

## Curriculum Vitae

Christian “Chrilly” Donn timer was born in 1957 in Wels, Austria. He has a Ph.D. in Mathematical Statistics. Results of his Ph.D. were published in the top journal JASA (Journal of the American Statistical Association). Afterwards he worked for some years in the mathematics and computer department at the Institute for Advanced Studies in Vienna. From 1989 to 1992 he was responsible for the development of life-support software at ESTEC (European Space Technology Centre) in Noordwijk/Netherlands. Since 1993 he is professional computer chess programmer. He was the main author of the FPGA based chess program Hydra. Hydra was initially developed (under the name Brutus) together with Ken Thompson (UNIX-‘father’). Hydra is considerable stronger than Deep Blue from IBM. It never lost to a human player. The “chess monster from UAE” was sponsored and developed by PAL group.

Since 2007 he is chief scientist for the Sibyl financial project of PAL group.

Chrilly’s main strength is the combination of excellent programming skills with profound mathematical knowledge.

Name: Dr. Mag. Christian “Chrilly” Donn timer

Born: 05.10.1957 in Wels, Austria

Nationality: Austria

Family status: Married with Mag. Anna Donn timer since 08.08.1981

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### Education:

1968-76: Gymnasium (High-School)

1976-83: Study of Mathematics and Physics at the University of Vienna. Magister (Master) in both disciplines.

1984: Post graduate course at the Institute for Advanced Studies, Dept. for Mathematical Methods and Computer Science, Vienna/Austria.

1987: Doktor (Ph.D.) in Mathematical Statistics at the Technical University Vienna.

### Professional Career:

1979-81: Part time job at the Chemiefaser-Lenzing-AG. Real-Time-Programming in process-control.

1985-86: Assistant Prof. for Applied Statistics at the Institute for Advanced Studies in Vienna.

1987: Project manager for medical software at MEDATA GesmbH Vienna.

1988-93: SIEMENS-Austria, PSE (Program and Software Development). Operating-System and Telecommunications projects.

1989-91: Consultant at the European Space Research and Technology Centre (ESTEC) in Noordwijk, Netherlands. Development of ECOSIM, a life-support simulation system.

Note: During this time he was formal staff member at Siemens-PSE.

Since 1994: Foundation of NimzoWerkstatt OEG. Development of numerous computer chess software and hardware products.

2000-03: Development of the Brutus Distributed FPGA chess program. Since 2002 in cooperation with the Univ. Paderborn/Germany.

2004-2006: Chief developer of Hydra for PAL-Group, UAE. Hydra is the successor of Brutus.

Since 2007: Chief-scientist for the Sibyl financial project of PAL group.  
Since 2007: Several projects for the Research Department of Siemens-CT (Computer-Tomography) at Forchheim/Germany. FPGA programming for the next generation of high-resolution Computer-Tomographs.  
Since 2010: Lecturer at the University of Jena (Germany) in Quantitative Finance.

### **Journal-Publications:**

Ch. Donninger, C. Signor: Least Absolute Deviation Estimators, IAS-Science Papers, Vienna June 1984.  
Ch. Donninger: The Distribution of Centrality in Social Networks, Social Networks Vol. 8, 1986  
Ch. Donninger: Is it always efficient to be nice – A Computer Simulation, in A. Diekmann, P. Mitter (ed.) Paradox Effects in Social Behaviour, Würzburg 1986.  
Ch. Donninger: RENE – A Relational Database for the Analysis of Social Networks, Proceedings of the VIII. Intern. Symposium on Computer at the University, Dubrovnik 1986.  
Ch. Donninger, W. Krämer: Spatial Autocorrelation Among Errors and the Relative Efficiency of OLS in the Linear Regression Model, Journal of the American Statistical Association, June 1987, Vol.82, Nr.398.  
Ch. Donninger: Mathematische, statistische und computergestützte Methoden der Netzwerkanalyse (Mathematical, statistical and programming methods for the Analysis of networks), Phd-Thesis, TU-Vienna, June 1987.  
Ch. Donninger: ORACLE Evaluation or Princess Matrix meets the ORACLE monster, ESTEC-YCV Report, Noordwijk Nov.1989.  
Ch. Donninger et al.: ECOSIM – An Environmental Control Simulation Software, 21<sup>st</sup> Intern. Conference on Environmental Systems, San Francisco Jul. 1991, SAE Technical Paper Series Nr. 911543.  
Ch. Donninger.: The relation of mobility, strategy and the mean dead rabbit in chess. Advances in Computer Chess 6, 1992  
Ch. Donninger: Null-Move and Deep Search, ICCA-Journal 16(3), 1993.  
(Best-article award for 1993. According the ICCA-editor the most influential computer-chess article since 1985).  
I. Althöfer, Ch. Donninger, U. Lorenz, V. Rottmann. On Timing, Permanent Brain and Human Intervention. Proc. Advances in Computer Chess (ACC) 7, ed. J. van den Herik  
Ch. Donninger and U. Lorenz. The Hydra Project. XCell Online Journal, Second Quarter 2005  
Ch. Donninger and U. Lorenz. The Hydra Project. Xilinx Journal (selected paper), Issue 53, 2005  
Ch. Donninger, U. Lorenz. Innovative Opening-Book Handling. Proc. of Advances in Computer Games (ACG) 11, Taipei, Taiwan, Springer LNCS 4250, 2006  
Ch. Donninger, U. Lorenz. The Chess Monster Hydra. Proc. of 14th International Conference on Field-Programmable Logic and Applications (FPL), 2004, Antwerp – Belgium, LNCS 3203, pp. 927 – 932, eds. J. Becker, M. Platzner, S. Vernalde  
Ch. Donninger, A. Kure, U. Lorenz. Parallel Brutus: The First Distributed, FPGA Accelerated Chess Program. Proc. of 18th International Parallel & Distributed Processing Symposium (IPDPS), 2004, Santa Fe – NM USA, IEEE Computer Society  
Ch. Donninger: Flying hours with Ken Thompson. New in Chess, 2009, Vol.1

### **Latest Sibyl-Working-Papers:**

The following working-papers can be retrieved from:

<http://www.godotfinance.com/workingpapers.xhtml>

- Ch. Donninger: The Identification of Market-Regimes with a Hidden-Markov Model. Sibyl-Working-Paper, June 2012.
- Ch. Donninger: The Godot-DaLEI. A Daily Leading Economic Index for the US-Economy. Sibyl-Working-Paper, June 2012.
- Ch. Donninger: ETF-Portfolio: Analyzing an Allocation of the Camel-Strategy, Revision-1. Sibyl-Working-Paper, July 2012.
- Ch. Donninger: Leveraged ETF-Trading: The Johnny Walker-Strategy, Revision-1. Sibyl-Working-Paper, July 2012.
- Ch. Donninger: ETF-Portfolio-Construction: The Camel-Strategy, Revision-2. Sibyl-Working-Paper, Oct. 2012.
- Ch. Donninger: Improving the S&P Vector-Index. The Daiquiri Strategy, Revision-1. Sibyl-Working-Paper, July 2012.
- Ch. Donninger: Improving the S&P Dynamic VIX-Futures Strategy. The Mojito Strategy, Revision-1. Sibyl-Working-Paper, July 2012.
- Ch. Donninger: Constructing and Trading a Dow-Jones Low-Volatility Index. The Baileys Strategy. Sibyl-Working-Paper, Aug. 2012.
- Ch. Donninger: Trading with Low-Volatility ETF's: The Irish-Cream Strategy. Sibyl-Working-Paper, Aug. 2012.
- Ch. Donninger: Selling Volatility Insurance. The Sidre- and Most-Strategy. Sibyl-Working-Paper, Revision-1. Aug. 2012.
- Ch. Donninger: Scenario-Generation with IVTS Block-Sampling. Sibyl-Working-Paper, Oct. 2012.
- Ch. Donninger: Riding the dead FX-Carry Horse: The Tequila-Strategy. Sibyl-Working-Paper, Nov. 2012.
- Ch. Donninger: Riding on the LIBOR and EURIBOR-Forward-Rate-Curve: The Arkhi-Strategy. Sibyl-Working-Paper, Revision-3. Dec. 2012.
- Ch. Donninger: SPX-Options-Trading: The Kir-Strategy. Sibyl-Working-Paper, Feb. 2013.
- Ch. Donninger: VIX-Futures Basis Trading: The Calvados-Strategy. Sibyl-Working-Paper, Feb. 2013.
- Ch. Donninger: A broad hint from the VIX: Timing the market with implied volatility. Sibyl-Working-Paper, April 2013
- Ch. Donninger: Boosting the SPY with the VXX. The Daiquiri Strategy. Sibyl-Working-Paper, April 2013
- Ch. Donninger: Improving the S&P Dynamic VIX-Futures Strategy: The Mojito 2.0 Strategy. Sibyl-Working-Paper, Revision 1: 2013.06.04
- Ch. Donninger: Futures Momentum Trading. The Mule-Strategy. Sibyl-Working-Paper, June 2013
- Ch. Donninger: ETF Momentum Trading. The Donkey-Strategy. Sibyl-Working-Paper, Rev. 3, 2013.07.02
- Ch. Donninger: Chrilly's Complete Manual of Momentum Trading. The Donkey and Mule Strategies. Sibyl-Working-Paper, July 2013.
- Ch. Donninger: Small- Large-Cap Trading. The Snail Strategy. Sibyl-Working-Paper, August 2013
- Ch. Donninger: Change-Point Trading: The Snowy Strategy. Sibyl-Working-Paper, August 2013.
- Ch. Donninger: Pairs Trading with CoIntegration: The Duck Strategy. Sibyl-Working-Paper, Nov. 2013

Ch. Donninger: Natural Gas Pairs Trading without CoIntegration: The Wild and Black Duck Strategy. Sibyl-Working-Paper, Nov. 2013

Ch. Donninger: Crack Spread Trading: The Pekin Duck Strategy. Sibyl-Working-Paper, Dec. 2013

Ch. Donninger: How to beat the market with the Implied Volatility Term Structure: The HeroRATs Strategy. Sibyl-Working-Paper, Dec. 2013

Ch. Donninger: Improving the S&P Dynamic VIX Futures Index: The Mojito 3.0 Strategy. Sibyl-Working-Paper, Dec 2013

Ch. Donninger: VIX Futures Basis Trading: The Calvados-Strategy 2.0. Sibyl-Working-Paper, Jan 2014

Ch. Donninger: Harvesting the Downside Beta Premium with the Implied Volatility Term Structure: The Cinderella Strategy. Sibyl-Working-Paper, Jan. 2014

Ch. Donninger: Plain Vanilla SPX-Options Hedging: The Effect of Smile-Adjustments and the Lark versus Owl Question. Sibyl-Working-Paper, Feb. 2014

Ch. Donninger: Smarter than the Options-Market? A Real-Measure GARCH Option Pricing Model with Volatility Regime Simulation. Sibyl-Working-Paper, March 2014

Ch. Donninger: Simple and Efficient Portfolio Construction with implicit Covariance Estimation: The Ant Strategy. Sibyl-Working-Paper, March 2014

#### **Other-Publications:**

Ch. Donninger, A. Donninger: Chrilly's Goldreport (in German).  
 Monthly newsletter. The Goldreport is an edutainment project. Besides Gold, special finance topics are treated in a popular way. But there are also reflections about 30+ years of marriage. This is the favourite part of most readers.

Numerous popular articles in German, Dutch and Italian (computer-) chess magazines about computer chess. Translation of Dutch chess articles to German.

#### **Publications about Ch. Donninger:**

T. Mueller: Your Move, Creating a better chess player, New Yorker, Dec. 12, 2005, p.62-69  
[en.wikipedia.org/wiki/Christian\\_Donninger](http://en.wikipedia.org/wiki/Christian_Donninger)  
[en.wikipedia.org/wiki/Hydra\\_\(chess\)](http://en.wikipedia.org/wiki/Hydra_(chess))

#### **Programming and Hardware-Description Languages:**

C, C++:	500 K-lines of production code.
Intel-x88 Assembler:	200 K-LOC.
Java:	100 K-LOC.
Verilog:	35 K-LOC.
VHDL	30 K-LOC
C#	10 K-LOC
Javascript	10 K-LOC
Objective-C	5 K-LOC
8051-Assembler	5 K-LOC.
Ada:	5 K-LOC
Fortran	5 K-LOC
Basic	5 K-LOC
Matlab	Internal Prototyping
R	Internal Prototyping

#### **Natural Languages:**

German (native speaker), English, Dutch (excellent), Spanish (moderate).