
- [44] Schwab, E. D., Schwab, E., (1988). Arithmetic Convolution. Applications in Combinatorics. *Seminar Arghiriade / Univ.of Timisoara*, 17, 1-8.
- [45] Schwab, E. D., (1988). Egy szamelmeleti fuggveny osszegezo fuggvenyerol, (On the Summation Function of an Arithmetic Function). *Matematikai Lapok 11-12*, 426-429.
- [46] Schwab, E. D., Schwab, E.,(1988). Produsul Dirichlet al functiilor aritmetice (The Dirichlet Product of Arithmetic Functions). *G.M. Metod/Bucharest*, 3, 120-124.

## CONFERENCE PROCEEDING

- [47] Schwab, E. D., Bede, B., Nobuhara, H., (2007). Multichannel Image Decomposition by Using Pseudo-Linear Harr Wavelets. (pp. IV17-IV20). San Antonio, Texas: Proceeding of 2007 IEEE International Conference on Image Processing.
- [48] Schwab, E. D., Schwab, E.,(2002). Pullbacks and Pushouts in Triangular Categories. (pp. 253-260). Proceedings of the Algebra Symposium, "Babes-Bolyai" University of Cluj-Napoca, Romania.
- [49] Schwab, E. D., (1996). Incidence algebra of a triangular category and calculus of fractions. (pp. p.171). Combinatorics'96, Assisi, Italy.
- [50] Schwab, E. D., (1992). Definitions equivalentes de la multiplicativite dans les algebras incidents reduites. (pp. 109-114). Proceedings of the Conference on Algebra, Univ 'Babes- Bolyai'of Cluj- Napoca, Romania,18-20 Sept. 1991.
- [51] Schwab, E. D., Schwab, E., (1989). Cyclic Subgroups of the Group of Multiplicative Arithmetic Functions. (pp. 127-132). Proceedings of the Algebra Conference University of Brasov, Romania, 1989.

## OTHER PUBLICATIONS (Including Not Peer Reviewed)

- [52] Schwab, E. D., (2005). Characterizations of some class of formal power series via Möbius categories of full binomial type. (vol. CO/0501271 v1 18). ArXiv:math..
- [53] Schwab, E. D., (1989). On the Equality  $\sigma(n) + \varphi(n) = nd(n)$ . *R.M.T.*, 20, 43-45.
- [54] Schwab, E. D., (1987). Produsul Dirichlet al functiilor aritmetice. Aplicatii (The Dirichlet Product of Arithmetic Functions. Applications). *R.M.T.*, 2(8), 15-19.

- [55] Schwab, E. D., Schwab, E., **(1986)**. Functii aritmetice multiplicative (Multiplicative Arithmetic Functions). (vol. 35). Timisoara: Caiete metodico-stiintifice / Univ. Timisoara.
- [56] Schwab, E. D., Schwab, E., **(1986)**. Numere pitagoreice si inele factoriale (Pythagorean Numbers and Factorial Rings). (vol. 36). Timisoara: Caiete metodico-stiintifice / Univ. Timisoara.

#### **JOURNAL ARTICLES SUBMITTED**

- [57] Schwab, E. D., **(2012)**. Inverse Semigroups Generated by Group Congruences. The Möbius Function. *Semigroup Forum*.
- [58] Schwab, E. D., **(2011)**. Lawvere intervals and the Möbius function of a Möbius category. *Discrete Mathematics and Applications*.