Arthur L. Dryver, Ph.D.

CONTACT INFORMATION:

- Address: Graduate School of Business Administration, NIDA, 118 Seri Thai Road, BKK Thailand 10240
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EDUCATION:

- **Ph.D. in Statistics** (August, 1999)
  - *The Pennsylvania State University*, State College, PA, USA
    - Dissertation Topic: Adaptive Sampling
    - Advisor: Steven K. Thompson, Ph.D.
- **B.A. in Mathematical Sciences/Statistics** (May, 1993)
  - *Rice University*, Houston, TX, USA

EMPLOYMENT HISTORY:

- Associate Professor (Dec., 2009 to present and employed from Oct., 2003)
  - **National Institute of Development Administration**, BKK, TH
- Statistical Analyst Consultant (Jan., 2002 to Sept., 2003)
  - **Scorex an Experian Company**, CA, USA
- Project Manager (Dec., 2000 to Jan., 2002)
  - **AnaBus Inc.**, PA, USA
- Statistical Consultant (Aug., 1999 to Dec., 2000)
  - **PricewaterhouseCoopers**, DC, USA
- Instructor, Research Assistant, and Teaching Assistant (Aug., 1993 to Aug., 1999)
  - **The Pennsylvania State University**, PA, USA

CONSULTING EXPERIENCE:

- *Representative Companies*
  - General Electric, JCPenney, United States Postal Services, ...
- *Strategic Consulting - Sample Projects*
  - Data Quality Studies - Investigated client data for its accuracy and usefulness
  - Fraud Detection Models - Built statistical models in order to rank individuals applying for credit in terms of likelihood to commit fraud
  - Optimal Sample Allocation - Cut sampling costs without decreasing precision
  - Retail Equipment Comparison - Comparison of retail checkout counter equipment and design in terms of efficiency
  - E-Commerce (Return on Investment) - Compared different on-line advertising tools in terms of revenue generation
  - Targeted Marketing - Created a target list of individuals, who were expected to be the most profitable to acquire as future clients from a larger list of potential clients
- *Strategic Consulting - Duties*
  - Design: Discussed and helped put together the design of the project
  - Analysis: Multiple linear, logistic, and piecewise regression, decision tree, ANOVA, ANCOVA, simulation, Neyman allocation, post stratification, ...
  - Presentation: Helped make the presentations and presented to senior management
- *Process Improvement*
  - Benchmark model is a model created in order to obtain an estimate of expected performance should a final model be developed. Improved and coded the sampling, variable selection, and performance chart steps used in the benchmark model process
  - Developed programs that create hundreds of statistical reports in HTML to be viewed in Internet Explorer with hyperlinks. Saved numerous labor hours while producing more elegant reports for our clients
  - Developed Excel macros written in visual basic. Used macros to facilitate the importing and formatting of multiple text files into excel spreadsheets. Also used macros to create over a hundred formatted spreadsheets for each project with hyperlinks

SELECTED COURSES TAUGHT:

- National Institute of Development Administration
  - Data Mining
  - Quantitative Analysis for Business Decisions
  - Quantitative Research Methodology I
  - Quantitative Research Methodology II
  - Regression
  - Sampling Techniques
  - Sampling Theory
  - Statistical Methods for Population and Development Research I
  - Statistical Quality Control
  - Theory of Multivariate Statistics
- Dhurakij Pundit University International College
  - Advanced Statistics and Business Modeling
- Thammasat University, Chulalangkorn University, and NIDA
  - Part of an intensive course on statistics for the JDBA
- The Pennsylvania State University
  - Elementary Statistics

RESEARCH GRANTS:

- Head of various research grants at NIDA, titled:
  - An in-depth look at validating logistic regression models in relation to credit scoring
  - Ratio estimators in adaptive cluster sampling
  - The enhancement of teaching materials for applied statistics courses by combining random number generation and portable document format files via LaTeX

SELECTED PUBLICATIONS:

- Dryver, A.L., Netharn, Urairat, and Smith, David R. (2012). Partial systematic adaptive cluster sampling. *Environmetrics*** **23**(4), 306-316
- Dryver, A.L., and Nathaphan, S. (2012). A new perspective on daily value at risk estimates. *International Journal of Economics and Finance* **4**(4), 114-120
- Chao, C.T., Dryver, A.L., and Chiang, T.Z. (2011). Leveraging the Rao-Blackwell theorem to improve ratio estimators in adaptive cluster sampling. *Environmental and Ecological Statistics*** **18**(1), 543-568
- Dryver, A.L. (2011). Focusing on the lower scoring data in order to improve the credit scoring model selection. *Advances and Applications in Statistics* **20**(1), 25-41
- Dryver, A.L. (2009). The enhancement of teaching materials for applied statistics courses by combining random number generation and portable document format files via LaTeX. *Journal of Statistical Software*** **31**(Code Snippet 3), 1-9
- Dryver, A.L. and Boonsathorn, W. (2009, May-July). Enhancing training materials of quantitative subjects through random number generation using Microsoft Excel (article in Thai - translated title). *Competitiveness Review: NIDA Business School* **3**, 151-152
- Dryver, A.L. and Sukkasem, J. (2009). Validating risk models with a focus on credit scoring models. *Journal of Statistical Computation and Simulation*** **79**(2), 181-193
- Dryver A.L. (2008) *An introduction to business statistics.* LearnViaWeb.com
- Dryver A.L. (2008) Adaptive sampling. In *Encyclopedia of survey research methods.* (Vol. 1, pp. 4-6). Thousand Oaks, CA: Sage Publications, Inc.
- Dryver, A.L. and Chao, C.T. (2007). Ratio estimators in adaptive cluster sampling. *Environmetrics*** **18**(6), 607-620
- Dryver, A.L. and Thompson, S.K. (2007). Adaptive sampling without replacement of clusters. *Statistical Methodology* **4**, 35-43
- Dryver, A.L. and Thompson, S.K. (2005). Improved unbiased estimators in adaptive cluster sampling. *Journal of Royal Statistical Society*** **B 67**(1), 157-166
- Dryver, A.L. and Chao, C.T. (2005). Analysis of adaptive cluster sampling utilizing standard software packages without complex programming. *KMITL Science Journal* **5**(1), 200-208
- Dryver, A.L. (2003). Performance of adaptive cluster sampling estimators in a multivariate setting. *Environmental and Ecological Statistics*** **10**(1), 107-113

**ISI impact factor journal

RESEARCH AWARDS:

- Nominated for Rachapruek Excellent Research Award at NIDA
- Papers awarded for outstanding research by the NIDA:
  - Improved unbiased estimators in adaptive cluster sampling
  - Ratio estimators in adaptive cluster sampling
  - Validating Risk Models With a Focus on Credit Scoring Models

INVITED PRESENTATIONS:

- A new way to leverage the Kolmogorov-Smirnov test statistic for comparing credit scoring models
  - Strategies and Risk Analysis International Conference, 2009
  - ISTAR and CARISMA, Bangkok, Thailand
- Improving ratio estimators in adaptive cluster sampling using the Rao-Blackwell theorem
  - Survey Research Methodology Conference, 2006
  - Center for Survey Research, Academia Sinica, Taiwan
  - Support provided by the Center for Survey Research Taipei, Taiwan.
- Data quality and preparation for model building
  - National Conference of Applied Statistics, 2006
  - National Institute of Development Administration, Thailand
- Building a fraud detection model
  - Applied Statistics Seminar: Data Mining and its Applications, 2005
  - National Institute of Development Administration, Thailand
- A more efficient estimator in adaptive cluster sampling than the standard Hansen-Hurwitz type estimator
  - Future of Statistical Theory, Practice and Education, 2004
  - Indian School of Business, India

COMPUTER SKILLS:

- Environments
  - Linux, Mainframe, Unix, and Windows
- Statistical Software and Programming Languages
  - Basic, C++, Excel VBA, Fortran, HTML, JAVA, JCL, JSP, LaTeX, LINDO, MATLAB, Minitab, PAJEK, PASCAL, R, SAS, SIMAN, S-Plus, and SPSS

REFERENCES: Available upon request