



Bull. Pure Appl. Sci. Sect. E Math. Stat.
42E(1), 67–71 (2023)
e-ISSN:2320-3226, Print ISSN:0970-6577
DOI 10.48165/bpas.2023.42E.1.9
©Dr. A.K. Sharma, BPAS PUBLICATIONS,
115-RPS-DDA Flat, Mansarovar Park,
Shahdara, Delhi-110032, India. 2023

Bulletin of Pure and Applied Sciences
Section - E - Mathematics & Statistics

Website : <https://www.bpasjournals.com/>

Professor Cai Wen's extenics (*A Letter to the Editor-in-Chief*) *

Florentin Smarandache^{1,†}

1. Department of Mathematics, Physical and Natural Sciences Division,
The University of New Mexico, 705 Gurley Ave., Gallup, NM 87301, USA.

1. E-mail: ✉ smarand@unm.edu

I had the chance and honor to meet Prof. Dr. Cai Wen (1941 - 2021), the founder of Extenics, in the summer of 2012, at the Guangdong University of Technology (GDUT), Institute of Extenics and Innovative Methods, in Guangzhou, P. R. China, where I was invited by Dr. Xingsen Li to do research on Extenics about solving contradictory problems in science. I have passed a wonderful time in China (17 May–15 August, 2012) presenting and listening to many scientific presentations on Extenics and their applications in various fields of knowledge, and studying new papers and book provided to me on this topic and visiting the wonderful and very modern cities of Guangzhou, then of Hong Kong and Macao which were not very far off. Professor Cai Wen was a kind man, very friendly and very smart, popular to the students and to the faculty from the university. That summer I published two books, one on the science, called *Extenics in Higher Dimensions*, Guangdong University of Technology, Guangzhou, China, 112 pp., 2012,

<http://fs.unm.edu/Extenics-book.pdf>,

and another one, a diary in Romanian language about my Chinese visit and research, called *Extensica. Fotojurnal instantaneu din Canton [Extenics, Instantaneous Photo Diary from Canton]*, AdSumus & Centrul Judetean pentru Conservarea si Promovarea Culturii Traditionale Bihor, Oradea, Romania, 171 pp., 2012, <http://fs.unm.edu/ExtensicaFotojurnal.pdf>, where I included many photos of Prof. Cai Wen, Li Weihua, Li Zhiming (Lucas), Li Jianming, Prof. Yang Chunyan, Dr. Xingsen Li, etc. Then, two years later, on 26-27 August 2014, Prof. Dr. Cai Wen, Dr. Xingsen Li, and Prof. Dr. Yang Chunyan had visited the University of New Mexico (UNM), Gallup Campus, United States, where I teach mathematics. I was happy to wait for them at the Albuquerque Sunport International Airport and bring them 140 miles to the Gallup City, New Mexico State. The UNM-G amphitheater was crowded, there were students and faculty staying even outside the amphitheater and listening to Prof. Cai Wen's presentation on Extenics. I had announced to the whole campus about this scientific visit of the Chinese delegation.

At the beginning, as a host, I introduced the foreign visitors and I gave a general explanation on Extenics and its many applications. Professor Cai Wen spoke in Mandarin and Dr. Xingsen Li translated to English.

Then I brought them to visit the Red Rock Canyon, near Gallup, New Mexico State, to admire the color and formation of the rocks in this area. They took many photos.

It was a pleasant encounter. Below there are my contribution to the advances and applications on the Extenics.

* Communicated, edited and typeset in Latex by *Lalit Mohan Upadhyaya* (Editor-in-Chief).
Received January 17, 2023 / Revised March 24, 2023 / Accepted April 11, 2023. Online First Published on June 18, 2023 at <https://www.bpasjournals.com/>.

[†]Corresponding author Florentin Smarandache, E-mail: smarand@unm.edu



Fig. 1: From left to right: Prof. Dr. Li Weihua, Prof. Dr. Florentin Smarandache, Prof. Dr. Cai Wen, Prof. Dr. Yang Chunyan, and a student.



Fig. 2: Prof. Dr. Cai Wen (in the middle) with his translator Dr. Xingsen Li (in the extreme right) at the University of New Mexico, Gallup Campus, USA.



Fig. 3: Prof. Dr. Cai Wen (in the left) with Dr. Xingsen Li (in the right) in the Conference Room, University of New Mexico, Gallup Campus, USA.



Fig. 4: Audience listening to Prof. Dr. Cai Wen in the Conference Room, University of New Mexico, USA.

Several of my publications, presentations, editorial work, and an award on Extenics

1. Editors: Wen Cai, Chunyan Yang, Florentin Smarandache, Luigi Vladareanu, Qiaoxing Li, Guangtian Zou, Yanwei Zhao, Xingsen Li, *Extenics and Innovation Methods, Proceedings of the International Symposium on Extenics and Innovation Methods*, Beijing, P. R. China, 16-18 August 2013, CRC Press / Balkema, Imprint of Taylor & Francis Group (Boca Roca – USA, London – U. K., New York – USA, Leiden – Netherlands), 335 pages, 2013.
2. Florentin Smarandache, *Extenics in Higher Dimensions*, by Guangdong University of Technology, Guangzhou, China, 112 pp., 2012.
3. Florentin Smarandache, Mihai Liviu Smarandache, *Generalizations in Extenics of the Location Value and Dependent Function from a Single Finite Interval to 2D, 3D, and n-D Spaces*, in *Extenics and Innovation Methods / Proceedings of the International Symposium on Extenics and Innovation Methods*, Beijing, P. R. China, 16–18 August 2013, editors: Wen Cai, Chunyan Yang, Florentin Smarandache, Luigi Vladareanu, Qiaoxing Li, Guangtian Zou, Yanwei Zhao, Xingsen Li, CRC Press / Balkema, Imprint of Taylor & Francis Group (Boca Roca – USA, London – U. K., New York – USA, Leiden – Netherlands), pp. 31-36, 2013; and in *Octogon Mathematical Magazine*, Brasov, Vol. 21, No. 1, April 2013.
4. Florentin Smarandache *Generalization of the Dependent Function in Extenics for Nested Sets with Common Endpoints to 2D-Space, 3D-Space, and generally to n-D-Space*, Critical Review (A Publication of Society for Mathematics of Uncertainty), Center for Mathematics of Uncertainty, Creighton University, USA, Vol. VII, 16-23, 2013; and in *Octogon Mathematical Magazine*, Brasov, Vol. 20, No. 2, 487-495, October 2012.
5. Florentin Smarandache and Victor Vladareanu, *Applications of Extenics to 2D-Space and 3D-Space*, Proceedings of the 6th International Conference on Software, Knowledge, Information Management and Applications (SKIMA 2012), Chengdu University, China, 9-11 September 2012.
6. Florentin Smarandache, *Generalizations of the Distance and Dependent Function in Extenics to 2D, 3D, and n-D*, Global Journal of Science Frontier Research (GJSFR) [USA, U.K., India], Vol. 12, Issue 8, pp. 47-60, 2012; and in *Progress in Physics*, Vol. 3, pp. 54-61, 2012; and in *Octogon Mathematical Magazine*, Vol. 20, No. 2, October 2012.
7. V. Vladareanu, O. I. Sandru, Mihnea Moisesescu, Florentin Smarandache, Hongnian Yu, *Modelling and Classification of a Robotic Workspace using Extenics Norms*, Annual Symposium of the Institute of Solid Mechanics, SISOM 2015, Robotics and Mechatronics. Special Session and Work Shop on VIPRO Platform and RABOR Rescue Robots, Romanian Academy, Bucharest, 21-22 May 2015.
8. Florentin Smarandache, Mihai Liviu Smarandache, *Generalizations in Extenics of the Location Value and Dependent Function from a Single Finite Interval to 2D, 3D, and n-D Spaces*, International Symposium on Extenics and Innovation Methods, Beijing, P. R. China, 16-18 August 2013.
9. Florentin Smarandache, Stefan Vladutescu, *Extension Communication for Solving the Ontological Contradiction between Communication and Information*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, August 8th, 2012.
10. Florentin Smarandache, *Extension Transformation Used in I Ching*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, August 2nd, 2012.
11. Florentin Smarandache, *Generalization of the Dependent Function in Extenics for Nested Sets with Common Endpoints to 2D-Space, 3D-Space, and generally to n-D-Space*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, July 19th, 2012.

12. Florentin Smarandache and Victor Vladareanu, *Applications of Extenics to 2D-Space and 3D-Space*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, June 11th, 2012; and at The 6th International Conference on Software, Knowledge, Information Management and Applications (SKIMA 2012), Chengdu University, China, 9-11 September 2012.
13. F. Smarandache, *Generalizations of the Distance and Dependent Function in Extenics to 2D, 3D, and n-D*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, June 4th, 2012.
14. Florentin Smarandache, Stefan Vladutescu, *Extention Communication for Solving the Ontological Contradiction between Communication and Information*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, August 8th, 2012.
15. Florentin Smarandache, *Extension Transformation Used in I Ching*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, August 2nd, 2012.
16. Florentin Smarandache, *Generalization of the Dependent Function in Extenics for Nested Sets with Common Endpoints to 2D-Space, 3D-Space, and generally to n-D-Space*, Guangdong University of Technology, Institute of Extenics Research and Innovative Methods, Guangzhou, China, July 19nd, 2012.
17. Chinese Association of Artificial Intelligence, *Distinguish Achievement in Extenics Honorary Membership*, awarded to Florentin Smarandache, Guangzhou, Guangdong Province, China, 14 August 2012.