

# The Packed Column

American Institute of Chemical Engineers - Upper Midwest Section

March 2005

## CHAIR'S CORNER

### **“Hold ‘Em or Fold ‘Em?”**

by Ryan P. O'Connor

The popularity of poker has never been greater than it is today. If you flip on cable TV, chances are high that you can find televised professional poker in which tiny cameras show viewers what cards each player has, thus giving us more information than the players themselves have. We can watch (and scrutinize) their strategies and learn from the pros. An estimated 75 million Americans play poker. I would bet that many readers of this column call themselves poker players as well!

Poker is fundamentally a game of skill, not chance. Of course, luck is certainly involved—especially on any given hand—but over time, over the course of many games, skills matter most. *Poker* and *business* have so much in common that useful comparisons can be made between the two “games.” I am not the first to draw such an analogy. I will admit that I enjoy playing both and still consider myself a student, not an expert.

The hottest game of them all is definitely a version called Texas Hold ‘Em, and it serves as a particularly apt model of the game of business. There are some basic strategies that apply. One is to practice *value maximization* at all times during the game. Always think in terms of expected value (payout) in poker, similar to net-present value (NPV) in business. Just as NPV needs to be adjusted for risk and opportunity costs, think about what you need to put at stake versus what you can possibly win—and the likelihood of actually winning. *Expected value* is basically the pot size multiplied by your odds. If the pot is \$100 and you have a 10% chance of hitting your straight, you might not want to match a \$50 bet since it far exceeds your expected value of \$10. A lot of players fall victim to the sunk-cost fallacy, saying something like “I’ve already invested so much, I can’t fold now.” They just can’t stand the thought of throwing so much money into the pot, only to give away any chance of possibly winning. However, knowing when to fold your cards is one of the most important abilities in poker. You can’t take back any of your bets, but you can save money going forward if you’re unlikely to win the pot. On the other hand, you need to bet (venture) chips to win (enhance revenue). Going “all in,” or betting all your chips, is like directing all corporate assets towards one major business. It can be risky but can also pay off very well.

At every single point in a game of poker, you should carry out some type of decision-tree analysis involving (1) your cards, (2) the community cards (shared by all players), (3) the size of your chip stack, (4) the pot size, (5) the odds governing the hand, and (6) the strategies of the other players still in the hand. Business is no different...

- (1) Your *cards* are your assets and your competitive advantages in the market.
- (2) The *community cards* represent the overall industry your company is playing in—i.e., the rules that preside over all competing firms.
- (3) Your *chip stack* of course epitomizes your available investment capital for business opportunities.
- (4) The *pot size* is the size of the market for your product or service. Note that it is often easier to win small pots than big pots, because big pots can attract more players willing to invest. Big pots with more players can be riskier since there are more ways to lose, and the temptation to go after that large pot (market) can mean you go broke.
- (5) The *odds* for the hand are important, and it’s good to have a sense for the mathematics and how your chances evolve throughout the hand. In business, we’re talking about probabilities of technical and market success. In poker, a feel for the odds comes with practice. Likewise in business: companies that are successful (or not) in a particular industry acquire knowledge over time that helps them assess probabilities of success for new, but related, ventures.
- (6) Finally, the *strategies of other players* cannot be overlooked. In fact, one definition of a “game” is a set of activities in which the strategy of player A must depend on the actions of all other players. Think of any sport—obviously players react and change strategies mid-course, to avoid a tackle or to break free for a goal. A single, fixed strategy will usually not work. You need to get to know your competition and what motivates them to make decisions. How will they react to something you might do? A great example is the poker bluff. When you bluff, you place a bet with a poor hand and hope nobody calls you. If everyone else folds, you win the pot regardless of the quality of your hand. The frequency of bluffing in poker has to depend on the strategies of other players: some will call bluffs more than others, just to “keep you honest” or maybe just to keep you guessing. Good poker players

modify their strategy dynamically in response to what everyone else tends to do. Even better poker players alter their strategy *in anticipation of* what other players will probably do. Competitive analysis in business is virtually identical. Companies bluff by announcing new technologies, capacity expansions, or price drops, with the hope that smaller players exit (fold). Watch for “tells” of others (and yourself!). Don’t give away what you are holding or how much you might bet. In business, be careful not to divulge critical information which can happen in many ways—and sometimes neither side even knows it happened until later.

There are many other analogies that could be discussed: optimal betting and raising (investment theory with capital

constraints), folding, risk tolerance, distribution of chips at the table, betting position, cheating, and so on. Space is running out, so I’ll conclude with a final word: the best player does not always win. Here is the luck component. Sometimes, in poker *and in business*, despite the best efforts of all involved—and the high degree of their skill/knowledge—simple bad luck can indeed lead to failure. Nevertheless, I believe that poker and business are both about 80% skill and 20% luck.

Thanks for reading our newsletter. And who’s in for some poker?

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**MAKE SURE TO CHECK OUT OUR WEB SITE AT:**

**<http://www.aichelocal.org/tc>**

# MinnTS 2005

## 3rd Annual Minnesota Joint Technical Symposium



Join us **Thursday March 17<sup>th</sup>** in the Medtronic state-of-the-art auditorium for dinner, cross-functional networking, and two outstanding technical talks:

### “Artificial Retina”

**Vincent Chow, Optobionics**

The targeted disease, Retinitis Pigmentosa, Artificial Silicon Retina technology, fabrication challenges, surgery, results, and the future. [www.optobionics.com](http://www.optobionics.com)

Come see what's happening with ASR technology!

### “Advanced Biomaterials”

**Arthur J. Coury, Genzyme Corporation**

The knowledge gained in physiology, cellular and molecular biology provides potential for replacing many mechanical, chemical and electronics based therapies by inducing the body to heal and regenerate its structures and functions. [www.genzyme.com](http://www.genzyme.com)

Join us and hear about this emerging field of research!

**Tours of the Medtronic facilities will be available!**

Tours will be available at specific times between 4:30 and 5:30pm only.

**DATE:** Thursday, March 17, 2005

**TIME:** 4:30-9pm

**LOCATION:** Medtronic, 694 & Hwy 65 Fridley, MN

**RESERVATIONS:** to Bede Willenbring [no later than Friday, March 11<sup>th</sup>](#)

**RSVP must include:** name, company, email address, phone number, affiliation (ACS, AIChE, ASM, AVS, MMS, SAS, SEMI, SID, or none)\*

\*MinnTS will not share your personal information outside your affiliated organization.

**Bede.Willenbring@hbfuller.com 651-236-5470 COST: \$25**

**RSVP today. Seating is limited.\*\***

**\*\*RESERVATIONS NON-CANCELLABLE AFTER MARCH 11, 2005**

# 2005 AIChE Annual Symposium

## Symposium Announcement and Call for Speakers

Wednesday, April 13th 2005

Time : 9 AM – 4 PM

(lunch provided)

At the Thunderbird Hotel

2201 East 78 St

Bloomington, MN

First Keynote Speaker:

**Mark J. Anderson, PE, CQE, MBA**

Principal and General Manager of Stat-Ease, Inc.

Second Keynote Speaker:

**Rudolf J. Schick**

Vice President – Spray Analysis and Research Services

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For this year's AIChE symposium, the keynote talks and one break-out session will focus on *Practical Tools for Engineering Research*. Other topics will be considered for the other break-out session, including fuel-cell technology, optimization and simulation of processes, process design and engineering, engineering of renewable energy sources, intellectual-property protection, etc. We are inviting other potential speakers (either yourself or someone you would like to nominate) in any of these areas, as well as "nontraditional" areas and other topics. \*\*We will also be offering AIChE PDH credits to any engineers who are interested in keeping up their professional development hours. Please ask at the registration table for your form.\*\*

As in previous years, undergraduate students are encouraged to submit posters for the **student poster contest**. There are cash prizes for the top winners. This year, we would like to invite at least two students to be speakers during the morning sessions. We are also looking for **corporate sponsors** for this contest.

Please contact Nathan A. Busch (phone : (952) 545.2650, email : busch034@umn.edu) to submit your speaking interest (with topic, speaker, and speaker credentials.) Be prepared to submit an abstract. You can also contact him to sponsor this event, or to sponsor the student poster contest. **Deadline for speaker interest/nominations is March 15, 2005.**

## Short Course Announcement

Dear Upper Midwest AIChE Member:

Our local section has decided to experiment in bringing a short course offered nationally by AIChE and ASME to Minneapolis this May. Dates are May 16, 17 & 18 for a full three-day course. After surveying our local membership, we have chosen CH140 Project Evaluation: Capital and Operating Cost Estimation.

**You Should Attend If** : Your goal is to improve your ability to make economic evaluations of projects, designs, ideas, and alternatives, or to better understand evaluations made by others. This course is ideal for engineers and others in the industry who work in a broad range of functional areas: research, development, design, manufacturing, project preparation, and management.

**About the Instructor:** John Williams, PhD, MBA, PE, is a practicing engineer in the process industries. He has over 20 years of project development, cost estimating, and financial analysis experience. He has worked for Monsanto, Babcock & Wilcox, and major pharmaceutical manufacturers in project conceptualization and analysis, plant design, process expansions, and plant retrofits. Williams holds advanced degrees in chemical and fuels engineering and finance.

For all the detailed information on the course follow the link: [http://ww2.asme.org/pd/courseDetail.cfm?CO\\_ID=843](http://ww2.asme.org/pd/courseDetail.cfm?CO_ID=843)

The cost to attend the course is \$1395 for members and \$1545 for non-members. This fee includes all course material, continental breakfast, lunch, and snacks. Please respond to me ([thomas.kempf@genmills.com](mailto:thomas.kempf@genmills.com)) if you have any questions. To register for the class please send a check made out to AIChE to:

Tom Kempf  
General Mills  
Strategic Technology  
Riverside Tech Center 27-51  
330 University Ave SE  
Minneapolis, MN 55416  
763-764-2873

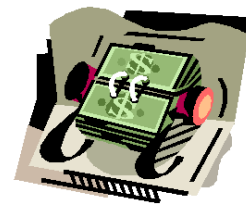
There are several advantages to you in attending one of these short courses. First is the professional growth and continuing education credits (this course counts for 22.5 Professional Development Hours). Attending locally also reduces your travel load and associated costs (plane, rental car, hotel, meals, time away from home,...). In addition, taking a 3-day class typically requires investment of 5 days if you have to fly to a remote site.

We have a minimum sign up for this class of 20 people. If we do not get 20 registrations by April 15th we will be forced to cancel the class and refund money to those previously registered. If you sign up and are unable to attend, you can have a different student take your place or get a full refund up to April 15th. Due to the commitments to the instructor and meeting facilities, there can be no refunds after April 15th.

Don't delay, SIGN UP TODAY!

## Financial Planning 101 (Including a Trading Floor Tour)

by Piper Jaffray  
for AIChE YPAB and ACS YCC



**Learn about methods to grab hold of your financial future and plan for the next stage of your life!**

**Who are YPAB and YCC:** We all are! We are a part of the parent organization focusing on bringing together young professionals to network and learn about topics that are meaningful to young professionals.

**When:** Tuesday, April 19th from 6:00 until ??

**Where:** Piper Jaffray in the US Bank building in downtown Minneapolis

**Dinner:** Provided by Piper Jaffray during the session

**Parking:** Will be validated if you arrive before 6 PM

**RSVP:** ASAP! Seats are limited. Please RSVP no later than Friday, April 8th  
to Matt Atkins [mpatkins@msn.com](mailto:mpatkins@msn.com) (952) 226-4538  
or Nichole Kuehn [nkuehn@mmm.com](mailto:nkuehn@mmm.com)

**Tour:** Tours will be provided of the Minnesota Stock Exchange trading floor

**Agenda:**

5:30 – 6:00 Arrive at Piper Jaffray

6:00 – 7:30 Discussion and Presentation on Financial Planning Basics

**Topics Include:**

Investing, accounts, and planning

Investment research

Investment management

Mutual Funds

IRAs, Roth IRAs, and others

Insurance

7:30 - ?? Networking and Additional Q&A for financial planning

**NOTE:** Detailed directions, parking information and room location will be provided with your RSVP.

**Place an ad here and get results! Reach over 600 chemical engineers!**

**Nathan Johnson, [doc\\_curtis@rocketmail.com](mailto:doc_curtis@rocketmail.com)**

**651-733-2184**



**Society of Women Engineers – Minnesota Section  
12<sup>th</sup> Annual Spring Professional Development Seminar**

**Engineers in Leadership: Empowering Ourselves**

Join us for the 12<sup>th</sup> Annual Spring Professional Development Seminar sponsored by the Minnesota Section of the Society of Women Engineers, Medtronic, and Rosemount Inc., a Division of Emerson Process Management. This event is historically the most popular event of the year. Registration is required, so RSVP early! Dress is business casual and breakfast and lunch are provided.

**When:** Saturday, March 19, 2005  
8:00 AM – 4:00 PM

**Location:** Medtronic World Headquarters  
710 Medtronic Parkway  
Minneapolis, MN 55432-5604

**Cost\*:** \$50 for SWE members  
\$60 for non-SWE members  
\$30 for students and unemployed SWE members  
*\*Cost includes breakfast and lunch*

**Topics:** Seminars on both professional and personal development. Potential speaker topics include: leadership, inclusion in the workplace, public speaking, conflict resolution, financial concerns, living a more balanced life, Six Sigma, networking, quick and easy meals, time management, continuing education options, starting your own business.

If you have questions, please e-mail [springseminar@swe-mn.org](mailto:springseminar@swe-mn.org).



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