FLANNIG©

FUZZY LOGIC AND NEURAL NETWORK INTEREST GROUP

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Our First Year
Looking Forward (and Backward)

As 1993 draws to a close, the FLANNIG membership must feel proud of our first year of existence. At our initial meeting, held in February, we gave ourselves a name, decided on our structure, and elected officers. We also decided that our first speaker should be none other than the inventor of fuzzy logic, Dr. Lotfi Zadeh. Our first formal meeting, held in April, was attended by over 100 people who turned out to hear Dr. Zadeh's philosophical words on approximate reasoning and the nature of uncertainty. Our May meeting hosted Boeing's Dr. Tom Caudell giving a fascinating talk on applications of neural networks at Boeing. In June, Buster Greene gave an introduction to genetic algorithms. After summer break, our own secretary, Tyler Folsom, spoke on vision in biological systems. In October, we broke from the standard meeting format of hosting a speaker, and held a rather lively roundtable discussion featuring a panel of 5 fuzzy logic practitioners from industry, moderated by Dr. Bob Marks from the University of Washington. Based on this success, we will host a roundtable talk on neural networks in '94.

Our final speaker of 1993 was Professor Jenq-Neng Hwang from the University of Washington, speaking on practical issues of back-propagation learning.

In addition to this program of activities, we have positioned ourselves for a prosperous future. Our coffers are full, and we have secured funding from the Local IEEE Section as well as from the Neural Networks Council of IEEE (our parent body.) These funds are in addition to the funds provided by our $10 annual membership fee.

So, as we look to 1994, we can plan an exciting program. Indeed, several activities are already set. Our January meeting will host Dr. Mike Healy of Boeing speaking on artificial life. In February, Dr. Hammerstrom of Adaptive Solutions, Inc. will speak. Our May meeting will feature Dr. George Klir, world renowned fuzzy logician. In addition, 1994 will see another roundtable discussion.

The rest of the schedule is wide open and we will have a newly elected executive committee giving its energy, enthusiasm and its own perspective to the group. If you want to have your say on what gets planned, get involved! Come to the December election meeting, give your inputs, or best yet, run for Office.

—Colin Wiel

Our Next Speaker

Wednesday, Dec 15
Executive Elections

Wednesday December 15, 1993
6:30 Meeting Time
Round Table Pizza
5111 25th NE, Seattle

To prepare for the next year of activities, we will hold elections for officers of FLANNIG. Positions will be open for chairperson, treasurer, secretary, and newsletter editor. As an added incentive, the meeting will be conducted at Round-Table pizza in Seattle. (Parking is available, so don't let that deter you!) We look forward to involving a new set of officers in FLANNIG. Take advantage of our successes and add your influence to this interest group.

January 1994
Dr. Mike Healy

Dr. Healy works for Boeing and will discuss Artificial Life.

February 1994
Dr. Hammerstrom

Dr. Hammerstrom is cheif technical officer of Adaptive Solutions, Inc. ASI builds the worlds fastest neurocomputer, the CNAPPS.

Watch the IEEE DataLink for the dates of these talks.
For more information contact Tyler Folsom at 543-2176, 545-7228, or 872-9500. His e-mail address is: *tfolsom@maxwell.ee.washington.edu*

Roundtable Brings Fuzzy Logic Into Focus

We recently conducted a roundtable discussion of applying fuzzy logic to real life problems. ***Dr. Bob Marks*** of the University of Washington lead the questioning of the five member panel. The experience of our panel members ranged from creating software to explore fuzzy logic to making hardware embedded fuzzy systems, and from control systems of large manufacturing kilns to the braking of airplanes. The panel members, with the direction of Dr. Marks, offered commentary on the stability of systems, ease of training, problems encountered, and the possible future of fuzzy systems.
The participants were:

Dave Lenartz of Byte Dynamics
Mr Lenartz has worked to develop software which can be used to build a fuzzy system. Its graphical representations make it easy to explore fuzzy logic decisions.

Ivan Rozek of Savantek
Mr. Rozek uses fuzzy logic to control large rotary kilns used in the manufacture of paper pulp and cement.

Jim Peckol of Oxford Consulting
Oxford Consulting is a research company which provides analysis, design, project leadership, training and expert services in embedded systems and fuzzy logic.

Suray Bhatia of Boeing
Dr. Bahtia teaches fuzzy logic at Boeing, and has used fuzzy logic in several control system designs.

Colin Wiel, Independent Consultant
Before becoming independent, Mr. Wiel worked at Boeing where he designed fuzzy systems used for automatic braking and anti-skid braking.

Dr. Marks started the discussion with the comment that fuzzy logic is offering a paradigm shift; a new way of thinking. The general view of the panel was that the new way of thinking was meeting with resistance. Fuzzy logic is not being accepted because it is not "mathematical" or "logical". Fuzzy systems are difficult to model and predict, and there is a lack of proofs showing that they are effective and robust.

Dr. Marks presented an amusing illustration of the life cycle of a new idea: it enjoys immense popularity when introduced and everyone expects great results, then falls into disrespect when it fails to meet the initial expectations, and finally rises back into use in the appropriate applications. Jim Peckol commented that fuzzy logic won't solve all of our problems, but that doesn't mean that it should be abandoned completely. We need to understand the technology and apply it where appropriate.

Renew your membership for 1994!
Network with *Flannig*