

Michael E. Glinsky

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EXPERIENCE

Sandia National Laboratories

2016-present

Research Physicist

- Conducting inertial confinement fusion research relevant to the hybrid magnetic/inertial scheme to produce energy from fusion called MagLIF using the Sandia Pulsed Power facilities (his includes analytic theory and large scale computer simulations)
- Advanced mathematical methods are being used to develop predictive models of plasma turbulence relevant to fusion

Geotrace Technologies

2014-2016

Manager, Reservoir Technologies

- Leading group to develop the next generation technologies to support petroleum development decision making

Halliburton

2014

Senior Technology Manager, Integrated Interpretation Group

- Led a group to develop technology for the integrated interpretation of downhole measurements

ION Geophysical

2012-2014

Research Director, Quantitative Interpretation

- Led a team to develop breakthrough technology for the integrated quantitative interpretation of multicomponent surface seismic, buried microseismic arrays, and well logs; goal was to revolutionize exploration and development of unconventional shale reservoirs

CSIRO (Australian national research laboratory)

2010-2012

CEO Science Leader / Adjunct Professor of Physics at University of Western Australia

- Led and conducted R&D on the physics of geology, including high performance computation; goal was to have predictive models of the self organization of geologic deposition
- Led joint Curtin University and CSIRO project to geophysically assess reservoirs for CO2 sequestration
- Set the scientific vision for the petroleum and mining division
- Led project to develop stochastic model based Bayesian inversion that integrated seismic time lapse and well information

BHP Billiton

2000-2010

Manager / Section Leader / Quantitative Interpretation Global Specialist

- Integration of physical measurements to assess mining resources with uncertainty, data acquisition optimization
- Line manager top geoscientists, manage \$4 million technology onboarding budget
- Development of uncertainty and risk analysis for petroleum exploration and development
- Project management, creation of Java based viewer of geologic models and seismic data
- Contributed to development of PVAT, a petroleum portfolio analysis tool
- Deployment of probabilistic lithology and fluid prediction (200+ worldwide applications)
- Designed and applied wavelet based method of geologic lithology identification
- CSIRO Medal for Research Achievement, 2004 (citation for reservoir characterization)

Shell International E&P Inc.

1983-1985, 1997-1999

Senior Research Physicist / Geophysicist

- Development and deployment of R&D management model based on option valuation
- Conceived and developed business and scientific solutions integrating heterogeneous software packages through more than 50,000 lines of new computer code
- Helped develop more than a half dozen integrated reservoir models (North Sea, NW Australian shelf and Gulf of Mexico), new technology added up to \$10 million in after tax NPV per project
- Solution of technical problems in statistical prestack seismic inversion including time lapse, refraction statics, the quantification of subsurface uncertainty and the application of neural networks to seismic imaging
- Extensive company training in geophysics, petroleum geology (especially turbidite stratigraphy), and programming techniques

Lawrence Livermore National Laboratory

1982, 1985, 1991-1997

Business Development / Business Strategy / Research

- Developed and helped execute business and marketing strategy for a new element of the Laser Program, using Laser Program core competencies to do product development funded by the biomedical device industry. Grown from inception to a \$4 million/yr project within 2 years
- Managed project of 10 people applying advanced neural networks and digital signal processing to seismic processing

- Theoretical and computational laser-biological tissue interaction research
- Theoretical and computational inertial confinement fusion research
- Experimental x-ray research
- Department of Energy Distinguished Postdoctoral Research Fellow
- LLNL Award for Outstanding Scientific Publication, 1994

EDUCATION

Executive Education *University of Chicago, Graduate School of Business (2001)*

- Corporate Finance, Advanced Options and Derivatives

Doctor of Philosophy in Physics (PhD) *University of California, San Diego (1985-1991)*

- Won the 1993 American Physical Society award for the best doctoral thesis in plasma physics
- Studies funded by a National Science Foundation Fellowship (3 year, full tuition plus monthly living stipend)
- Submitted successful proposals to the NSF Super Computer Center for a significant block of computer time
- Worked with a professor in organizing and lecturing the freshman honors level physics class
- Conducted research and collaborated with researchers at the University of Tokyo and Denmark

Bachelor of Science in Physics (BS) *Case Western Reserve University (1979-1983)*

- MBA level economics, operations research, accounting, and management information systems courses
- Senior Class President; organized the senior class activities, including financial and managerial accounting
- Member and officer (social chairman) of Sigma Nu fraternity
- Albert W. Smith Scholarship (4 year, full tuition, based on competitive scholastic examinations)

OTHER Bicycle racing (amateur level throughout U.S., Mexico and France)

INTERESTS Classical music (piano)

Photography (excellence recognized by Grauer Award, CWRU)

PUBLICATIONS 7 U.S. patents, 30 refereed scientific articles, 52 articles in scientific conference proceedings

LIST OF PUBLICATIONS

M.E. Glinsky, A. Cortis, J. Chen, D. Sassen, H. Rael, "Geomechanical property estimation of unconventional reservoirs using seismic data and rock physics," *Geophysical Prospecting* **63**, 1224 (2015).

J. Chen, M.E. Glinsky, "Stochastic inversion of seismic PP and PS data for reservoir parameter estimation," *Geophysics* **79**, R233 (2014).

D. Myer, S. Constable, K. Key, M.E. Glinsky, G. Lui, "Marine CSEM of the Scarborough gas field, Part 1: Experimental design and data uncertainty," *Geophysics* **77**, E281 (2012).

M. Strauss, M.E. Glinsky, "Turbidity current flow over an erodible obstacle and phases of sediment wave generation," *J. Geophys. Res.* **117**, C06007 (2012).

M.E. Glinsky, J. Gunning, "Understanding uncertainty in CSEM", *World Oil* **232**, 57 (2011).

J. Gunning, M.E. Glinsky, J. Hedditch, "Resolution and uncertainty in 1D CSEM inversion: a Bayesian approach and open-source implementation", *Geophysics* **75**, F151 (2010).

S. Bryant, C. Lerch, M.E. Glinsky "Critical grain size parameters for predicting framework and floating grains in sediments", *Journal of Sedimentary Research* **79**, 817 (2009).

S. Kalla, C.D. White, J. Gunning, M.E. Glinsky, "Downscaling multiple seismic inversion constraints to fine-scale flow models", *SPE Journal* **14**, 746 (2009).

S. Kalla, C.D. White, J. Gunning, M.E. Glinsky, "Consistent downscaling of seismic inversion thicknesses to cornerpoint flow models", *SPE Journal* **13**, 412 (2008).

- M.E. Glinsky, M.C. Haase, V. Charoing, G. Duncan, R. Hill, G. O'Halloran, L. Dang, J. Gunning, "Bayesian inversion whispers", *The Leading Edge* **27**, 642 (2008).
- M.E. Glinsky, J. Gunning, R. Pascoe, B. Asher, "The value of using relative amplitude changes", *The Leading Edge* **26**, 562 (2007).
- J. Gunning, M.E. Glinsky, C.D. White, "DeliveryMessenger: a tool for propagating seismic inversion information into reservoir models", *Computers & Geosciences* **33**, 630 (2007).
- J. Gunning, M.E. Glinsky, "Detection of reservoir quality using Bayesian seismic inversion", *Geophysics* **72**, R37 (2007).
- D.C. DeMartini, M.E. Glinsky, "A model for variation of velocity versus density trends in porous sedimentary rocks," *J. Appl. Phys.* **100**, 014910 (2006).
- J. Gunning, M.E. Glinsky, "Wavelet extractor: a Bayesian well-tie wavelet derivation program," *Computers & Geosciences* **32**, 681 (2006).
- F. Blanchette, M. Strauss, E. Meiburg, B. Kneller, M.E. Glinsky, "High-resolution numerical simulations of resuspending gravity currents: Conditions for self-sustainment," *J. Geophys. Res.* **110**, C12022 (2005).
- M.E. Glinsky, B. Asher, R. Hill, M. Flynn, M. Stanley, J. Gunning, T. Thompson, J. Kalifa, S. Mallat, C. White, D. Renard, "Integration of uncertain subsurface information into multiple reservoir simulation models," *The Leading Edge* **24**, 990
- J. Gunning, M.E. Glinsky, "Delivery: an open-source model-based Bayesian seismic inversion program," *Computers & Geosciences* **30**, 619 (2004).
- S.G. Kuzmin, T.M. O'Neil, M.E. Glinsky, "Guiding center drift atoms," *Phys. Plasmas* **11**, 2382 (2004)
- M. Strauss, M. Sapir, M.E. Glinsky, J.J. Melick, "Geologic lithofacies identification using the multiscale character of seismic reflections," *J. Appl. Phys.* **94**, 5350 (2003).
- M. Strauss, Y. Kaufman, M. Sapir, P. Amendt, R. A. London, M.E. Glinsky, "Self-consistent coupling of cavitation bubbles in aqueous systems," *J. Appl. Phys.* **91**, 4720 (2002).
- M. Friedman, M. Strauss, P. Amendt, R.A. London and M.E. Glinsky, "Two-dimensional Rayleigh model for bubble evolution in soft tissue," *Phys. Fluids* **14**, 1768 (2002).
- M.E. Glinsky, D.S. Bailey, R.A. London, P.A. Amendt, A.M. Rubenchik, M. Strauss, "An Extended Raleigh model of bubble evolution," *Phys. Fluids* **13**, 20 (2001).
- M.E. Glinsky, G.A. Clark, P.K.Z. Cheng, K.R.S. Devi, J.H. Robinson, G.E. Ford, "Automatic event picking in prestack migrated gathers using a probabilistic neural network," *Geophysics* **66**, 1488 (2001).
- F.N. Beg, A.R. Bell, A.E. Dangor, C.N. Danson, AP. Fews, M.E. Glinsky, B.A. Hammel, P. Lee, P.A. Norreys and M. Tatarakis, "A study of picosecond laser-solid interactions up to 10^{19} W cm⁻²," *Phys. Plasmas* **4**, 447 (1997).
- R.A. London, M.E. Glinsky, G.B. Zimmerman, D.S. Bailey, D.C. Eder, "Laser-tissue interaction modeling with LATIS," *Applied Optics* **36**, 9068 (1997).
- M.E. Glinsky, "A Simple Model of Suprathermal Electron Transport," *Physics of Plasmas* **2**, 2796 (1995).

M. Tabak, J. Hammer, M.E. Glinsky, W.L. Kruer, S.C. Wilks, J. Woodworth, E.M. Campbell, M.D. Perry, and R.J. Mason, "Ignition and High Gain with Ultra-Powerful Lasers," *Phys. of Plasmas* **1**, 1626 (1994).

M.E. Glinsky, T.M. O'Neil, M.N. Rosenbluth, K. Tsuruta and S. Ichimaru, "Collisional Equipartition Rate for a Magnetized Pure Electron Plasma," *Phys. Fluids B* **4**, 1156 (1992).

M.E. Glinsky and T. M. O'Neil, "Guiding Center Atoms: Three-body Recombination in a Strong Magnetic Field," *Phys. Fluids B* **3**, 1279 (1991).