# Rahul M. Dodhia

NASA Ames Research Center MS 262-4 Moffett Field, CA 94035

Phone: 650-604-2115 Fax: 650-604-3729

rdodhia@mail.arc.nasa.gov

777 W. Middlefield Rd, #62 Mountain View, CA 94043

Phone: 650-804-2884 rahul@rmdodhia.com

### **EDUCATION:**

10 / 2000 Ph.D. in Mathematical Psychology, Columbia University, New York, NY.

- Dissertation topic "Subjective Judgments of Statistical Likelihood Evidence"
- Awarded 5-year Faculty Fellowship; 4 time recipient of Departmental Research Award.

10 / 1998 M.Phil. in Cognitive Psychology, Columbia University, New York, NY.

• Statistics, Judgment and decision-making, Human memory.

10 / 1998 M.A. in Mathematical Psychology, Columbia University, New York, NY.

• Mathematical models of human memory.

5 / 1994 B.A. with High Honors in Mathematics, Minor in Economics, **Brandeis University**, **Waltham**, **MA**.

• Summa Cum Laude, Phi Beta Kappa, Robert Shapiro prize in Mathematics (1994).

• Awarded 4-year Brandeis University Grant.

#### **EXPERIENCE:**

9 / 1996 – Statistical and Research Consultant, New York City, NY and Mountain View, CA

Present • Provide services in biostatistics and clinical trials to biotechnology companies.

Provide consulting services in quantitative and research methods to corporations and researchers

NASA Ames Research Center, Moffett Field, CA

6/2001 - Senior Research Associate, Aviation Safety Branch, NASA Ames Research Center, Moffett Field, CA

Present • Perform mathematical and statistical analyses of empirical cognitive and aviation operation data.

• Create human factor applications of cognitive theory for use in aviation.

• Teach statistics courses to NASA researchers.

Columbia University, New York, NY.

9 / 2000 - **Post-doctoral Research Scientist,** Department of Psychology, Columbia University, New York, NY

5 / 2001 • Tested theoretical models of decision-making.

• Directed team of research assistants in data collection and statistical analysis.

9 / 1995 - Statistical and Research Consultant, Columbia University, New York, NY.

• Provided consulting services in statistics, computing and quantitative methods to researchers and corporations.

9 / 1995 - Website Designer

• Programmed websites for organizations (Columbia Bartending Agency, academic departments, etc.).

New York State Psychiatric Institute (NYSPI), New York, NY

9 / 1996 - **Research Technician,** Biological Studies Unit

9 / 1997 • Collected and analyzed data from brain imaging studies.

### **TEACHING EXPERIENCE:**

University of California, Santa Cruz, CA.

1 / 2002 - **Instructor,** Department of Psychology

• Taught *Problem Solving and Decision Making* to 4<sup>th</sup> year undergraduates.

Columbia University, New York, NY.

9 / 2000 - **Post-doctoral Fellow,** Quantitative Methods in Social Sciences,

• Advised Master's students about research and career issues.

• Taught statistics classes to Master's students.

7/2000 **Teacher**, Columbia University High School Program

• Taught college level math to ambitious high school students.

1 / 1997 - **Tutor**, Columbia University Translating and Tutoring Agency

• One-on-one tutoring in mathematics and statistics.

9 / 1995 - **Teaching Assistant,** Department of Psychology

12 / 1999 • Science of Psychology (Herb Terrace)

• Behavioral Neuroscience (Jon Horvitz)

• Research Methods and Statistics II (David Krantz)

• Introduction to Mathematical and Statistical Methods (for graduate students, Norma Graham and David Krantz)

• Cognition (Janet Metcalfe).

Phillips Academy, Andover, MA

5 / 1994 - **Teaching Fellow**.

8 / 1995 • Taught Precalculus and Calculus.

• Coached Squash.

• Supervised 40-member dormitory.

**RESEARCH GRANTS:** 

2004 - 2005 NASA Ames Director's Discretionary Fund, "Algorithms to track evaluate pilots' allocation of attention", Rahul M. Dodhia and R. Key Dismukes.

1999 - 2002 National Science Foundation, SBR 98-18849 (Evidence and uncertainty in human reasoning), David H. Krantz, Principal Investigator; Rahul M. Dodhia (co-author), Graduate Research Assistant.

1995-1999 4-time recipient of Psychology Research Grant, Columbia University.

### **PUBLICATIONS AND PRESENTATIONS:**

Dodhia, R.M., and Dismukes, R.K. (November, 2003). *A task interrupted becomes a prospective memory task: Encoding and retrieval manipulations.* Psychonomic Society.

Dodhia, R.M., and Dismukes, R.K. (May, 2003). *A task interrupted becomes a prospective memory task*. American Psychological Society.

Colvin, K, Dodhia, R. M., Belcher, S., & Dismukes, R. K. (2003). *Scanning for visual traffic: an eye tracking study*. Proceedings of the 12th International Symposium on Aviation Psychology, Dayton, OH, p.255-260.

Gelman, A., Pasarica, C., and Dodhia, R.M. (2002) Let's practice what we preach: turning tables into graphs in statistics papers. The American Statistician, 56(1), p.121-130

- Dodhia, R.M. (January, 2001). *Intertemporal and risky choice*. Invited Presentation, Institute for Social and Economic Research and Policy.
- Dodhia, R.M. (November, 2000) *Mapping likelihood functions to strength of evidence*. Invited Presentation, NASA Ames Research Center, Human Factors Division.
- Dodhia, R.M., and Metcalfe, J. (1999). *False memories and source monitoring*. Journal of Cognitive Neuropsychology, 16 (3-5), p.489-508.
- Dodhia, R.M., and Metcalfe, J. (1999). *False memories and source monitoring*. In Schacter, D. (ed.), Cognitive Neuropsychology of False Memories: A Special Issue of the Journal Cognitive Neuropsychology (pp.???-???). Hove, UK: Philadelphia Psychology Press, Ltd.
- Dodhia, R.M., Miller, G., and Krantz, D.H. (In preparation, presented at SMP 2000). Subjective strength of evidence judgments of likelihood functions.
- Dodhia, R.M., Burhans, K., and Krantz, D.H. (In preparation). Measuring the effects of uncertainty and delay.
- Dodhia, R.M. and Krantz, D.(December 1999). *Subjective judgments of likelihood evidence*. Cognitive Seminar Series, Columbia University,.
- Dodhia, R.M., Miller, G., and Krantz, D.H. (July, 1999). *Judgments of likelihood evidence*. Society for Mathematical Psychology.
- Dodhia, R.M. and Krantz, D. (December 1998). *Strength of evidence from likelihoods*. Cognitive Seminar Series, Columbia University.
- Dodhia, R.M. and Metcalfe, J. (June, 1997). *A Composite Memory Trace Account of Source Monitoring*. American Psychological Society.
- Dodhia, R.M. and Metcalfe, J. (April 1997). *A Composite Memory Trace Account of Source Monitoring*. Cognitive Seminar Series, Columbia University.
- Metcalfe, J. and Dodhia, R.M. (August, 1996). *Source Monitoring in a composite memory model*. Society for Mathematical Psychology.
- Dodhia, R.M. and Metcalfe, J. (April, 1996). *How do distributed memory models handle source monitoring?* Cognitive Seminar Series, Columbia University.
- Metcalfe, J & Dodhia, R. (1996). Source monitoring in a composite memory model. In Conference Abstracts of the 29th Annual Meeting of the Society for Mathematical Psychology. Burbeck, C., Hirshman, E., Marshall, J., Schmajuk, N., Wallsten, T. & Yung, Y. Journal of Mathematical Psychology (40), p.352

#### **Refereed Journals:**

Journal of the American Statistical Association Human Factors Memory and Cognition Journal of Experimental Psychology: Learning, Memory and Cognition

## **ACADEMIC COLLABORATORS**

David Krantz, Professor of Statistics and Psychology, Columbia University Andrew Gelman, Professor of Statistics, Columbia University Janet Metcalfe, Professor of Psychology, Columbia University Herb Terrace, Professor of Psychology, Columbia University John Hilton, Professor of Neurology, Columbia Presbyterian Medical Center Key Dismukes, Chief Scientist for Human Factors, NASA Ames Research Center Kurt Colvin, Assistant Professor of Industrial Engineering, California Polytechnic State University

### **Professional Affiliations**

Psychonomic Society, Society for Mathematical Psychology, Society for Judgment and Decision Making, Cognitive Neuroscience Society, American Psychological Society

### **SKILLS:**

Computer Windows, Macintosh and Unix operating systems; S+, R, SAS, SPSS, CodeWarrior, Mathematica, C /

Software: C++, SQL, RealBasic, etc.

Languages: Good knowledge of Gujarati, working knowledge of French, good knowledge of Swahili

Interests: Aviation (working towards General Aviation license), Sailing, Camping and Hiking, Ancient History