Experts' comments on "gradually varied surfaces:"

(1997) The email letter from Pawlak, the founder of Rough Sets:

"Thank you very much for your kind letter and the reprint of your paper on gradual variation." "I am convinced that this is very important issue both philosophically and practically."

"From the philosophical point of view it seems to me that idea of continuity, or in other words the concept of a real number, is not understood fully yet and the example of rough continuity (or gradual variation confirm this. There is kind of contradiction between how we think (real numbers) and how we measure and compute (rational numbers). We cannot measure or compute with real numbers. Thus it seems that there is a gap between how we think and how we compute or measure."

"Of course the applications of gradual variation for image processing, control, measurement is of great importance, but I guess that the philosophical problems here is also important."

Professor Zdzislaw Pawlak was with Institute of Theoretical and Applied Informatics Polish Academy of Sciences ul. Batycka 5 44 100 Gliwice, Poland. See **J. F. Peters and A. Skowron, "**Zdzislaw Pawlak life and work (1926–2006)," Information Sciences, Volume 177, No 1, 2007, Pages 1-2 .

****

(2004) The email letter from Zadeh, the founder of Fuzzy Logic.

"I looked at chapters 8 [Ch8 gradually varied functions, in Li Chen, Discrete Surfaces and Manifolds, 2004] and l0 but made no attempt at following your exposition in detail since your theory extends beyond my competence. But what is quite obvious is that your ideas are original and highly interesting. Please accept my congratulations."
"P.S. I am taking the liberty of donating your book to our Math Library."

Lotfi A. Zadeh
Professor in the Graduate School, Computer Science Division
Department of Electrical Engineering and Computer Sciences
University of California
Berkeley, CA 94720 -1776
****

Experts' comments on "Discrete Surfaces and Manifolds:"

(2005) The email letter from Goodman, one of the founders of Discrete and Computational Geometry:

"Thank you for giving me an opportunity to look into your book. Judging by its table of contents at least, it looks like a very complete and authoritative treatment of digital topology."

Jacob E. Goodman
Department of Mathematics
The City College of CUNY
138th Street and Convent Ave. NAC 8133

New York, NY 10031

****

Experts' comments on "the definition of digital manifolds:"

REVIEW FOR SOLID MODELING '93

Second ACM/IEEE Symposium on Solid Modeling and Applications

Date sent: 11/11 Date due: ~~November 30~~, 1992. Extended to December 19, 1992

Paper Number: 125PB

Title: A Note on Digital Manifolds

Author(s): Chen & Zhang

Please summarize the major previously unpublished scientific contributions reported in this paper? (Please include the PAPER AND REFEREE NAME on each additional page.)

The problem of a simple, intuitive, and tractable definition of discrete manifolds (mainly 3D discrete surfaces) is very important for Computer Science. The authors give the first one with such properties. It is the only possible, in my opinion, because it has a real analog and can be defined in the theory of Khalimsky and Kovalevsky (not adressed in the paper), and expected properties. The authors give the basic properties of the manifolds only. Improvements are possible, e.g. "disjoint union" instead of "union" in the theorems 3.1 and 3.2. There are too much errors and some obscurities. English is wrong.

ADDITIONAL INFORMATION REQUIRED ON REVERSE

Please circle your choices and provide the appropriate justifications, comments, and editorial suggestions on separate pages. Specifically, please suggest reorganization, cuts, additions, or changes to the title or abstract, if necessary; point out theoretical flaws; and provide complete references to relevant uncited previous work. **(Please include the PAPER AND REFEREE NAME on each additional page.)**

THE REPORTED ORIGINAL RESULTS ARE:
Very important – Possibly Useful -- Marginal -- Useless

THE PAPER WILL APPEAL TO:
The Community – Most Attendees -- Few Specialists – No One

THE NOVEL TECHNIQUE OR SOLUTION PROPOSED IN THE PAPER IS:
Break Through – Elegant – Correct But Not Interesting -- Wrong

THE TECHNICAL CONTENT OF THE PAPER IS:
Flawless and Complete – Incomplete – Missing – Wrong

THE STYLE, LENGTH, ENGLISH, AND PAPER ORGANIZATION IS:
Excellent -- Acceptable – Require Revisions – Requires Major Rewrite

REFERENCES TO PREVIOUS WORK ARE:
Illuminating – Sufficient – Incomplete -- Inadequate

WOULD YOU ACCEPT THE PAPER (WITH MINOR MODIFICATIONS):
Absolutely – Probably -- Reluctantly – No
with major rewrite

IF NOT ACCEPTED AS A REGULAR PAPER, WOULD YOU ACCEPT THE PAPER FOR A POSTER SESSION:
Absolutely -- Probably -- Reluctantly – No A regula paper or nothing

Number of comment and explanation pages attached: 0

Please Fax or send express mail a hard copy of this form with the additional pages, BEFORE NOVEMBER 30, 1993 to [illegible]

****

Experts' comments on the "generating algorithm for the check matrix of Hsiao-Codes:"

Dear Dr. Stallings,

I am teaching Section 5.2 of your book COA: Error Correction. I was so surperised that the most popular code for error correction of Memory is still SEC-DED code (single error correction and double error detection).

I have worked on how to generate the check matrix twenty years ago when I was a college student. I published my work five years later in 1986. I searched the Internet and found there are still some interests in generating the check matrix. There are some AI based algorithms that are proposed.

It is my pleasure to tell you and other related researcher. There is an optimum algorithm that can generate the matrix. There is no need to have an approximation algorithm.

The paper was reviewed by ZBL (German Math Abstract).

Li Chen, An optimal generating algorithm for matrix of equal-weight column and quasiequal-weight row, Journal of Nanjing Institute of Tech, 2(1986). pp 1-7.

The algorithm is an elegant algorithm. If you are interested, I would like to send you a copy.

Li Chen

Thank you. I would be interested. You can mail it to me at the address below
--
William Stallings
P. O. Box 2405
Brewster, MA 02631

> Just for your information, I have found an optimum algorithm to generate
> the check matrix of odd-column-weight Hsiao codes. The paper was in
> Chinese. If you have a Chinese student, I could mail a copy to you. The
> paper was reviewed by ZBL (German Math Abstract).
>
> Li Chen, An optimal generating algorithm for matrix of equal-weight
> column and quasiequal-weight row, Journal of Nanjing Institute of Tech,
> 2(1986). (Zbl, In Chinese)

Thank you very much for the information. Sounds like you did some nice work. I wish we were aware of it earlier. I would be interested to get a copy of the paper if you are willing to mail it. My address is below.
Thank you very much.

- Nur

Prof. Nur A. Touba
Department of Electrical & Computer Engineering
University of Texas, Austin, TX 78712-1084
(512) 232-1456
==========

****

Experts' comments on "Digital surfaces:"

IAPR Newsletter Mentions Li Chen's Research Work

An email was sent by Dr. Kovalevsky about his recent book "Geometry of Locally Finite Spaces". A reviewer wrote a review in IAPR

Newsletter, Volume 30, Number 4, October 2008.
(http://www.iapr.org/members/newsletter/Newsletter08-04/index_files/Page387.htm.)
The International Association for Pattern Recognition (IAPR) is a major international association related to Computer Science, Artificial Intelligence, and Applications.

The reviewer has written "In conclusion, Kovalevsky's book is interesting and important, and I am sure that it will have to be studied seriously. However, I would like to note that it could have been even more integrated in the context of actual research. For example, although deduced or motivated in other ways as by Kovalevsky, parts of the topological approach to topology and geometry, have been independently developed by other authors; for example by Khalimsky, Kopperman, Meyer, Kong, (Julian) Webster, Kronheimer, to mention just a few. Various works, strongly related to the topological approach to digital topology, are not mentioned or cited in Kovalevsky's book. We have also no mention of Gabor Herman's book "Geometry of Digital Spaces" (Birkhäuser Boston, USA, 1998), and of the works of Li Chen, in relation to the modeling of surfaces. The reader of Kovalevsky's book can get the impression that the topological approach is the unique reasonable one to develop digital topology. Nevertheless, recently several new investigation lines have appeared within the development of digital topology and geometry, based on structures distinct from graphs and topological spaces, for example, on lattices, domains and matroids."

****

Experts' comments on "lambda-connectedness"

Zbl 0817.68137

Chen, Li; Cheng, Heng-Da; Zhang, Jianping

Fuzzy subfiber and its application to seismic lithology classification. (English)

[J] Inf. Sci., Appl. 1, No.2, 77-95 (1994). ISSN 1069-0115

Let $\Sigma\sb N$ be an N-dimensional discrete space. A fuzzy (N,n) subfilter is defined as a mapping $f : \Sigma\sb N \to [0,1]\sp n$. In particular for $N = 2$ and $n = 1$, the concept reduces to a 2D fuzzy set (relation). Basic operations on fuzzy subfibers are defined and resulting structures investigated. The key idea of an λ-connectedness is introduced in the context of image segmentation viz. an identification of pixels of similar characteristics. Some λ-connected segmentation algorithms are proposed and analyzed with respect to their time complexity. A detailed application of fuzzy subfibers to lithology classification in oil-gas exploration is also presented. [W.Pedrycz (Winnipeg)]

****

Experts' comments on the related work on "fuzzy relation equations"

Peeva, Ketty. Fuzzy Relational Calculus : Theory, Applications and Software.
River Edge, NJ, USA: World Scientific Publishing Company, Incorporated, 2005.
http://site.ebrary.com/lib/udclibrary/Doc?id=10173954&ppg=106

……

Chen, L. and Wang, P. P. (2002). Fuzzy relation equations (I): the general and specialized solving algorithms, Soft Comput. 6, pp. 428 435.
……..

Fuzzy Relational Equations.

The most important results for fuzzy relational equations are presented in [Chen and Wang (2002), De Baets (2000), Di Nola et al. (1989), Drewniak (1989), Higashi and Klir (1984), Klir and Yuan (1995), Miyakoshi and Shimbo (1986), Pappisand Sugeno (1985), Peeva (1992), (2002b), Sanchez (1976), (1982)]. Investigations concern the greatest solution, solvability, complete solution set, algorithms and software for inverse problem resolution. Some of them are still open problems.
[Pappis and Sugeno (1985)] formulated inverse problem resolution for max ? min fuzzy relational equations.
The book by [Di Nola et al. (1989)] gives the first systematic approach to fuzzy relational equations. An up-to-date presentation is proposed now by De Baets in Chapter 6 of the book by [Dubois and Prade (2000)], including a thorough and extensive research of the analytical methods for solving FRE, as well as various methods, from analytical to these with neural networks and genetic algorithms. An overview of the theory and applications of fuzzy relational equations is presented in [Pedrycz (2000)].

The most representative results for FRE are given in [Chen and Peng (1988), Chen and Wang (2002), Cuninghame-Green (1979), Czogala et al. (1982), De Baets (1995), (2000), Di Nola et al. (1984), (1987), (1988), (1989), (1991a), Di Nola and Sessa (1983), (1988), Drewniak (1984), (1989), Fang and Li (1999), Friedman et al. (1998), Gottwald and **Pedrycz** (1988), Han and Sekiguchi (1992), Higashi and **Klir** (1984), Hirota and Pedrycz (1996), (1999), Imai et al. (1997), (1998), Klir et al. (1997), Klir and Yuan (1995), Lettieri and Liguori (1984), (1985), Miyagi et al. (1997), (1998), Miyakoshi and Shimbo (1985), (1986), (1987), Neundorf and Bohm (1996), Pappis and Adomopoulos (1991), (1992), Pappis and **Sugeno** (1985), Pedrycz (1988), (1990a), (1990b), (1993), (2000), Peeva (1992), (2001b), (2002b), Peeva et al. (2000), Perfilieva and Tonis (1997), (2000), Ross (1995), Saha and Konar (2002), **Sanchez** (1976), (1977a), (1977b), (1979), (1982), Santos (1972a), Sessa (1989), Shi (1987), Stamou and Tzafestas (1999), Turunen (1987), Wang et al. (1984), Xu et al. (1982)].
Peeva, Ketty. Fuzzy Relational Calculus: Theory, Applications and Software.
River Edge, NJ, USA: World Scientific Publishing Company, Incorporated, 2005. p 93.

….