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REFERÊNCIAS BIBLIOGRÁFICAS

Ref: 1 JÖRGEN W. WEIBULL. ***Evolutionary Game Theory***. Cambridge, MA: MIT press 1995

Ref: 2 HOFBAUER, JOSEF; SIGMUND, KARL. ***Evolutionary Games end Population Dynamics***. Cambridge University Press 2002

Ref: 3 SAMUELSON, LARRY. ***Evolutionary Games and Equilibrium Selection***. MIT Press 1998

Ref: 4 MORTON D, DAVIS. ***Game Theory, a Nontechnical Introduction***. Diver Publications, 1997

Ref: 5 TVEDE, LARS. ***The Psychology of Finance***. John Wiley & Sons LTD, 1999

Ref: 6 SLOTINE, JEAN-JACQUES; WEIPING, LI. ***Applied Nonlinear Control***. Prentice-Hall 1990

Ref: 7 MORRIS, W. HIRSH; SMALE, STEPHEN. ***Differential Equations, Dynamical Systems and Linear Algebra***. Academic Press, INC, 1994

Ref: 8 TESCHL, GERALD. ***Ordinary differential equations and Dynamical Systems***. AMS-LATEX and Makeindex.Version: 2004

Ref: 9 HILE, EINAR. ***Ordinary Differential Equations in The Complex Domain***. John Wiley & Sons

Ref: 10 BRAUER, FRED; NOHEL, JOHN A. ***The Qualitative Theory of Ordinary Differential Equations***. Dover Publications 1989.

Ref: 11 KEMENY, JOHN G.; SNELL, J. LAURIE; THOMPSON, GERALD L.; ***Introduction to Finite Mathematics***. Prentice Hall

Ref: 12 TITS, ANDRE L.; WÄCHTER, ANDREAS; BAKHTIARI, SASAN; URBAN, THOMAS J.; CRAIG T. LAWRENCE. ***A Primal-Dual Interior-Point Method for Nonlinear Programming with Strong Global and Local Convergence Properties***. ISR Technical Report TR 2002-29 July 19, 2002

Ref: 13 ROBSON, ARTHUR J.; REDONDO, FERNANDO VEGA-; ***Efficient Equilibrium Selection in Evolutionary Games with Random Matching***. journal of economic theory 70, 65 a 92 (1996)

Ref: 14 RITZBERGER, KLAUS; WEIBULL, JÖRGEN W. ***Evolutionary Selection in Normal Forms Games***. Econometrica, Vol 63, Nº 6 (Nov. 1995), 1371-1399

Ref: 15 BINMORE, KEN; PICCIONE, MICHELE; SAMUELSON, LARRY. ***Evolutionary Stability in Alternating-Offers Bargaining Games***. Journal of Economic Theory 80, 257_291 (1998)

Ref: 16 BRANDENBURGER, ADAM M.; NELEBUFF, BARRY J.; ***The Rigth Game: Use Game Theory to Shape Strategy***. Harvard Business Review 1995.

Ref: 17 SMITH, JOHN. MAYNARD; PRICE, G. R. ***The Logic of Animal Conflict***. Nature Vol 246 15-18, (Nov 1973)

Ref: 18 SMITH, JOHN MAYNARD; ***The Games Lizards Play***. Nature, Vol 380 198-199, (Mar. 1996)

Ref: 19 NOWAK, MARTIN A.; SIGMUND, KARL. ***Evolutionary Dynamics of Biological Games Science***. Vol 303, 793-799, (Feb. 2004)

Ref: 20 SCHALK, ANDREA. ***The Theory of Games and Game Models***. Course CS3192, Department of Computer Science University of Manchester, 2003

Ref: 21 MURRAY, RICHARD M.; LI, ZEXIANG; SASTRY, S. SHANKAR. ***A Mathematical Introduction to Robotic Manipulation***. CRC Press LLC, 1994.

Ref: 22 POLYMENAKOS, BERTSEKAS, L. C.; D. P.; TSITSIKLIS, J. N. ***Implementation on Efficient Algorithms for Globally Optimal Trajectories***. IEEE Transactions on Automatic Control, Vol 43, 278-283, 1998

Ref: 23 PINTO, LEONTINA; SZCZUPAK, JACQUES. *Uma* ***plataforma de Comercialização baseada em preditores de Cenários Futuros***. VIII SEPOPE, IP 071 (Mai. 2002)

Ref: 24 PINTO, LEONTINA; SZCZUPAK, JACQUES; RAMOS, DOREL. ***Evolutionary Representation of Energy Markets and Systems***. Power Tech Conference Proceedings, 2003 IEEE Bologna**.**

Ref: 25 TABORDA, OSCAR A. FERNÁNDEZ; PINTO, LEONTINA M. V. G. ***Commercialization of Electric Energy in Competitive Environments***. Anais do VII Sepope, Brasil, 2000

Ref: 26 PINTO, LEONTINA M. V. G.; AIRES, JOÃO CARLOS DE OLIVEIRA. ***A Platform for Energy Business Administration***. Anais do VII Sepope, Brasil, 2000.

Ref: 27 CORREIA, PEDRO F.; WEBER, JAMES D.; OVERBYE, THOMAS J.; HISKENS, IAN [a]. ***Strategic Equilibria in Centralized Electricity Markets***. IEEE Porto Power Conference (Set 2001)

Ref: 28 FOSTER, DEAN; YOUNG, PEYTON. ***Stochastic Evolutionary Games Dynamics***. Catherine Press 1990.

Ref: 29 BINMORE, KEN; SAMUELSON, LARRY. ***Evolution and Mixed Strategies. Games and Economic Behavior*** 34, 200-226, 2001

Ref: 30 PETERS, RALF. ***Evolutionary Stability in the Ultimatum Game***. Group Decision and Negotiation 9, 315-324, 2000

Ref: 31 FICICI, SEVAN G.; MELNIK, OFER; POLLACK, JORDAN B. ***A Game Theoretic Investigation of Selection Methods Used in Evolutionary Algorithms***. Proceedings of the 2000 Congress on Evolutionary Computation, 880-887 IEEE Press, 2000.

Ref: 32 FLÅM, SJUR DIDRIK; ***Equilibrium, Evolutionary Stability and Gradient Dynamics***. Department of Economics, University of Bergen and Norwegian School of Economics and Business Administration, 2002

Ref: 33 FLÅM, SJUR DIDRIK; ***Cooperative Features of the Electricity Market***. Department of Economics, University of Bergen. University of Bergen and Norwegian School of Economics and Business Administration, julho de 2003

Ref: 34 FRIEDMAN, DANIEL. ***On Economic Applications of Evolutionary Game Theory***. Journal of Evolutionary Economics 8, 15-43, Spring Verlag 1998

Ref: 35 MESZÉNA, G.; KISDI, É.; DEICKMANN, U.; GERITZ, S.A.H.; METZ, J.A.J. ***Evolutionary Optimization Models and Matrix Games in the Unified Perspective of Adaptive Dynamics.*** Selection 2, 193-210, 2001

Ref: 36 WEIBULL, JÖRGEN W. ***What Have We Learned from Evolutionary Game Theory do Far?*** Econometric Society European Meeting, 1997.

Ref: 37 FICICI, SEVAN G.; POLLACK, JORDAN B. ***Game Theory and Simple Coevolutionary Algorithm: some Preliminary Results on Fitness Sharing.*** Genetic and Evolutionary Computation Conference Workshop Program, 2-7. 2001.

Ref: 38 TAYLOR, PETER. ***Evolutionary stable strategies with two types of players***. Journal of Applied Probability, 1979

Ref: 39 HALE, J. ***Ordinary Differential Equations***. Willey, 1969

Ref: 40 JACOBSON, J; SLOTH; B. ***Tools of the game theory***, 1996

Ref: 41 VON STENGEL, B. ***Computing equilibria for two person games***. London School of Economics, 1999

Ref: 42 DHILLON, MERTENS. ***Perfect correlated equilibria,*** Journal of Economic Theory 68, pg 279-302, 1996

Ref: 43 MISHRA, D. ***Introduction to game theory***. Department of Industrial Engineering University of Wisconsin, Madison, 2003

Ref: 44 VARIAN, HAL R. ***Intermediate Microeconomics, a modern approach***. W.W. Norton & Company, 2003

Ref: 45 SIMON, H. A.. ***From substantive to procedural rationality. Methods and Appraisal in Economics***. Cambridge University Press 1976.

Ref: 46 TAYLOR, P.; JONKER, L. ***Evolutionary stables strategies and game dynamics***. Mathematical Biosciences, Vol 40, 145-56, 1978

Ref: 47 RUBINSTEIN, ARIEL. ***Perfect Equilibrium in a Bargaining Model. Econometrica.*** Vol 50, 97-110, 1982

Ref: 48 LEWONTIN, R. ***Evolution and the Theory of Games***. Journal Theoretic of Biology Vol 1, 382-403, 1961

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ANEXO I – INTEGRAÇÃO NUMÉRICA

No Capítulo 7 foram utilizado métodos numéricos de integração para se alcançar o ponto de máximo nas funções de distribuição de cada jogador.

Existem diversas técnicas para integração numérica; a regra de Newton-Cotes, onde se incluem a regra do trapézio e o método de Simpson, as quadraturas de Gauss, sendo uma delas a de Gauss-Legendre e a fórmula de Lobato.

O procedimento para integração numérica por quadratura de Gauss-Lobatto, similar à quadratura de Gauss para integração unidimensional, é representada pela seguinte equação.

$$\int_{-1}^{+1} f(x)dx \approx \frac{2}{n(n-1)}\left[f(-1)+f(+1)\right]+\sum_{k=1}^{n-2}\omega_k f(\xi_k)$$

onde n é o número de pontos de integração empregados, ξ_k é a k-ésima coordenada do ponto de integração, com valor definido no intervalo $-1 < \xi_k < 1$.

Esta coordenada corresponde à k-ésima raiz de $P'_{n-1}(x)$ (primeira derivada em relação a x do polinômio de Legendre de grau n-1). O peso ω_k é dado por,

$$\omega_k = \frac{2}{n(n-1)\left[P'_{n-1}(\xi_k)\right]^2}$$

De modo mais explícito, consideremos uma função contínua φ, com apenas uma variável x, definida num intervalo [a,b] tal que $a \le x \le b$.

Para calcular o valor aproximado da integral definida, utiliza-se uma combinação linear de valores da função $\varphi(x)$ em certo pontos x_i tal que; $a \le x_i \le b$ e certos valore w_i, que são os pesos, de modo que a integral é calculada somando-se os produtos dos peso em cada ponto pelo valor da função no mesmo ponto, resultando:

$$\int_a^b \varphi(x)dx \cong \sum_{i=1}^{n} w_i \varphi(x_i) \qquad \textbf{Equação 10-1}$$

Os pontos x_i e os pesos w_i são determinados de modo que a regra seja exata para qualquer polinômio de grau 2n-1, sendo n o número de pontos tomados no intervalo [-1,1].

Esse intervalo corresponde a uma mudança de variável x para τ (adimensional). Assim, tem-se de proceder à seguinte transformação da integral (Equação 10-1):

$$\int_a^b \varphi(x)dx = J\int_{-1}^{1} g(\tau)d\tau \qquad \textbf{Equação 10-2}$$

O fator J é o Jacobiano da transformação, obtido fazendo-se:

$$\begin{bmatrix} x & \tau & 1 \\ a & -1 & 1 \\ b & 1 & 1 \end{bmatrix} = 0$$

Onde resulta que $x = \frac{b-a}{2}\tau + \frac{a+b}{2}$

E $dx = \frac{b-a}{2}d\tau$ *ou* $J = \frac{dx}{d\tau} = \frac{1}{2}(b-a)$

Logo da Equação 10-2, tem-se:

$$\int_a^b \varphi(x)dx = \frac{b-a}{2}\int_{-1}^{1} g(\tau)d\tau$$