

# Advanced Technical Analysis



**Attend and gain a comprehensive understanding of advanced technical tools and trading strategies, and how and when they should be used.**

## Course Date & Location

**When:** May 21-22, 2008  
8 a.m. – 4 p.m. both days

**Where:** Sheraton on the Hudson  
500 Harbor Boulevard  
Weehawken, NJ 07086  
Phone: 201.617.5600

## What You Will Learn

This 2-day program will give you a comprehensive understanding of the various strategies employed in the field of advanced technical analysis. You'll examine a wide array of advanced technical tools and strategies, including what they are and how and when they should be used. In addition, you'll gain an in-depth understanding of how various theories of behavioral finance can be integrated into technical trading strategies. **You will leave this course with a solid and immediately useful understanding of:**

- ▣ The principles of behavioral finance and how these principles can be fully integrated into a trading strategy.
- ▣ Systematic irrationality of the markets and its application to technical analysis.
- ▣ Decision-making behavior, prospect theory and cognitive dissonance theory.
- ▣ Integrating volatility studies with traditional mathematical technical analysis.
- ▣ Multiple-time-cycle analysis of the markets.
- ▣ Risk management pyramid including stop losses, volumetric limits, VaR limits, correlation analysis, stress testing and fixed fractional money management.
- ▣ How to use trend exhaustion indicators including TD Sequential and TD Combo.
- ▣ How to combine DeMark's Trend Exhaustion Indicators with "traditional" percentage oscillators.
- ▣ How to implement DeMark's TD Carry and TD Setup Trend as Mechanical Trading Systems.
- ▣ How to use TD Risk Lines as support, resistance and pivot levels.
- ▣ Mechanizing Elliott Wave with the Elliott Wave Oscillator and Profit-Taking Indicator.
- ▣ Neural networks.
- ▣ Machine induction methods.
- ▣ Applying fractals and self-similarity to technical analysis.
- ▣ Genetic algorithms.
- ▣ Chaos theory.
- ▣ Fuzzy logic.
- ▣ Applying fuzzy logic to candlestick patterns.
- ▣ Applying neural nets, machine induction methods and genetic algorithms to mechanical trading systems.
- ▣ Making money with mechanical trading systems. In this **real-time trading simulation** you will analyze the energy markets with mathematical technical indicators, develop a short-term trading system to capitalize on probable market behavior over the next 24 hours and see how various trading strategies unfold in real time.
- ▣ Developing trading models with CQG software.
- ▣ Matching the system to your personality.
- ▣ Cutting-edge insights in the field of trader psychology
- ▣ Avoiding the pitfalls in model development.
- ▣ Back-testing and forward-testing of models.
- ▣ Optimization studies.
- ▣ Development of trending: Following trading systems.
- ▣ Development of mean reversion trading systems.
- ▣ Development of mean reversion systems with trending-following filters.
- ▣ Combining negatively correlated trading systems.
- ▣ Black Box Arbitrage: What it is, how to develop models that will capture this kind of arbitrage opportunity and the risks inherent in the implementation of this strategy.

## CPE Credits



This course earns 12 CPE credits. EMI awards credit hours towards CPE and Certified Purchasing Manager status (CPM).

## Program Registration Fees

1 <sup>st</sup> delegate:	\$1,895
2 <sup>nd</sup> delegate:	\$1,595
3 <sup>rd</sup> delegate:	\$1,395*

Fee includes full two-day course, expert instruction, course materials, continental breakfast, & lunch.



# Advanced Technical Analysis

May 21-22, 2008 ~ Weehawken, NJ ~ An EMI Energy Training Program

## Who Should Attend

The course is applicable to all levels of the energy infrastructure, oil, natural gas, electricity and coal. Individuals in every functional area of responsibility in all energy industries whose decisions have significant *financial impact will benefit from this program. Managers from areas such as marketing, sales, manufacturing, engineering, supply and distribution, trading risk management, purchasing and financial and accounting will find the course highly beneficial. Some of the more specific areas follow:*

- ☐ Traders and hedgers of any of the energy products.
- ☐ Major oil and large independents: Refiners, marketers, supply and distribution personnel, exchange personnel, terminal managers, risk managers, wholesale and commercial managers, retail-branded and unbranded managers, traders.
- ☐ Wholesale/marketing companies; jobbers.
- ☐ Retailers.
- ☐ End-Users: Commercial fleet managers, government agencies (federal, state and municipal), transportation companies.
- ☐ Lenders to the energy industry.
- ☐ Futures and OTC brokers – especially brokers catering to the above companies.
- ☐ Utilities and power marketers.
- ☐ Natural gas marketers.
- ☐ Accounting and financial personnel.
- ☐ Back office administrators of trading and hedging operations.

## Course Syllabus

### **DAY 1: Advanced Technical Analysis – Using the Tools** (8:00 a.m. – 4:00 p.m.)

#### ☐ **Session 1 – Behavioral Finance**

This session discusses various theories of behavioral finance and how they disprove the efficient market hypothesis by dispelling the myth of rational behavior of market participants. Included in this section are coverage of systematic irrationality of the markets, decision-making behavior, prospect theory and cognitive dissonance theory along with their application to technical analysis.

#### ☐ **Session 2 – Risk Management, Volatility and Time Cycle Studies**

This session works through the development and implementation of a three-tiered risk management model that includes volumetric and stop loss methodologies, Value-at-Risk and stress testing as well as anti-Martingales such as fixed fractional money management techniques. We then move on to explore ways of enhancing performance of traditional mathematical technical indicators through incorporation of volatility studies. Finally we close the session with an analysis of how to filter out suboptimal trades by extending our analysis to timeframes other than our “primary” decision-making timeframe. Also included in this section are a discussion of fractals and the theory of self-similarity.

#### ☐ **Session 3 – Developing Trading Models with CQG Software**

In this session we will explore various programming issues inherent in the development of mechanical trading systems including theory testing, spot checking as well as various potential pitfalls inherent in the programming process.

#### ☐ **Session 4 - Trading simulation: Making Money with Real-Time Mechanical Trading Systems**

In this real-time trading simulation attendees will analyze an energy commodity, develop a market opinion regarding which trading system will outperform others over the following twenty-four hours of trading and learn about how other systems performed in real-time.

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## Course Syllabus

### Day 1 (continued)

- ▣ **Session 5 – Neural Networks, Machine-Induction Methods, Genetic Algorithms, Chaos Theory and Fuzzy Logic**  
This session examines the major flavors of advanced technical tools including neural networks, machine-induction methods, genetic algorithms, chaos theory and fuzzy logic. Particular emphasis will be placed on what these tools are, why they are helpful in the development of technical trading models as well as their limitations.
- ▣ **Session 6 – Applying the Theories: Mechanizing Elliott Wave, Candlesticks and Trendlines**  
This session applies the theoretical principles discussed in the prior session to specific arenas of subjective, interpretative technical analysis including applying fuzzy logic to candlestick formations, applying neural nets, machine induction methods and genetic algorithms to mechanical trading systems and mechanizing Elliott Wave with the Elliott Wave Oscillator and Profit Taking indicator.

### Day 2 – Mechanical Trading Systems: Development, Testing And Implementation Issues (8:00 a.m. – 4:00 p.m.)

- ▣ **Session 1 – Tom DeMark Indicators and Trading Systems**  
In this session we examine the major indicators used by Tom DeMark including TD Sequential, TD Set Up Trend, TD Risk Lines, TD Carrie and TD Combo.
- ▣ **Session 2 – Optimization, Curve-Fitting, Backtesting, Forward-Testing and Out-of-Sample Testing**  
This session examines various methods to ensure the robustness of a mechanical trading system including optimization studies, backtesting, forward-testing and out-of-sample testing. Particular emphasis will be placed on elimination of suboptimal parameter sets, data integrity issues, liquidity risk as well as avoidance of various curve-fitting problems (including parameter curve-fitting and data curve-fitting). We close the session with an in-depth examination of backtesting, forward-testing, out-of-sample testing as well as the development and implementation of trading system “failsafes” based on losses, drawdowns and paradigm shifts.
- ▣ **Session 3 – Trader Psychology and Matching the Optimal Trading System to the Trader**  
This session examines trader psychology, the importance of even-mindedness, non-attachment to the results of one's actions and elimination of contradictory beliefs regarding trading for a living. In addition, it dispels the myth of trading systems as a “one size fits all” proposition through a detailed exposition of various long-term, intermediate-term, swing and day trading systems. Special emphasis will be placed on various psychological issues such as “fading the crowd”, “screen burnout”, “buying new highs” and “selling new lows”. In addition we will look at realistic performance expectations for various systems based on peak-to-valley equity drawdowns, winning percentages, average trade duration, average “flat” period and longest duration prior to achievement of new equity highs.
- ▣ **Session 4 – Enhancing Performance by Combining Non-Correlated Trading Systems**  
This session opens with a discussion of how performance can be enhanced through three categories of diversification: asset class diversification, parameter set diversification and system diversification. We then provide an in-depth examination of the pros and cons of each type of diversification methodology. Finally we will look at how combining of negatively correlated trading systems forces us to expand beyond our “natural” comfort zone as traders and thereby enables us to systematically and “safely” overcome psychological limitations of what has limited our success in the past.
- ▣ **Session 5 – Black Box Arbitrage**  
The day closes with an examination of what Black Box arbitrage is, how to develop models that will capture this kind of arbitrage opportunities as well as the risks inherent in the implementation of these strategies.



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## About EMI Instructors



### Learn From the Experts that Experts Trust

EMI experts are frequent editorial contributors to petroleum magazines & are trusted by today's leading news sources. Our experts have been featured in:

*The Wall Street Journal* • *USA Today* • *The New York Times* • *The Washington Post* • *Journal of Commerce* • CNN • NBC • CBS • ABC • Williams Energy News Live

EMI's leading industry experts have an average of over 30 years of knowledge and experience in:

**Energy • Commodity trading • Risk management  
• Education • Consulting • Financial services**

Plus many years of managing marketing, international trading, manufacturing, consulting, start-up operations and project finance operations of well-known companies; integrated major oil companies as well as international trading companies.

EMI's industry experts have also provided risk and value management analysis, advice, information, and services to a variety of companies in the electric power industry. Clients have included power marketers, integrated utilities, retail power providers, hedge funds, and power plants.

Highlights of our instructors' experience include: • Developing a suite of models for a variety of power markets that quantify value and risk • Managing spark spread portfolios for hedge funds in the power markets • Operating in futures trading pits as a market observer in the power markets • Developing working papers for investigations and performing compliance audits in the power industry • Helping Texaco initiate its first use of futures exchanges as an integral part of hedging/trading strategy • Chief Operating Officer of Triwell Marketing and refining • Director of OPIS, Oil Price Information Service, a management-consulting and educational services group that solely focused on the downstream energy industry • Member of Board of Directors of Longview Refinery • Member of the New York Mercantile Exchange Petroleum Advisory Board • Expert witness for a hearing before the subcommittee on surface transportation for the Commerce, Science, and Transportation Committee of the US Senate • Supplied expert testimony to a US Senate subcommittee hearing on diesel petroleum product pricing • Supplied testimony to the Federal Highway Administration regarding fuel tax evasion • Expert witness in a MTBE litigation against the major oil companies • Publishers of *The Daily Hedger*, *BTU's Daily Gas Wire* and *BTU's Daily Power Report*, which advise thousands of petroleum professionals daily.

Our instructors are frequent expert speakers for numerous petroleum industry events and trade associations including: • DOE DESC World Energy Conference • OPIS Fleet Fueling • NYMEX • Fuel Management University • NATSO • ATA • AAA • Dairy Distribution • eyeforEnergy eCommerce • OPIS Supply Summit • CIOMA • American Society of Mechanical Engineers • American Society of Lubricating Engineers • Ambrust Aviation • NACHA.

Over the years EMI has developed a series of intensive courses covering all aspects of Energy from production all the way to managing the impact price and volatility on the margin of end-users, resellers, traders, marketers, shippers, retailers and refiners. Our instructors have had the privilege to instruct thousands of professionals representing all aspects of the energy industry, including every major oil company (i.e. Exxon Mobil, BP, Shell, Equilon, Motiva) major power utilities (i.e. Sempra, Edison Mission, Berkley, Toronto Hydro, Dominion, Conectiv) small marketers (i.e. Sprague, Getty, Southern Counties, Western Petroleum) trucking fleets from 50 to 10,000 (i.e. UPS, U.S. Postal Service, Yellow, Pepsi, Werner), gasoline-powered fleets hyper-markets (i.e. The Pantry, Wawa, BJs Wholesale) and many fortune 500 energy consumers.



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**Reserve  
Your Seat  
Today!**

**Three easy ways to register:**

1. Call PMA Conference Management at 201.871.0474 or send email to: [register@pmaconference.com](mailto:register@pmaconference.com).
2. Complete & fax this form to 253.663.7224.
3. Complete & mail the form to: PMA Conference Management, POB 2303, Falls Church, VA 22042.

<p><b>A</b>      <b>Registration Fees:</b></p> <p>\$1,895 for full program</p> <p>This fee includes expert instruction, course materials &amp; lunch.</p>	<p><b>Discount for Additional Attendees:</b></p> <p>2<sup>nd</sup> delegate \$1,595</p> <p>3<sup>rd</sup> delegate \$1,395</p>
<p><b>B</b>      <b>Enrollment Information (please print clearly)</b></p> <p><b>NAME:</b> _____</p> <p><b>COMPANY:</b> _____</p> <p><b>ADDRESS:</b> _____</p> <p>_____</p> <p><b>PHONE:</b> _____ <b>FAX:</b> _____</p> <p><b>E-MAIL:</b> _____</p>	
<p><b>C</b>      <b>PAYMENT METHOD</b></p> <p><input type="checkbox"/> Please invoice my company (payment must be received prior to course date)</p> <p><input type="checkbox"/> MasterCard    <input type="checkbox"/> Visa    <input type="checkbox"/> American Express</p> <p>Card Number _____ Expiration Date ____/____/____</p> <p>Card Holder Name _____</p> <p>Card Holder Signature _____</p>	

REFUND/CANCELLATION POLICY:  
Attendees may reschedule for a different date or course with no penalty. 100% refundable with 14 days cancellation notice. 80% refundable with 5 days cancellation notice. Cancellations are non-refundable day of or after course.