

Living my American Dream
- A Retrospective on an
un-American Life -

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HongKong

MY RESEARCH, EDUCATION, AND LIFE

- 1950-1961 Working & Finishing school
- 1961-2007 Research and Teaching 90% at Harvard
- 2001-date Research and Teaching at Tsinghua
- 2007-date Blogger on Science Net

The Last 68 Years

- Lived in the US since 1950 at age 16
- Had one job since finishing school from 1961 to retirement at 2007
- Married one woman in 1959 and still married to her
- Bought and lived in one house in which I still live
- All 3 children went to the same kindergarten through university
- One attorney, one CPA, and one insurance agent
- Boring and un-American
- But I lived the American dream!

Some “First or XXXest” in my Life

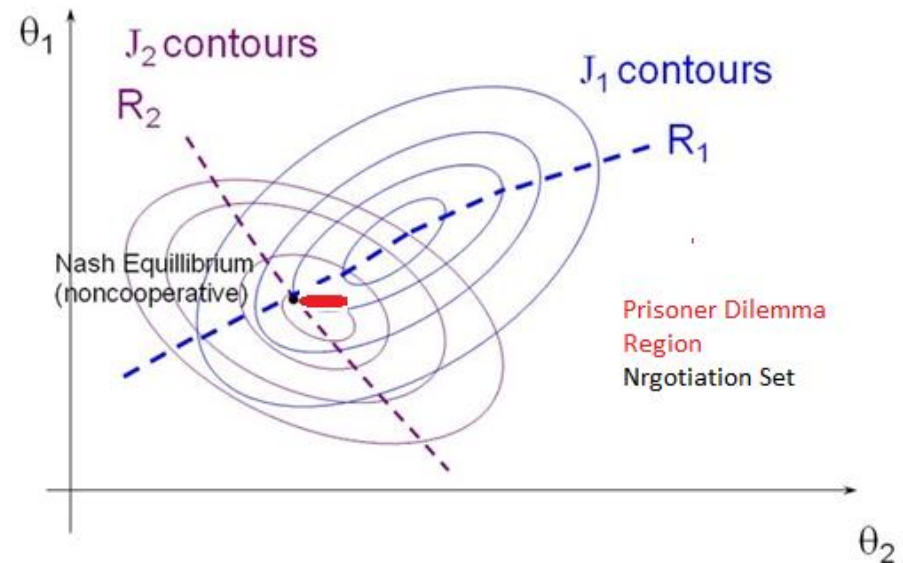
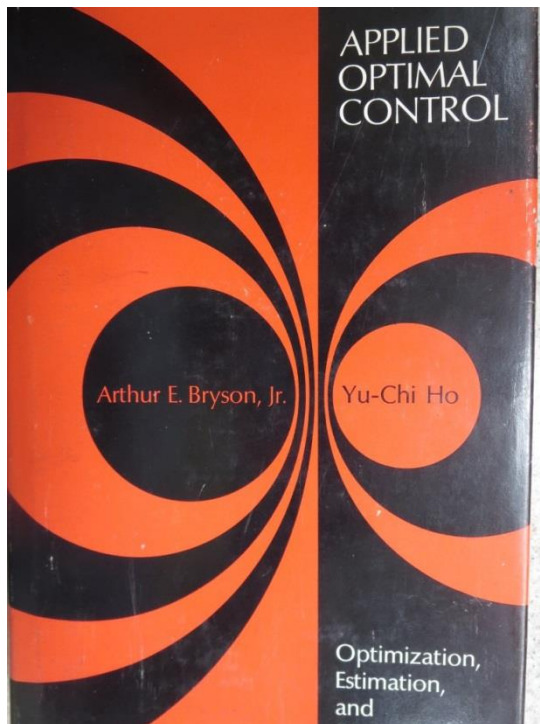
- Applied to MIT on my own (age 15) from HK in 1949 <http://blog.sciencenet.cn/blog-1565-874045.html>
- My “first day” in the US <http://blog.sciencenet.cn/blog-1565-869753.html>
- Simplest explanation of Kalman Filter <http://blog.sciencenet.cn/blog-1565-851754.html>

“First or XXXest” (continued)

- Easiest demonstration of **Ordinal Optimization**
<http://people.seas.harvard.edu/~ho/>
- First paper that stood the test of time (56+ years) – **Kalman, Ho, Narendra (1960)**
- Most **IFAC Plenary** talks (1981 Kyoto, 1990 Talin, 1999 Beijing)

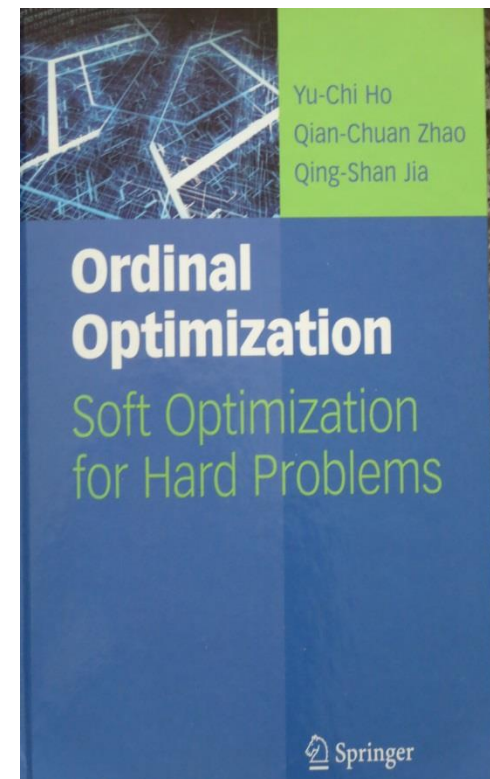
Four Decades of Research

- Applied Optimal Control (10,000+ citation classic)
- Game-theoretic Work



Four Decades of Research (contd)

- Perturbation Analysis of DEDS
- Ordinal Optimization



Four Decades of Research (contd)

OO Demo [Compatibility Mode] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Paste Arial 10 Bold Italic Underline Font Clipboard Alignment Number Styles Insert Delete Format Cells Sort & Find Filter Select Editing

D2 153.049444744007

	A	B	C	D	E	F	G
	DESIGN	TRUE PERFORMANCE J	Order	approximation error,w	Estimated Performance J+w		Expt #
1							
2	1	1	8	153.0494447	161.0494447	reset	
3	2	2	91	88.65895183	179.6589518		
4	3	3	183	29.55926916	212.5592692		
5	4	4	4	229.1338592	233.1338592		add no
6	5	5	119	137.2181526	256.2181526		
7	6	6	160	272.459856	432.459856		
8	7	7	188	282.9636839	470.9636839		
9	8	8	137	337.6071474	474.6071474		
10	9	9	184	298.4403052	482.4403052		
11	10	10	69	421.0174627	490.0174627		
12	11	11	193	331.8401108	524.8401108		
13	12	12	40	501.780372	541.780372		
197	196	196	67	9739.301068	9806.301068		
198	197	197	120	9691.08441	9811.08441		
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200	199	199	142	9841.601	9983.601		
201	200	200	147	9960.532226	10107.53223		
202							
203							
204							

Sheet1 Sheet2 Sheet3 Sheet4 Sheet5 Sheet6

Ready 100%

In Summary

- 1961-1970 Optimal Control
- 1971-1980 Games and Multiplayer Control
- 1980-1991 Perturbation analysis and DEDS
- 1991-2009 Ordinal optimization
- 2007-Date Blogging on Science Net

Many thanks for a
Wonderful Ride

Getting there is all the
fun!