

CURRICULUM VITAE

GENERAL

TANMOY BHATTACHARYA

Scientist 5, [Los Alamos National Laboratory](#) and
 Professor, [Santa Fe Institute](#)
[Santa Fe, NM 87501](#)
[United States of America](#)
 +1 (505) 946 2704

Date of birth: 5th November, 1962



EDUCATION

1982

B. Sc. in Physics, [IIT, Kharagpur](#), India

1984

M. Sc. in Physics, [IIT, Kharagpur](#), India

1989

Ph. D. in Physics, [Tata Institute of Fundamental Research](#), Bombay, India

EMPLOYMENT

1989–91

Post-doctoral fellow at [Brookhaven National Laboratory](#)

1991–92

Post-doctoral fellow at [Centre de Energie Atomique, Saclay](#)

9 Nov 1992–7 Nov 1994

Post-doctoral Fellow at [Los Alamos National Laboratory](#)

8 Nov 1994–5 Nov 1995

Post-doctoral Research Associate at [Los Alamos National Laboratory](#)

6 Nov 1995–31 Jan 1999

Limited Term Staff Member at [Los Alamos National Laboratory](#)

1 Feb 1999–27 Jul 2008

Staff Member at [Los Alamos National Laboratory](#)

28 Jul 2008–30 Jun 2013

Scientist 4 at [Los Alamos National Laboratory](#)


1 Jul 2013–

Scientist 5 at [Los Alamos National Laboratory](#)

2006–

Professor at [Santa Fe Institute](#)

PUBLICATIONS

This is a roughly reverse time-ordered list of my publications and a few unpublished papers. See my [academic interests](#) page for a brief description of the context in which this research sits. I have a [LinkedIn profile](#), but this page is likely to be more complete and updated. My ORCID is [0000-0002-1060-652X](#), Researcher id is [J-8956-2013](#)  and the Scopus Author ID [7006308075](#) conflates me with a namesake.

The links below from the author names go to their home pages. The ori links go directly to the papers. Note that on-line journals may need subscription. The pmid links go to pub med which provides a

detailed metadata for the paper, whereas PMC's and NIHMS's go to the [Pubmed Central](#) and the [NIH Manuscript Submission](#) system which makes US government funded biomedical work available for free after an embargo period. A list of my papers on the publicly accessible [e-print arXiv](#), which covers my physics interests, can be obtained using my arXiv public identifier [bhattacharya_t_1](#); the arXiv identifiers on the individual entries link to the abstract of the paper on the arXiv allowing retrieval of the full text; it might be more convenient to access one of its [mirror sites](#) instead. Though every attempt is made to update them, the versions on the arXiv are not always completely up to date.

The inspire links go to the [InSpire HEP database](#), which allows a citation search in high energy physics. The InSpire publication summary [page](#) provides statistics of my career in HEP publication; and my InSpire ID is [INSPIRE-00066839](#).

Citation count

Google scholar automatically maintains [a citation count](#). According to it, on Oct 18, 2013, the six most cited articles of mine had 893, 694, 602, 410, 290, and 273 citations. With 16 more articles with more than 100 citations and yet 14 others with 50 or more citations, overall my articles had garnered 7670 citations by that date, and I had an [h index](#) of 40. I used this data to calculate my $h(2)$ index to be 13, g index to be 86, i index to be 164.175, m index to be 103.5 and r index to be 6567. I also have a research gate [profile](#), though it is in a mess right now since they often cannot identify duplicate entries, and their selection of papers to include for calculating the impact factor misses most of my non-biology publication. So, on Apr 10, 2012, the total impact of 365.01 that it calculates is an underestimate, and the 256 publications it counts is equally an overestimate. I have contacted their help about how to fix, or work around, this.

Since like all automatic programs, it is difficult to know the accuracy of the google scholar results, I have also manually counted the number of citations each publication had on April 13, 2011. The number I quote below is the larger of the result from ISI Web of Knowledge and from the INSPIRE databases, and is an underestimate because these databases have a very uneven coverage of the various fields I work in. Also, comparing them across fields is a bit problematic. Nevertheless, the count stood at two papers with over 300 citations (317 and 395, not counting citations to responses), four more with over 100, 11 further with greater than 50 citations, 15 more with greater than 25 citations. A more robust measure is that I had over 28 (30 to be exact) papers with 28 citations or more, so my [h index](#) was 28. Similarly, my [g index](#) was 55, my [w index](#) was 9, and my [E and P indices](#) were 919 and about 677 respectively.

Miscellaneous

My [Erdős number](#) is at most 4, Einstein number at most 5, and Wolfgang Pauli and Eugene Wigner numbers at most 4, as detailed [here](#). My academic genealogy is traced [here](#).

In Chinese patent applications, my name is spelt 坦莫伊·巴塔查里亚, and in Japanese as バッタチャルヤ, タンモイ. In Devanagari script it is written as तन्मय भट्टाचार्य and I spell my name in Bengali as তন্ময় ভট্টাচার্য.

Papers and refereed conference papers

1. **Iso-vector and Iso-scalar Axial Charges of the Nucleon from Lattice QCD** (Tanmoy Bhattacharya, Saul D. Cohen, Rajan Gupta, Huey-Wen Lin, and Boram Yoon) *In preparation*.
2. **Iso-vector and Iso-scalar Tensor Charges of the Nucleon from Lattice QCD** (Tanmoy Bhattacharya, Vincenzo Cirigliano, Saul D. Cohen, Rajan Gupta, Anosh Joseph, Huey-Wen Lin, and Boram Yoon) *In preparation*.
3. **The Emergence of Life as a First Order Phase Transition** (Cole Mathis, Tanmoy Bhattacharya, Sara Imari Walker) [Los Alamos](#) report LA-UR-15-21595. [ori:oai:arXiv.org:1503.02776](#) [[nlin.AO](#)]

Submitted.

4. **Dimension-5 CP-odd operators: QCD mixing and renormalization** (Tanmoy Bhattacharya, Vincenzo Cirigliano, Rajan Gupta, Emanuele Mereghetti, and Boram Yoon) [Los Alamos report LA-UR-15-21109](#). [ori:oi:arXiv.org:1502.07325](https://arxiv.org/abs/1502.07325) [[hep-ph](#)] [[inspire](#)].
5. **HMMs for Optimal Detection of Cybernet Attacks.** (Justin Grana, David Wolpert, Joshua Neil, Dongping Xie, Tanmoy Bhattacharya) [Los Alamos report LA-UR-14-24747](#), Jul 2014. [Santa Fe working paper 2014-06-022](#), Jun 26 2014. *In preparation.*
6. **Preexisting compensatory amino acids compromise fitness costs of a HIV-1 T cell escape mutations.** (Donglai Liu, Tao Zuo, Bhavna Hora, Hongshuo Song, Wei Kong, Xianghui Yu, Nilu Goonetilleke, Tanmoy Bhattacharya, Alan S. Perelson, Barton F. Haynes, Andrew McMichael, and Feng Gao) [Los Alamos report LA-UR-14-24449](#) July 2013. [Retrovirology 11:1 \(2014\) 101](#); [ori:doi:10.1186/s12977-014-0101-0](https://doi.org/10.1186/s12977-014-0101-0); [pmid: 25407514](#); [PMC4264250](#). *Published Nov 19, 2014.*
7. **Impact of clade, geography and age of epidemic on HIV-1 neutralization by antibodies** (Peter Hraber, Bette T. Korber, Alan S. Lapedes, Robert T. Bailer, Michael S. Seaman, Hongmei Gao, Kelli M. Greene, Francine McCutchan, Carolyn Williamson, Jerome H. Kim, Sodsai Tovananabutra, Beatrice H. Hahn, Ronald Swanstrom, Michael M. Thompson, Feng Gao, Linda Harris, Elena Giorgi, Nicholas Hengartner, Tanmoy Bhattacharya, John R. Mascola, David C. Montefiori) [Journal of Virology 88:21 \(Nov 2014\). 12623–12643](#) [ori:doi:10.1128/JVI.01705-14](https://doi.org/10.1128/JVI.01705-14); [pmid: 25142591](#); [PMC4248897](#). *Published ahead of print August 20, 2014.*
8. **Equation of state in (2+1)-flavor QCD.** (A. Bazavov, [Tanmoy Bhattacharya](#), C. DeTar, H.-T. Ding, Steven Gottlieb, [Rajan Gupta](#), P. Hegde, U.M. Heller, F. Karsch, E. Laermann, L. Levkova, Swagato Mukherjee, P. Petreczky, C. Schmidt, C. Schroeder, R.A. Soltz, W. Soeldner, R. Sugar, M. Wagner, and P. Vranas), [Los Alamos report LA-UR-14-25672](#). [ori:oi:arXiv.org:1407.6387](https://arxiv.org/abs/1407.6387) [[hep-lat](#)] [Physical Review 90:09 \(2014\) 094503](#); [ori:doi:10.1103/PhysRevD.90.094503](https://doi.org/10.1103/PhysRevD.90.094503) *Published Nov 4, 2014.* [[inspire](#)].
9. **The QCD phase transition with physical-mass, chiral quarks.** ([Tanmoy Bhattacharya](#), Michael I. Buchoff, Norman H. Christ, H.-T. Ding, [Rajan Gupta](#), Chulwoo Jung, F. Karsch, Zhongjie Lin, R.D. Mawhinney, Greg McGlynn, Swagato Mukherjee, David Murphy, P. Petreczky, Dwight Renfrew, Chris Schroeder, R.A. Soltz, P.M. Vranas, and Hantao Yin) Brookhaven preprint BNL-103837-2014-JA, Columbia University preprint CU-TP-1205, INT preprint INT-PUB-14-003, [Los Alamos report LA-UR-14-21066](#), and Livermore preprint LLNL-JRNL-650194. [ori:oi:arXiv.org:1402.5175](https://arxiv.org/abs/1402.5175) [[hep-lat](#)] [Physical Review Letters 113:08 \(2014\) 082001](#); [ori:doi:10.1103/PhysRevLett.113.082001](https://doi.org/10.1103/PhysRevLett.113.082001) *Published Aug 18, 2014.* [[inspire](#)].
10. **Reversion and T cell escape mutations compensate the fitness loss of a CD8+T cell escape mutant in their cognate transmitted/founder virus.** (Hongshuo Song, Bhavna Hora, Tanmoy Bhattacharya, Nilu Goonetilleke, Michael K.P. Liu, Kevin Wiehe, Hui Li, Shilpa S. Iyer, Andrew J. McMichael, Alan S. Perelson, Feng Gao) [Public Library of Science One 9:7 \(2012\) e102734](#); [ori:doi:10.1371/journal.pone.0102734](https://doi.org/10.1371/journal.pone.0102734); [pmid: 25028937](#); [PMC4100905](#). *Published online Jul 16, 2014.*
11. **Automatic Estimation of Transmitted Founder Variants in Acute HIV-1 Infection.** *In preparation.*
12. **Universal replication and the origins of biological diversity.** (Sara Imari Walker and Tanmoy Bhattacharya) [Los Alamos report LA-UR-13-25377](#) July 2013. *Unpublished.*
13. **Evolutionary dynamics and information hierarchies in biological systems.** (Sara Imari Walker, Benjamin J. Callahan, Gaurav Arya, J. David Barry, Tanmoy Bhattacharya, Sergei Grigoryev, Matteo Pellegrini, Karsten Rippe, Susan M. Rosenberg) [Annals of the New York Academy of Sciences, 1305:Annals Reports \(December 2013\) 1–17](#); [ori:doi:10.1111/nyas.12140](https://doi.org/10.1111/nyas.12140); [pmid: 23691975](#). *First published online May 20, 2013.*
14. **Nucleon Charges and Electromagnetic Form Factors from 2+1+1-Flavor Lattice QCD.** (Tanmoy Bhattacharya, Saul D. Cohen, Rajan Gupta, Anosh Joseph, Huey-Wen Lin, and Boram Yoon) [Los Alamos report LA-UR-13-24606](#), University of Washington preprint NT@UW-13-23, [ori:oi:arXiv.org:1306.5435](https://arxiv.org/abs/1306.5435) [[hep-lat](#)] [Physical Review D89:9 \(2014\) 094502](#); [ori:doi:10.1103/PhysRevD.89.094502](https://doi.org/10.1103/PhysRevD.89.094502) *Published May 6, 2014.* [[inspire](#)].
15. **Detecting regular sound changes in linguistics as an example of concerted evolution.** (Daniel J. Hruschka, Simon Branford, Eric D. Smith, Jon Wilkins, Andrew Meade, Mark Pagel, and Tanmoy Bhattacharya) [Los Alamos report LA-UR-14-29463](#), Dec 2014. [Current Biology 25:1 \(2015\) 1–9](#); [ori:doi:10.1016/j.cub.2014.10.064](https://doi.org/10.1016/j.cub.2014.10.064); *Published online Dec 18, 2014.*

16. **Event-driven non-cooperative games.** (David H. Wolpert, Tanmoy Bhattacharya, Russel Bent, Joshua Neil, Alexander Kent and Annarita Giani) [Los Alamos report LA-UR-13-22238](#), Mar 2013. *Unpublished*
17. **Molecular Mechanisms of HIV Type 1 Prophylaxis Failure Revealed by Single-Genome Sequencing.** (Hui Li, Lily Blair, Yalu Chen, Gerald Learn, Katja Pfafferott, Mina John, Tanmoy Bhattacharya, Beatrice H Hahn, Simon Mallal, George M Shaw, and Katherine J Bar) [The Journal of Infectious Diseases](#) **208:10** (2013) 1598–1603; [ori:doi:10.1093/infdis/jit485](#); [pmid: 24023257](#). [PMC3805246](#); *Published online Sep 9, 2013.*
18. **Human APOBEC3 Induced Mutation of Human Immunodeficiency Virus Type-1 Contributes to Adaptation and Evolution in Natural Infection.** (Eun-Young Kim, Ramon Lorenzo-Redondo, Susan J. Little, Yoon-Seok Chung, Prabhjeet K. Phalora, Irina Malijjkovic Berry, John P. Archer, Sudhir Penugonda, Will Fischer, Douglas D. Richman, Tanmoy Bhattacharya, Michael H. Malim, and Steven M. Wolinsky) [Los Alamos report LA-UR-14-25673](#) [Public Library of Science Pathogens](#) **10:7** (2014) e1004281; [ori:doi:10.1371/journal.ppat.1004281](#). *Published online Jul 31, 2014.*
19. **Modeling sequence evolution in HIV-1 infection with recombination.** (Elena E. Giorgi, Bette T. Korber, Alan S. Perelson, and Tanmoy Bhattacharya), [Los Alamos report LA-UR-12-24298](#), Sep 2012. [Journal of Theoretical Biology](#) **329** (21 July 2013) 82–93; [ori:doi:10.1016/j.jtbi.2013.03.026](#); [pmid: 23567647](#); [PMC3667750](#); [NIHMS465784](#). *Published online Apr 6, 2013.*
20. **Quantifying the Diversification of Hepatitis C Virus (HCV) During Primary Infection: Estimates of the *In Vivo* Mutation Rate.** (Ruy M. Ribeiro, Hui Li, Shuyi Wang, Mark B. Stoddard, Gerald H. Learn, Bette T. Korber, Tanmoy Bhattacharya, Jeremie Guedj, Erica H. Parrish, Beatrice H. Hahn, George M. Shaw, and Alan S. Perelson), [Los Alamos report LA-UR-12-20157](#), 22 Mar 2012. [Public Library of Science Pathogens](#) **8:8** (2012) e1002881; [ori:doi:10.1371/journal.ppat.1002881](#); [pmid: 22927817](#); [PMC3426522](#). *Published online Aug 23, 2012.*
21. **Computationally-Identified Mutations Suspected to Cause gp120 Charge Inversion and gp41-Mediated Allosteric Effects Impact HIV-1 Susceptibility to Neutralization.** (Anthony R. Geonnotti, S. Gnanakaran, Marcus G. Daniels, Tanmoy Bhattacharya, Alan S. Lapedes, Bette Korber, and David C. Montefiori), *In revision for JVI.*
22. **Elucidation of Hepatitis C Virus Transmission and Early Diversification by Single Genome Sequencing.** (Hui Li, Mark B. Stoddard, Shuyi Wang, Lily M. Blair, Elena E. Giorgi, Erica H. Parrish, Gerald H. Learn, Peter Hraber, Paul A. Goepfert, Michael S. Saag, Thomas N. Denny, Barton F. Haynes, Beatrice H. Hahn, Ruy M. Ribeiro, Alan S. Perelson, Bette T. Korber, Tanmoy Bhattacharya, and George M. Shaw), [Los Alamos report LA-UR-12-20288](#), Mar 2012. [Public Library of Science Pathogens](#) **8:8** (2012) e1002880; [ori:doi:10.1371/journal.ppat.1002880](#); [pmid: 22927816](#); [PMC3426529](#). *Published online Aug 23, 2012.*
23. **Impact of immune escape mutations on HIV-1 fitness in the context of the cognate transmitted/founder genome.** (Hongshuo Song, Jeffrey W. Pavlichek, Fangping Cai, Tanmoy Bhattacharya, Hui Li, Shilpa S. Iyer, Katharine J. Bar, Julie M. Decker, Nilu Goonetilleke, Michael K.P. Liu, Anna Berg, Bhavna Hora, Mark S. Drinker, Josh Eudailey, Joy Pickeral, M. Anthony Moody, Guido Ferrari, Andrew McMichael, Alan S. Perelson, George M. Shaw, Beatrice H. Hahn, Barton F. Haynes, and Feng Gao), [Retrovirology](#) **9:10** (2012) 89; [ori:doi:10.1186/1742-4690-9-89](#); [pmid: 23110705](#); [PMC3496648](#). *Published online Oct 30, 2012.*
24. **On the universal structure of human lexical semantics.** (Hyejin Youn, Logan Sutton, Eric Smith, Cristopher Moore, Jon Wilkins, Ian Maddieson, William Croft, and Tanmoy Bhattacharya) *Submitted.*
25. **Chiral transition and $U(1)_A$ symmetry restoration from lattice QCD using Domain Wall Fermions.** (A. Bazavov, [Tanmoy Bhattacharya](#), Michael I. Buchoff, Michael Cheng, N.H. Christ, H.-T. Ding, [Rajan Gupta](#), Prasad Hegde, Chulwoo Jung, F. Karsch, Zhongjie Lin, R.D. Mawhinney, Swagato Mukherjee, P. Petreczky, R.A. Soltz, P.M. Vranas, and Hantao Yin) Columbia University preprint CU-TP-1200, Brookhaven preprint BNL-97301-2012-JA, [Los Alamos report LA-UR-12-21329](#), Livermore preprint LLNL-JRNL-557574. [ori:oai:arXiv.org:1205.3535 \[hep-lat\]](#) [Physical Review D](#). **D86:9** (2012) 094503; [ori:doi:10.1103/PhysRevD.86.094503](#) *Published Nov 6, 2012.* [[inspire](#)].
26. **Fluctuations and Correlations of net baryon number, electric charge, and strangeness: A**

- comparison of lattice QCD results with the hadron resonance gas model.** (A. Bazavov, [Tanmoy Bhattacharya](#), C.E. DeTar, H.-T. Ding, Steven Gottlieb, [Rajan Gupta](#), P. Hegde, Urs M. Heller, F. Karsch, E. Laermann, L. Levkova, Swagato Mukherjee, P. Petreczky, Christian Schmidt, R.A. Soltz, W. Soeldner, R. Sugar, and Pavlos M. Vranas) [ori:oi:arXiv.org:1203.0784 \[hep-lat\]](#) [Physical Review D86:3 \(2012\) 034509](#); [ori:doi:10.1103/PhysRevD.86.034509](#) *Published Aug 31, 2012* [[inspire](#)].
27. **Probing Novel Scalar and Tensor Interactions from (Ultra)Cold Neutrons to the LHC.** ([Tanmoy Bhattacharya](#), Vincenzo Cirigliano, Saul D. Cohen, Alberto Filipuzzi, Martín González-Alonso, Michael L. Graesser, [Rajan Gupta](#), Huey-Wen Lin) [Los Alamos](#) report LA-UR-11-11460, September 2011. University of Washington preprint NT@UW-11-16, Universitat de València preprint IFIC/11-57 and FTUV/11-1007, University of Wisconsin-Madison preprint NPAC-11-14, [ori:oi:arXiv.org:1110.6448 \[hep-ph\]](#) [Physical Review D85:5 \(2012\) 054512](#); [ori:doi:10.1103/PhysRevD.85.054512](#). *Published Mar 30, 2012.* [[inspire](#)].
28. **Chiral and deconfinement aspects of the QCD transition** (A. Bazavov, [T. Bhattacharya](#), M. Cheng, C. DeTar, H.-T. Ding, Steven Gottlieb, [R. Gupta](#), P. Hegde, U.M. Heller, F. Karsch, E. Laermann, L. Levkova, S. Mukherjee, P. Petreczky, C. Schmidt, R.A. Soltz, W. Soeldner, R. Sugar, D. Toussaint, W. Unger, and P. Vranas) [BNL](#) report BNL-96539-2011-JA, [LANL](#) report LA-UR-11928. [ori:oi:arXiv.org:1111.1710 \[hep-lat\]](#) [Physical Review D85:5 \(2012\) 054503](#); [ori:doi:10.1103/PhysRevD.85.054503](#). *Published Mar 5, 2012.* [[inspire](#)].
29. **Greenbergian universals, diachrony and statistical analysis** (William Croft, [Tanmoy Bhattacharya](#), Dave Kleinschmidt, D. Eric Smith, T. Florian Jaeger), [Los Alamos](#) report LA-UR-11-03658, June 2011. [Linguistic Typology 15:2 \(2011\) 433–453](#) [ori:doi:10.1515/LITY.2011.029](#). *Published online Nov 22, 2011.*
30. **Geographical distribution of phonological complexity** (Ian Maddieson, [Tanmoy Bhattacharya](#), Eric Smith, William Croft), [Los Alamos](#) report LA-UR-11-03659, June 2011. [Linguistic Typology 15:2 \(2011\) 267–269](#) [ori:doi:10.1515/LITY.2011.020](#). *Published online Nov 22, 2011.*
31. **A Note on Two-sample Tests for Comparing Intra-individual Genetic Sequence Diversity between Populations** (EE Giorgi and [T Bhattacharya](#)) [Los Alamos](#) report LA-UR-11-10065. [Biometrics](#) [ori:doi:10.1111/j.1541-0420.2012.01775.x](#); pmid: 23004569; PMC3652673; NIHMS454001. *Published online Sep 24, 2012.*
32. **Role of Donor Genital Tract HIV-1 Diversity in the Transmission Bottleneck** (Debrah I. Boeras, Peter T. Hraber, Mackenzie Hurlston, Tammy Evans-Strickfaden, [Tanmoy Bhattacharya](#), Elena E. Giorgi, Joseph Mulenga, Etienne Karita, Bette T. Korber, Susan Allen, Clyde E. Hart, Cynthia A. Derdeyn and Eric Hunter) [Los Alamos](#) report LA-UR-11-11256. [Proceedings of the National Academy of Sciences 108:46 \(2011\) E1156–E1163](#) [ori:doi:10.1073/pnas.1103764108](#); pmid: 22065783; PMC3219102. *Published online Nov 7, 2011.*
33. **Recurrent Signature Patterns in HIV-1 B Clade Envelope Glycoproteins Associated with either Early or Chronic Infection** (S. Gnanakaran, [Tanmoy Bhattacharya](#), Marcus Daniels, Brandon F. Keele, Peter T. Hraber, Alan S. Lapedes, Tongye Shen, Brian Gaschen, Mohan Krishnamoorthy, Hui Li, Julie M. Decker, Jesus F. Salazar-Gonzalez, Shuyi Wang, Chunlai Jiang, Feng Gao, Ronald Swanstrom, Jeffrey A. Anderson, Li-Hua Ping, Myron S. Cohen, Martin Markowitz, Paul A. Goepfert, Michael S. Saag, Joseph J. Eron, Charles B. Hicks, William A. Blattner, Georgia D. Tomaras, Mohammed Ashmal, Norman L. Letvin, Peter B. Gilbert, Allan C. DeCamp, Craig A. Magaret, William R. Schief, Yih-En Andrew Ban, Ming Zhang, Kelly A. Soderberg, Joseph G. Sodorsky, Barton F. Haynes, George M. Shaw, Beatrice H. Hahn and Bette Korber) [Public Library of Science Pathogens 7:9 \(2011\) e1002209](#) [ori:doi:10.1371/journal.ppat.1002209](#); pmid: 21980282; PMC3182927. *Published online September 29, 2011.*
34. **A Signature in HIV-1 Envelope Leader Peptide Associated with Transition from Acute to Chronic Infection Impacts Envelope Processing and Infectivity** (Mohammed Asmal, Ina Hellmann, Weimin Liu, Brandon F. Keele, Alan S. Perelson, [Tanmoy Bhattacharya](#), S. Gnanakaran, Marcus Daniels, Barton F. Haynes, Bette T. Korber, Beatrice H. Hahn, George M. Shaw and Norman L. Letvin) [Public Library of Science One 6:8 \(2011\) e23673](#) [ori:doi:10.1371/journal.pone.0023673](#); pmid: 21876761; PMC3158090. *Published online August 18, 2011.*
35. **Epitope-specific CD8⁺ T Lymphocytes Cross-recognize Mutant SIV Sequences but Fail to Contain Very Early Evolution and Eventual Fixation of Epitope Escape Mutations During**

- SIV Infection.** (Evan M. Cale, Peter Hraber, Elena E. Giorgi, Will Fisher, [Tanmoy Bhattacharya](#), Thomas Leitner, Wendy W. Yeh, Cheryl Gleasner, Lance D. Green, Cliff S. Han, Bette Korber, and Norman L. Letvin) *Journal of Virology* **85:8** (2011) 3746–3757. [ori:doi:10.1128/JVI.02420-10](#); [pmid: 21307185](#); [PMC3126128](#). *Published ahead of print February 9, 2011.*
36. **Genital tract sequestration of SIV following acute infection** (James B. Whitney, Peter T. Hraber, Corinne Luedemann, Elena E. Giorgi, Marcus G. Daniels, [Tanmoy Bhattacharya](#), Srinivas S. Rao, John R. Mascola, Gary J. Nabel, Bette T. Korber, and Norman L. Letvin) *Public Library of Science Pathogens* **7:2** (2011) e1001293 [ori:doi:10.1371/journal.ppat.1001293](#); [pmid: 21379569](#); [PMC3040679](#). *Published online February 17, 2011.*
37. **Absence of Xenotropic Murine Leukemia Virus-Related Virus in Blood Cells of Men at Risk for and Infected with HIV** (Kevin J. Kunstman, [Tanmoy Bhattacharya](#), John Flaherty, John P. Phair, and [Steven M. Wolinsky](#)) Los Alamos report LA-UR-09-08117, December 2009. *AIDS* **24:11** (July 17, 2010) 1784–1785 [ori:doi:10.1097/QAD.0b013e32833b76fb](#); [pmid: 20597166](#). 2 citations as of Apr 13, 2011.
38. **Transmission of Single HIV-1 and Dynamics of Early Immune Escape Revealed by Ultra-deep Sequencing** (Will Fischer, Vitaly V. Ganusov, [Elena E. Giorgi](#), Peter T. Hraber, Brandon F. Keele, Thomas Leitner, Cliff S. Han, Cheryl D. Gleasner, Lance Green, Chien-Chi Lo, Ambarish Nag, Timothy C. Wallstrom, Shuyi Wang, Andrew J. McMichael, [Barton F. Haynes](#), [Beatrice H. Hahn](#), [Alan S. Perelson](#), Persephone Borrow, [George M. Shaw](#), [Tanmoy Bhattacharya](#), and [Bette Korber](#)) *Public Library of Science One* **5:8** (2010) e12303 [ori:doi:10.1371/journal.pone.0012303](#); [pmid: 20808830](#); [PMC2924888](#). *Published online August 20, 2010.* 3 citations as of Apr 13, 2011.
39. **High Multiplicity Infection by HIV-1 in Men Who Have Sex with Men** (Hui Li, Katharine J. Bar, Shuyi Wang, Julie M. Decker, Yalu Chen, Chuanxi Sun, Jesus F. Salazar-Gonzalez, Maria G. Salazar, Gerald H. Learn, Charity J. Morgan, Joseph E. Schumacher, Peter Hraber, [Elena E. Giorgi](#), [Tanmoy Bhattacharya](#), [Bette T. Korber](#), [Alan S. Perelson](#), Joseph J. Eron, Myron S. Cohen, Charles B. Hicks, [Barton F. Haynes](#), Martin Markowitz, Brandon F. Keele, [Beatrice H. Hahn](#), and [George M. Shaw](#)) *Public Library of Science Pathogens* **6:5** (2010) e1000890. [ori:doi:10.1371/journal.ppat.1000890](#); [pmid: 20485520](#); [PMC2869329](#). *Published online May 13, 2010* 8 citations as of Apr 13, 2011.
40. **Genetic signatures in the Envelope Glycoproteins of HIV-1 that Associate with Broadly Neutralizing Antibodies.** ([S. Gnanakaran](#), [Marcus G. Daniels](#), [Tanmoy Bhattacharya](#), [Alan S. Lapedes](#), [Anurag Sethi](#), [Ming Li](#), [Haili Tang](#), [Kelli Greene](#), [Hongmei Gao](#), [Barton F. Haynes](#), [Myron S. Cohen](#), [George M. Shaw](#), [Michael Seaman](#), [Amit Kumar](#), [Feng Gao](#), [David C. Montefiori](#), and [Bette Korber](#)) *Public Library of Science Computational Biology* **6:10** (2010) e1000955 [ori:doi:10.1371/journal.pcbi.1000955](#); [pmid: 20949103](#); [PMC2951345](#). *Published online October 7, 2010.* 1 citation as of Apr 13, 2011.
41. **Estimating time since infection in Early Homogeneous HIV-1 Samples using a Poisson Model** ([Elena E. Giorgi](#), [Bob Funkhouser](#), [Gayathri Athreya](#), [Alan S. Perelson](#), [Bette Korber](#), and [Tanmoy Bhattacharya](#)) *Biomedcentral Bioinformatics* **11** (2010) 532 [ori:doi:10.1186/1471-2105-11-532](#); [pmid: 20973976](#); [PMC2975664](#). *Published online October 25, 2010.* 1 citation as of Apr 13, 2011.
42. **Tiered Categorization of a Diverse Panel of HIV-1 Env Pseudoviruses for Neutralizing Antibody Assessment** ([Michael S. Seaman](#), [Holly Janes](#), [Natalie Hawkins](#), [Lauren E. Grandpre](#), [Colleen Devoy](#), [Ayush Giri](#), [Rory T. Coffee](#), [Linda Harris](#), [Blake Wood](#), [Marcus G. Daniels](#), [Tanmoy Bhattacharya](#), [Alan Lapedes](#), [Victoria R. Polonis](#), [Francine E. McCutchan](#), [Peter B. Gilbert](#), [Steve G. Self](#), [Bette T. Korber](#), [David C. Montefiori](#), and [John R. Mascola](#)) *Journal of Virology* **84:3** (2010) 1439–1452 [ori:doi:10.1128/JVI.02108-09](#); [pmid: 19939925](#); [PMC2812321](#). *Published online November 25, 2009.* 14 citations as of Apr 13, 2011.
43. **Breadth of HIV-specific Neutralizing Activity in Sera: Clustering Analysis and Association with Clinical Variables** ([Nicole A. Doria-Rose](#), [Rachel M. Klein](#), [Marcus G. Daniels](#), [Sijy O'Dell](#), [Martha Nason](#), [Alan Lapedes](#), [Tanmoy Bhattacharya](#), [Stephen A. Migueles](#), [Richard T. Wyatt](#), [Bette T. Korber](#), [John R. Mascola](#), and [Mark Connors](#)), *Journal of Virology* **84:3** (2010) 1631–1636 [ori:doi:10.1128/JVI.01482-09](#); [pmid: 19923174](#); [PMC2812355](#). *Published online November 18, 2009.* 12 citations as of Apr 13, 2011.
44. **Equation of state and QCD transition at finite temperature** ([A. Bazavov](#), [T. Bhattacharya](#), [M. Cheng](#), [N.H. Christ](#), [C. DeTar](#), [S. Ejiri](#), [Steven Gottlieb](#), [R. Gupta](#), [U.M. Heller](#), [K. Huebner](#), [C. Jung](#), [F. Karsch](#), [E. Laermann](#), [L. Levkova](#), [C. Miao](#), [R.D. Mawhinney](#), [P. Petreczky](#), [C. Schmidt](#), [R.A. Soltz](#), [W. Soeldner](#), [R. Sugar](#), [D. Toussaint](#), [P. Vranas](#)) [ori:oai:arXiv.org:0903.4379 \[hep-lat\]](#)

- Physical Review **D80:1** (2009) 014504; [ori:doi:10.1103/PhysRevD.80.014504](#). Published Jul 17, 2009. [inspire]. 193 citations as of Apr 13, 2011.
45. **The First T Cell Response to Transmitted/Founder Virus Contributes to the Control of Acute Viremia in HIV-1 Infection** (Nilu Goonetilleke, Michael K.P. Liu, Jesus F. Salazar-Gonzalez, Guido Ferrari, [Elena Giorgi](#), Vitaly V. Ganusov, Brandon F. Keele, Gerald H. Learn, Emma L. Turnbull, Maria G. Salazar, Kent J. Weinhold, Stephen Moore, CHAVI Clinical Core B, [Norman Letvin](#), [Barton F. Haynes](#), Myron S. Cohen, Peter Hraber, [Tanmoy Bhattacharya](#), Persephone Borrow, [Alan S. Perelson](#), [Beatrice H. Hahn](#), [George M. Shaw](#), [Bette T. Korber](#) and Andrew J. McMichael) *Journal of Experimental Medicine* **206:6** (2009) 1253–1272 [ori:doi:10.1084/jem.20090365](#); pmid: 19487423; PMC2715063. Published online June 1, 2009. 66 citations as of Apr 13, 2011.
 46. **Low-dose rectal inoculation of rhesus macaques by SIVsmE660 or SIVmac251 recapitulates human mucosal infection by HIV-1** (Brandon F. Keele, Hui Li, Gerald H. Learn, Peter Hraber, [Elena E. Giorgi](#), Truman Grayson, Chuanxi Sun, Yalu Chen, Wendy W. Yeh, [Norman L. Letvin](#), John R. Mascola, Gary J. Nabel, [Barton F. Haynes](#), [Tanmoy Bhattacharya](#), [Alan S. Perelson](#), [Bette T. Korber](#), [Beatrice H. Hahn](#) and [George M. Shaw](#)) Los Alamos report LA-UR-08-08081, December 2008. *Journal of Experimental Medicine* **206:5** (2009) 1117–1134. [ori:doi:10.1084/jem.20082831](#); pmid: 19414559; PMC2715022. Published online May 4, 2009. 39 citations as of Apr 13, 2011.
 47. **The HLA-B/-C Haplotype Block Contains Major Determinants for Host Control of HIV** (Elizabeth Trachtenberg, [Tanmoy Bhattacharya](#), Martha Ladner, John Phair, Henry Erlich and [Steven M. Wolinsky](#)) Los Alamos report LA-UR 08-07875, December 2008. *Genes and Immunity* **10:8** (2009) 673–677; [ori:doi:10.1038/gene.2009.58](#); pmid: 19693088; PMC2873233; NIHMS201076. Published online August 20, 2009. 4 citations as of Apr 13, 2011.
 48. **Human APOBEC3G-mediated Editing can Promote HIV-1 Sequence Diversification and Accelerate Adaptation to Selective Pressure.** (Eun-Young Kim, [Tanmoy Bhattacharya](#), Kevin Kunstman, Peter Swantek, Fransje A. Koning, Michael H. Malim and [Steven M. Wolinsky](#)) Los Alamos report LA-UR 08-07876, December 2008. *Journal of Virology* **84:19** (2010) 10402–10405. [ori:doi:10.1128/JVI.01223-10](#); pmid: 20660203; PMC2937764. Published ahead of print July 21, 2010 1 citation as of Apr 13, 2011.
 49. **CCL3L1 and HIV/AIDS susceptibility** ([Tanmoy Bhattacharya](#), Jennifer Stanton, Eun-Young Kim, Kevin J. Kunstman, John P. Phair, Lisa P. Jacobson and [Steven M. Wolinsky](#)) Los Alamos report LA-UR-08-07711, December 2008. *Nature Medicine* **15:10** (October 2009) 1112–1115 [ori:doi:10.1038/nm1009-1112](#); pmid: 19812561. Corrected online Nov 3, 2009. 11 citations as of Apr 13, 2011.
 50. **Detecting Recombination within Highly Similar Sequences** *In preparation.*
 51. **HIV Evolution in Early Infection: Selection Pressures, Patterns of Insertions and Deletions and the impact of Apobec** (Natasha Wood, [Tanmoy Bhattacharya](#), Brandon F. Keele, [Elena Giorgi](#), Michael Liu, Brian Gaschen, [Marcus Daniels](#), Guido Ferrari, [Barton F. Haynes](#), Andrew McMichael, [George M. Shaw](#), [Beatrice H. Hahn](#), [Bette Korber](#) and Cathal Seoighe) Los Alamos report LA-UR-08-00653, February 2008. *Public Library of Science Pathogens* **5:5** (2009) e1000414. [ori:doi:10.1371/journal.ppat.1000414](#); pmid: 19424423; PMC2671846. Published online May 8, 2009 13 citations as of Apr 13, 2011.
 52. **Highly Complex Neutralization Determinants on a Monophyletic Lineage of Newly Transmitted Subtype C Human Immunodeficiency Virus Type 1 Env Clones from India** (Smita S. Kulkarni, Alan Lapedes, Haili Tang, [S. Gnanakaran](#), [Marcus G. Daniels](#), Ming Zhang, [Tanmoy Bhattacharya](#), Ming Li, Victoria R. Polonis, Francine E. McCutchan, Lynn Morris, Dennis Ellenberger, Salvatore T. Butera, Robert C. Bollinger, [Bette T. Korber](#), Ramesh S. Paranjape, and [David Charles Montefiori](#)) Los Alamos report LA-UR-07-08163, December 2007. *Virology* **385:2** (2009) 505–520 [ori:doi:10.1016/j.virol.2008.12.032](#); pmid: 19167740; PMC2677301; NIHMS103344. Published ahead of print January 23, 2009 18 citations as of Apr 13, 2011.
 53. **Modeling Sequence Evolution in Acute HIV-1 Infection** ([Ha Youn Lee](#), [Elena E. Giorgi](#), Brandon F. Keele, Brian K. Gaschen, [Gayathri S. Athreya](#), Jesus F. Salazar-Gonzalez, Kimmy T. Pham, Paul A. Geopfert, J. Michael Kilby, Michael S. Saag, Eric L. Delwart, Michael P. Busch, [Beatrice H. Hahn](#), [George M. Shaw](#), [Bette T. Korber](#), [Tanmoy Bhattacharya](#) and [Alan S. Perelson](#)) Los Alamos report LA-UR-08-03733, June 2008. *Journal of Theoretical Biology* **261:2** (2009) 341–360. [ori:doi:10.1016/j.jtbi.2009.07.038](#); pmid: 19660475; PMC2760689; NIHMS142119.

- Available online August 4, 2009* (Corrigendum: *Journal of Theoretical Biology* **297:3** (2012) 187. [ori:doi:10.1016/j.jtbi.2011.12.010](https://doi.org/10.1016/j.jtbi.2011.12.010). *Available online December 22, 2011*) 12 citations as of Apr 13, 2011.
54. **Quantitating the multiplicity of infection with HIV subtype C reveals a non-Poisson distribution of variants** (M-R Abrahams, JA Anderson, EE Giorgi, C Seoighe, K Milsana, L-H Ping, GS Athreya, FK Treurnicht, BF Keele, N Wood, JF Gonzalez-Salazar, T Bhattacharya, H Chu, I Hoffman, S Galvin, C Mapanje, P Kazembe, R Thebus, S Fiscus, W Hide, MS Cohen, S Abdool Karim, [BF Haynes](#), [GM Shaw](#), [BH Hahn](#), [BT Korber](#), R Swanstrom, C Williamson, for the CAPRISA Acute Infection Study Team and the Center for HIV-AIDS Vaccine Immunology Consortium) *Los Alamos report LA-UR-08-06483*, October 2008. *Journal of Virology* **83:8** (2009) 3556–3567. [ori:doi:10.1128/JVI.02132-08](https://doi.org/10.1128/JVI.02132-08); pmid: 19193811; PMC2663249. *Published ahead of print February 4, 2009* 33 citations as of Apr 13, 2011.
 55. **Genetic Identity, Biological Phenotype, and Evolutionary Pathways of Transmitted/Founder Viruses in Acute and Early HIV-1 Infection** (Jesus F. Salazar-Gonzalez, Maria G. Salazar, Brandon F. Keele, Gerald H. Learn, [Elena E. Giorgi](#), Hui Li, Julie M. Decker, Shuyi Wang, Joshua Baalwa, Matthias H. Kraus, Nicholas F. Parrish, Katharina S. Shaw, M. Brad Guffey, Katharine J. Bar, Katie L. Davis, Christina Ochsenbauer-Jambor, John C. Kappes, Michael S. Saag, Myron S. Cohen, Joesph Mulenga, Cynthia A. Derdeyn, Susan Allen, Eric Hunter, Martin Markowitz, Peter Hraber, [Alan S. Perelson](#), [Tanmoy Bhattacharya](#), [Barton F. Haynes](#), [Bette T. Korber](#), [Beatrice H. Hahn](#), and [George M. Shaw](#)) *Journal of Experimental Medicine* **206:6** (2009) 1273–1289 [ori:doi:10.1084/jem.20090378](https://doi.org/10.1084/jem.20090378); pmid: 19487424; PMC2715054. *Published online June 1, 2009*. 73 citations as of Apr 13, 2011.
 56. **Identification and the Characterization of Transmitted and Early Founder Virus Envelopes in Primary HIV-1 Infection** (Brandon F. Keele, [Elena E. Giorgi](#), Jesus Salazar-Gonzalez, Julie M. Decker, Kimmy T. Pham, Maria G. Salazar, Chuanxi Sun, Truman Grayson, Shuyi Wang, Hui Li, Xiping Wei, Chunlai Jiang, Jennifer L. Kirchherr, [Feng Gao](#), Jeffrey A. Anderson, Li-Hua Ping, [Ronald Swanstrom](#), [Georgia D. Tomaras](#), [William A. Blattner](#), Paul A. Goepfert, J. Michael Kilby, Michael S. Saag, [Eric L. Delwart](#), [Michael P. Busch](#), Myron S. Cohen, [David C. Montefiori](#), [Barton F. Haynes](#), Brian Gaschen, [Gayathri S. Athreya](#), [Ha Y. Lee](#), Natasha Wood, Cathal Seoighe, [Alan S. Perelson](#), [Tanmoy Bhattacharya](#), [Bette T. Korber](#), [Beatrice H. Hahn](#), [George M. Shaw](#)) *Los Alamos report LA-UR-07-07974*, November 2007. *Proceedings of the National Academy of Sciences* **105:21** (2008) 7552–7557 [ori:doi:10.1073/pnas.0802203105](https://doi.org/10.1073/pnas.0802203105); pmid: 18490657; PMC2387184. *Published online May 19, 2008*. 195 citations as of Apr 13, 2011.
 57. **Maternal and paternal imprinted genes oppositely influence risk-based decision making** (Claire L. Dent, Trevor Humby, Antonius Plagge, Tanmoy Bhattacharya, Andrew Ward, Lawrence S. Wilkinson, Jon F. Wilkins, and Anthony R. Isles) *Los Alamos report LA-UR-06-6156*, September 2006. *Unpublished*.
 58. **Web-based design and evaluation of T-cell vaccine candidates** ([James Thurmond](#), Hyejin Yoon, Carla Kuiken, Karina Yusim, Simon Perkins, [James Theiler](#), [Tanmoy Bhattacharya](#), [Bette Korber](#), and Will Fischer). *Los Alamos report LA-UR-07-08354*, December 2007. *Bioinformatics* **24:14** (2008) 1639–1640 [ori:doi:10.1093/bioinformatics/btn251](https://doi.org/10.1093/bioinformatics/btn251); pmid: 18515277. *Published online May 29, 2008* 8 citations as of Apr 13, 2011.
 59. **HLA Class-I Driven Evolution of Human Immunodeficiency Virus Type 1 Subtype C Proteome: Immune Escape and Viral Load** (Christine M. Rousseau, [Marcus G. Daniels](#), [Jonathan M. Carlson](#), [Carl Kadie](#), Hayley Crawford, Andrew Prendergast, Philippa Matthews, Rebecca Payne, Morgane Rolland, Dana N. Raugi, [Brandon S. Maust](#), [Gerald H. Learn](#), [David C. Nickle](#), [Hoosen Coovadia](#), Thumbi Ndung'u, Nicole Frahm, [Christian Brander](#), [Bruce D. Walker](#), Philip J. R. Goulder, [Tanmoy Bhattacharya](#), [David E. Heckerman](#), [Bette T. Korber](#), and [James I. Mullins](#)) *Journal of Virology* **82:13** (2008) 6434–6446. [ori:doi:10.1128/JVI.02455-07](https://doi.org/10.1128/JVI.02455-07); pmid: 18434400; PMC2447109. *Published ahead of print April 23, 2008* 45 citations as of Apr 13, 2011.
 60. **Evidence of Differential HLA Class I-Mediated Viral Evolution in Functional and Accessory/Regulatory Genes of HIV-1** (Zabrina L. Brumme, Chanson J. Brumme, [David Heckerman](#), [Bette T. Korber](#), [Marcus Daniels](#), [Jonathan Carlson](#), [Carl Kadie](#), [Tanmoy Bhattacharya](#), Celia Chui, James Szinger, Theresa Mo, Robert S. Hogg, Julio S.G. Montaner, Nicole Frahm, [Christian Brander](#), [Bruce D. Walker](#), and [P. Richard Harrigan](#)), *Los Alamos report LA-UR-07-0410*, January 2007. *Los Alamos report LA-UR-07-0410*, Jan 2007. *Public Library of Science Pathogens* **3:7** (2007) e94. [ori:doi:10.1371/journal.ppat.0030094](https://doi.org/10.1371/journal.ppat.0030094); pmid: 17616974;

- PMC1904471. *Published online July 6, 2007.* (Affiliation correction *ibid.* **3:8** (2007) e121. [ori:doi:10.1371/journal.ppat.0030121](https://doi.org/10.1371/journal.ppat.0030121). *Published online August 31, 2007.*) 60 citations as of Apr 13, 2011.
61. **Extensive Intra-subtype Recombination in South African Human Immunodeficiency Virus Type 1 Subtype C Infections** (Christine M. Rousseau, Gerald H. Learn, Tanmoy Bhattacharya, David C. Nickle, David Heckerman, Senica Chetty, Christian Brander, Philip J.R. Goulder, Bruce D. Walker, Photini Kiepiela, Bette T. Korber, and James I. Mullins), Los Alamos report LA-UR-06-6156, September 2006. *Journal of Virology* **81:9** (2007) 4492–4500. [ori:doi:10.1128/JVI.02050-06](https://doi.org/10.1128/JVI.02050-06); pmid: 17314156; PMC1900147. *Published ahead of print February 21, 2007* 20 citations as of Apr 13, 2011.
 62. **Clade Specific Differences between Human Immunodeficiency Virus Type 1 Clades B and C: Diversity and Correlations in C3–V4 Regions of gp120** (S. Gnanakaran, Dorothy Lang, Marcus Daniels, Tanmoy Bhattacharya, Cynthia Derdyn, and Bette Korber), Los Alamos report LA-UR-06-1255. *Journal of Virology* **81:9** (2007) 4886–4891. [ori:doi:10.1128/JVI.01954-06](https://doi.org/10.1128/JVI.01954-06); pmid: 17166900; PMC1900169. *Published ahead of print December 13, 2006* 24 citations as of Apr 13, 2011.
 63. **Chiral Lattice Gauge theories from Warped Domain Walls and Ginsparg-Wilson Fermions** (Tanmoy Bhattacharya, Matthew R. Martin, and Erich Poppitz), Los Alamos report LA-UR-06-2667, April 2006. [ori:oai:arXiv.org:hep-lat/0605003](https://arxiv.org/abs/hep-lat/0605003) *Physical Review* **D74:8** (2006) 085028; [ori:doi:10.1103/PhysRevD.74.085028](https://doi.org/10.1103/PhysRevD.74.085028). *Published Oct 30, 2006.* [inspire]. 11 citations as of Apr 13, 2011.
 64. **Human Leukocyte Antigen-Associated Sequence Polymorphisms in Hepatitis C Virus Reveal Reproducible Immune Responses and Constraints on Viral Evolution** (Joerg Timm, Bin Li, Marcus G. Daniels, Tanmoy Bhattacharya, Laura L. Reyor, Rachel Allgaier, Thomas Kuntzen, Will Fischer, Brian E. Nolan, Jared Duncan, Julian Schulze zur Wiesch, Arthur Y. Kim, Nicole Frahm, Christian Brander, Raymond T. Chung, George M. Lauer, Bette T. Korber, and Todd M. Allen), Los Alamos report LA-UR-06-8196, November 2006. *Hepatology*, **46:2** (2007) 339–349 [ori:doi:10.1002/hep.21712](https://doi.org/10.1002/hep.21712); pmid: 17559151. *Published online June 8, 2007* 34 citations as of Apr 13, 2011.
 65. **Founder effects in the assessment of HIV polymorphisms and HLA allele associations or Founder effects contribute to perceived associations between HIV sequence polymorphisms and HLA class I alleles** (Tanmoy Bhattacharya, Marcus Daniels, David Heckerman, Brian Foley, Nicole Frahm, Carl Kadie, Jonathan Carlson, Karina Yusim, Ben McMahon, Brian Gaschen, Simon Mallal, James I. Mullins, David C. Nickle, Joshua Herbeck, Christine Rousseau, Gerald H. Learn, Toshiyuki Miura, Christian Brander, and Bruce Walker, and Bette Korber) Los Alamos report LA-UR-06-3312, May 2006. *Science* **315:5818** (2007) 1583–1586 [ori:doi:10.1126/science.1131528](https://doi.org/10.1126/science.1131528); pmid: 17363674.
Subsumes
Multiple factors impact negative associations between HIV sequence polymorphisms and HLA class I alleles Los Alamos report LA-UR-05-3897, May 2005. 93 citations as of Apr 13, 2011.
 66. **Polyvalent HIV-1 vaccines for optimal coverage of potential T-cell epitopes in diverse global variants** (Will Fischer, Simon Perkins, James Theiler, Tanmoy Bhattacharya, Karina Yusim, Robert Funkhouser, Carla Kuiken, Barton Haynes, Norman L. Letvin, Bruce D. Walker, Beatrice H. Hahn, and Bette T. Korber) Los Alamos report LA-UR-06-3608, May 2006. *Nature Medicine* **13:1** (2007) 100–106 [ori:doi:10.1038/nm1461](https://doi.org/10.1038/nm1461); pmid: 17187074. 72 citations as of Apr 13, 2011.
 67. **Warped Domain Wall Fermions** (Tanmoy Bhattacharya, Csaba Csáki, Matthew R. Martin, Yuri Shirman, and John Terning), Los Alamos report LA-UR-05-1569, March 2005. [ori:oai:arXiv.org:hep-lat/0503011](https://arxiv.org/abs/hep-lat/0503011) *Journal of High Energy Physics* **JHEP08** (2005) 061; [ori:doi:10.1088/1126-6708/2005/08/061](https://doi.org/10.1088/1126-6708/2005/08/061). [inspire]. 9 citations as of Apr 13, 2011.
 68. **B_K from quenched QCD with improved staggered fermions. or Testing improved staggered fermions with m_s and B_K .** (Weonjong Lee, Tanmoy Bhattacharya, George T. Fleming, Rajan Gupta, Gregory Kilcup, and Stephen Sharpe), Los Alamos report LA-UR-04-4788, University of Washington report UW-PT 04-11, and Seoul National University report SNUTP-04-008, July 2004. [ori:oai:arXiv.org:hep-lat/0409047](https://arxiv.org/abs/hep-lat/0409047) *Physical Review* **D71:09** (2005) 094501; [ori:doi:10.1103/PhysRevD.71.094501](https://doi.org/10.1103/PhysRevD.71.094501). *Published May 2, 2005.* [inspire]. 21 citations as of Apr 13, 2011.

69. **Feedback cooling of atomic motion in cavity QED.** (Tanmoy Bhattacharya, Salman Habib, Kurt Jacobs, Hideo Mabuchi, and Daniel A. Steck) Los Alamos report LA-UR-04-4687, July 2004. [ori:oai:arXiv.org:quant-ph/0509039](https://arxiv.org/abs/quant-ph/0509039) *Physical Review A* **74:1** (2006) 012322; [ori:doi:10.1103/PhysRevA.74.012322](https://doi.org/10.1103/PhysRevA.74.012322). *Published Jul 31, 2006*. 16 citations as of Apr 13, 2011.
70. **Successive dominance of human immunodeficiency virus type 1 sequences in patients receiving combination antiretroviral therapy or Evolution of human immunodeficiency virus type 1 sequences in patients receiving combination antiretroviral therapy.** (Carla Kuiken, Kevin Kunstman, Tanmoy Bhattacharya, Jennifer Kunstman, Kristina Kommander, John Phair, Benjamin Good, Satish Pillai, and Steven Wolinsky), Los Alamos report LA-UR-04-5456.
71. **Quantum Feedback Control of Atomic Motion in an Optical Cavity.** (Daniel A. Steck, Kurt Jacobs, Hideo Mabuchi, Tanmoy Bhattacharya, and Salman Habib) Los Alamos report LA-UR-03-6826, September 2003; [ori:oai:arXiv.org:quant-ph/0310153](https://arxiv.org/abs/quant-ph/0310153). *Physical Review Letters* **92:22** (2004) 223004; [ori:doi:10.1103/PhysRevLett.92.223004](https://doi.org/10.1103/PhysRevLett.92.223004); pmid: 15245219. *Published Jun 4, 2004*. [inspire]. 41 citations as of Apr 13, 2011.
72. **The transition to classical chaos in a coupled quantum system through continuous measurement.** (Shohini Ghose, Paul Alsing, Ivan Deutsch, Tanmoy Bhattacharya, Salman Habib, and Kurt Jacobs) Los Alamos report LA-UR-03-5886, August 2003; [ori:oai:arXiv.org:quant-ph/0309093](https://arxiv.org/abs/quant-ph/0309093). *Physical Review A* **69:5** (2004) 052116; [ori:doi:10.1103/PhysRevA.69.052116](https://doi.org/10.1103/PhysRevA.69.052116). *Published May 24, 2004*. 18 citations as of Apr 13, 2011.
73. **Improved bilinears in lattice QCD with non-degenerate quarks.** (Tanmoy Bhattacharya, Rajan Gupta, Weonjong Lee, Stephen Sharpe, and Jackson M.S. Wu) Los Alamos report LA-UR-03-4939, July 2003; University of Washington report UW/PT 03-20, September 2003. [ori:oai:arXiv.org:hep-lat/0511014](https://arxiv.org/abs/hep-lat/0511014). *Physical Review D* **73:3** (2006) 034504; [ori:doi:10.1103/PhysRevD.73.034504](https://doi.org/10.1103/PhysRevD.73.034504). *Published Feb 13, 2006*. [inspire]. 15 citations as of Apr 13, 2011.
74. **Scaling behavior of discretization errors in renormalization and improvement constants.** (Tanmoy Bhattacharya, Rajan Gupta, Weonjong Lee, and Stephen Sharpe) Los Alamos report LA-UR-03-3849, June 2003. [ori:oai:arXiv.org:hep-lat/0509160](https://arxiv.org/abs/hep-lat/0509160). *Physical Review D* **73:11** (2006) 114507; [ori:doi:10.1103/PhysRevD.73.114507](https://doi.org/10.1103/PhysRevD.73.114507). *Published Jun 14, 2006*. [inspire]. 5 citations as of Apr 13, 2011.
75. **Timing of the HIV-1 subtype C epidemic in Ethiopia: An improved estimate using maximum likelihood methods.** or **Molecular Paleontology of HIV-1 M Subtype C in Ethiopia.** (Una Smith, Tanmoy Bhattacharya, and Carla L. Kuiken) Los Alamos report LA-UR-02-7315, November 2002.
76. **Continuous Quantum Measurement and the Quantum to Classical Transition.** (Tanmoy Bhattacharya, Salman Habib, and Kurt Jacobs) Los Alamos report LA-UR-02-5289, August 2002; [ori:oai:arXiv.org:quant-ph/0211036](https://arxiv.org/abs/quant-ph/0211036). *Physical Review A* **67:4** (2003) 042103; [ori:doi:10.1103/PhysRevA.67.042103](https://doi.org/10.1103/PhysRevA.67.042103). *Published Apr 8, 2003*. 16 citations as of Apr 13, 2011.
77. **Recovering Classical Dynamics from Coupled Quantum Systems through Continuous Measurement.** (Shohini Ghose, Paul Alsing, Ivan Deutsch, Tanmoy Bhattacharya, Salman Habib, and Kurt Jacobs) Los Alamos report LA-UR-02-5290, August 2002; [ori:oai:arXiv.org:quant-ph/0208064](https://arxiv.org/abs/quant-ph/0208064). *Physical Review A* **67:5** (2003) 052102; [ori:doi:10.1103/PhysRevA.67.052102](https://doi.org/10.1103/PhysRevA.67.052102). *Published May 20, 2003*. 4 citations as of Apr 13, 2011.
78. **Diversity Considerations in HIV-1 Vaccine Selection** (Brian Gaschen, Jesse Taylor, Karina Yusim, Brian Foley, Feng Gao, Dorothy Lang, Vladimir Novitsky, Barton Haynes, Beatrice H. Hahn, Tanmoy Bhattacharya, and Bette Korber) *Science* **296:5577** (2002) 2354–2360. (June 28, 2002; number 5577) [ori:doi:10.1126/science.1070441](https://doi.org/10.1126/science.1070441); pmid: 12089434. Available without subscription. **Consensus and Ancestral State HIV Vaccines: Response** (F. Gao, T. Bhattacharya, B. Gaschen, J. Taylor, J.P. Moore, V. Novitsky, K. Yusim, D. Lang, B. Foley, S. Beddows, M. Alam, B. Haynes, B.H. Hahn, and B. Korber) *Science* **299:5612** (2003) 1517–1518. (March 7, 2003; number 5612); [ori:doi:10.1126/science.299.5612.1515c](https://doi.org/10.1126/science.299.5612.1515c); author reply in pmid: 12624248. 317+7 citations as of Apr 13, 2011.
79. **Strange Happenings at the Quantum-Classical Boundary: The Delta-Kicked Rotor.** or **The δ -function-kicked rotor: Momentum diffusion and the quantum-classical boundary.** (T. Bhattacharya, S. Habib, K. Jacobs, and K. Shizume) Los Alamos report LA-UR-01-1909 May 2001. Los Alamos report LA-UR-01-6307, November 2001. [ori:oai:arXiv.org:quant-ph/0105086](https://arxiv.org/abs/quant-ph/0105086). *Physical Review A* **65:3** (2002) 032115; [ori:doi:10.1103/PhysRevA.65.032115](https://doi.org/10.1103/PhysRevA.65.032115). *Published Feb 20,*

2002. 8 citations as of Apr 13, 2011.
80. **Using Human Immunodeficiency Virus Type 1 Sequences to Infer Historical Features of the Acquired Immune Deficiency Syndrome Epidemic and Human Immunodeficiency Virus Evolution.** (Karina Yusim, Martine Peeters, Oliver G. Pybus, Tanmoy Bhattacharya, Éric Delaporte, Claire Mulanga, Mark Muldoon, James Theiler, and Bette Korber) *Philosophical Transactions of the Royal Society, London*, **B 356** (2001) 855–866; [ori:doi:10.1098/rstb.2001.0859](#); [pmid: 11405933](#); [PMC1088479](#). 34 citations as of Apr 13, 2011.
 81. **Order α Improved Renormalization Constants.** (T. Bhattacharya, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-00-3538 and University of Washington report UW/PT-00-16, September 2000. [ori:oai:arXiv.org:hep-lat/0009038](#). *Physical Review D***63:7** (2001) 074505; [ori:doi:10.1103/PhysRevD.63.074505](#). *Published Mar 13, 2001*. [inspire]. 67 citations as of Apr 13, 2011.
 82. **Timing the Ancestor of the HIV-1 Pandemic Strains.** (B. Korber, M. Muldoon, J. Theiler, F. Gao, R. Gupta, A. Lapedes, B.H. Hahn, S. Wolinsky, and T. Bhattacharya) *Science* **288:5472** (2000) 1789–1796. (June 9, 2000; number 5472) [ori:doi:10.1126/science.288.5472.1789](#); [pmid: 10846155](#). **Search for the Origin of HIV and AIDS : Response.** (B. Korber, T. Bhattacharya, J. Theiler, R. Gupta, A. Lapedes, B. Hahn, F. Gao, M. Muldoon, and S. Wolinsky) *Science* **289:5482** (2000) 1140–1141. (August 18, 2000; number 5482) [ori:doi:10.1126/science.289.5482.1140](#); part of [pmid: 10970225](#). 395+5 citations as of Apr 13, 2011.
 83. **Continuous Quantum Measurement and the Emergence of Classical Chaos.** (T. Bhattacharya, S. Habib, and K. Jacobs) Los Alamos report LA-UR-99-3187 June 1999. [ori:oai:arXiv.org:quant-ph/9906092](#). *Physical Review Letters* **85:23** (2000) 4852–4855; [ori:doi:10.1103/PhysRevLett.85.4852](#); [pmid: 11102134](#). [inspire]. 60 citations as of Apr 13, 2011.
 84. **Non-perturbative Renormalization Constants using Ward Identities.** (T. Bhattacharya, S. Chandrasekharan, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LAUR-99-1717, University of Washington report UW-PT/98-15, University of Tsukuba report UTCCP-P-56, and Duke University report DUKE-TH-99-185, April 1999. [ori:oai:arXiv.org:hep-lat/9904011](#) *Physics Letters B***461:1–2** (1999) 79–88; [ori:doi:10.1016/S0370-2693\(99\)00796-0](#). [inspire]. 27 citations as of Apr 13, 2011.
 85. **Heavy-light Mesons and Baryons with b quarks.** (A. Ali Khan, T. Bhattacharya, S. Collins, C.T.H. Davies, R. Gupta, C. Morningstar, J. Shigemitsu, and J. Sloan) Los Alamos report LAUR-99-723, OSU report OHSTPY-HEP-T-98-018, and University of Tsukuba report UTCCP-P-77, December 1999. [ori:oai:arXiv.org:hep-lat/9912034](#) *Physical Review D***62:5** (2000) 054505; [ori:doi:10.1103/PhysRevD.62.054505](#). *Published Jul 27, 2000*. [inspire]. 61 citations as of Apr 13, 2011.
 86. **B Meson Decay Constants from NRQCD.** (A. Ali Khan, T. Bhattacharya, S. Collins, C.T.H. Davies, R. Gupta, C. Morningstar, J. Shigemitsu, and J. Sloan) Los Alamos report LA-UR-97-4642 and OSU report OHSTPY-HEP-T-97-017, January 1998. [ori:oai:arXiv.org:hep-lat/9801038](#) *Physics Letters B***427:1–2** (1998) 132–140; [ori:doi:10.1016/S0370-2693\(98\)00323-2](#). [inspire]. 48 citations as of Apr 13, 2011.
 87. **Duality and the Extraction of Light Quark Masses From Finite Energy and QCD Sum Rules. or Extraction of Light Quark Masses from Sum Rule Analyses of Axial Vector and Vector Current Ward Identities.** (Tanmoy Bhattacharya, Rajan Gupta, and Kim Maltman) Los Alamos report LA-UR-96-2698, March 1997. [ori:oai:arXiv.org:hep-ph/9703455](#) *Physical Review D***57:9** (1998) 5455–5467; [ori:doi:10.1103/PhysRevD.57.5455](#). [inspire]. 31 citations as of Apr 13, 2011.
 88. **Matrix Elements of 4-fermion Operators with Quenched Wilson Fermions.** (R. Gupta, T. Bhattacharya, and S. Sharpe) Los Alamos report LA-UR-96-1829 and University of Washington report UW/PT-96-12, November 1996. [ori:oai:arXiv.org:hep-lat/9611023](#) *Physical Review D***55:7** (1997) 4036–4054; [ori:doi:10.1103/PhysRevD.55.4036](#). [inspire]. 127 citations as of Apr 13, 2011.
 89. **Comment on “Gravitationally Induced Neutrino-Oscillation Phases.” or Gravitationally induced neutrino oscillation phases in static spacetimes** (T. Bhattacharya, S. Habib, and E. Mottola) [ori:oai:arXiv.org:gr-qc/9605074](#) *Physical Review D***59:6** (1999) 067301; [ori:doi:10.1103/PhysRevD.59.067301](#). [spires(eprint), spires(paper)]. 14+34 citations as of Apr 13, 2011.
 90. **Light Quark Masses from Lattice QCD.** (R. Gupta and T. Bhattacharya) Los Alamos report LA-UR-96-1840, May 1996. [ori:oai:arXiv.org:hep-lat/9605039](#) *Physical Review D***55:11** (1997)

- 7203–7217; [ori:doi:10.1103/PhysRevD.55.7203](#). [inspire]. 116 citations as of Apr 13, 2011.
91. **Large q Expansion of the 2D q -states Potts' Model.** (T. Bhattacharya, R. Lacaze and A. Morel) Saclay report SACLAY-SPHT-96-001, January 1996. [ori:oai:arXiv.org:hep-lat/9601012](#) *Journal of Physics* **I7:1** (1997) 81–103; [ori:doi:10.1051/jp1:1997127](#). [inspire].
 92. **Hadron Spectrum with Wilson fermions.** (T. Bhattacharya, R. Gupta, G. Kilcup, and S. Sharpe) Los Alamos report LA-UR-95-2354, October 1995. [ori:oai:arXiv.org:hep-lat/9512021](#) *Physical Review* **D53:11** (1996) 6486–6508; [ori:doi:10.1103/PhysRevD.53.6486](#); [pmid: 10019932](#). [inspire]. 65 citations as of Apr 13, 2011.
 93. **Decay Constants with Wilson Fermions at $\beta=6.0$.** (T. Bhattacharya and R. Gupta) Los Alamos report LA-UR-95-2355, October 1995. [ori:oai:arXiv.org:hep-lat/9510044](#) *Physical Review* **D54:1** (1996) 1155–1166; [ori:doi:10.1103/PhysRevD.54.1155](#); [pmid: 10020582](#). [inspire]. 21 citations as of Apr 13, 2011.
 94. **Large Energy Cumulants in the 2-d Potts' Model and their Effects in Finite Size Analysis.** (T. Bhattacharya, R. Lacaze, and A. Morel) Saclay Preprint SACLAY-SPHT-94-008, July 1994. [ori:oai:arXiv.org:hep-lat/9407004](#) *Nuclear Physics* **B435:3** (1995) 526–554; [ori:doi:10.1016/0550-3213\(94\)00393-S](#). [inspire]. 13 citations as of Apr 13, 2011.
 95. **Semileptonic Form-Factors of Heavy-Light Mesons From Lattice QCD.** (R. Gupta, T. Bhattacharya, and D. Daniel) Los Alamos report, LA-UR-93-3580, October 1993. [ori:oai:arXiv.org:hep-lat/9310007](#) 5 citations as of Apr 13, 2011.
 96. **The Free Energy of the Potts' Model: From the Continuous to the First Order Transition Region.** (T. Bhattacharya, R. Lacaze, and A. Morel) Saclay report SACLAY-SPHT-93-022, March 1993. [ori:oai:arXiv.org:hep-th/9303075](#) *Europhys. Lett.* **23** (1993) 547. [ori:doi:10.1209/0295-5075/23/8/002](#). [inspire]. 15 citations as of Apr 13, 2011.
 97. **Critical Behavior of the Antiferromagnetic Heisenberg Model on a Stacked Triangular Lattice.** (T. Bhattacharya, A. Billoire, R. Lacaze, and Th. Jolicœur) Saclay report SACLAY-SPHT-93-015, February 1993. [ori:oai:arXiv.org:cond-mat/9302019](#) *Journal of Physics* **I4:2** (1994) 181–186; [ori:doi:10.1051/jp1:1994131](#). [inspire]. 21 citations as of Apr 13, 2011.
 98. **Z(N) Interface Tension in a Hot SU(N) Gauge Theory.** (T. Bhattacharya, A. Gocksch, C.P. Korthals Altes, and R.D. Pisarski) Brookhaven Preprint BNL-47625, February 1992. [ori:oai:arXiv.org:hep-ph/9205231](#) *Nuclear Physics* **B383:3** (1992) 497–524; [ori:doi:10.1016/0550-3213\(92\)90086-Q](#). [inspire]. 91 citations as of Apr 13, 2011.
 99. **Particles Near Threshold.** (T. Bhattacharya and S. Willenbrock) Brookhaven Preprint BNL-46481, July 1991. *Physical Review* **D47:9** (1993) 4022–4027; [ori:doi:10.1103/PhysRevD.47.4022](#); [pmid: 10016028](#). [inspire]. 33 citations as of Apr 13, 2011.
 100. **Interface Tension in an SU(N) Gauge Theory at High Temperature.** (T. Bhattacharya, A. Gocksch, C.P. Korthals Altes, and R.D. Pisarski) Brookhaven Preprint BNL-45297, October 1990. *Physical Review Letters* **66:8** (1991) 998–1000; [ori:doi:10.1103/PhysRevLett.66.998](#); [pmid: 10043969](#); [inspire]. 94 citations as of Apr 13, 2011.
 101. **Tree Unitarity in Broken Supergravity. 2. Double Gravitino Amplitude.** (T. Bhattacharya and P. Roy) TIFR report TIFR/TH/88-41, October 1988. *Nuclear Physics* **B328:2** (1989) 481; [ori:doi:10.1016/0550-3213\(89\)90338-6](#). [inspire]. 14 citations as of Apr 13, 2011.
 102. **Tree Unitarity in Broken Supergravity. 1. Single Gravitino Amplitude.** (T. Bhattacharya and P. Roy) TIFR report TIFR/TH/88-38, June 1988. *Nuclear Physics* **B328:2** (1989) 469; [ori:doi:10.1016/0550-3213\(89\)90337-4](#). [inspire]. 11 citations as of Apr 13, 2011.
 103. **Role of Chiral Scalar and Pseudoscalar in Two Photon Production of a Superlight Gravitino.** (T. Bhattacharya and P. Roy) TIFR report TIFR/TH/88-11, May 1988. *Physical Review* **D38:7** (1988) 2284–2287; [ori:doi:10.1103/PhysRevD.38.2284](#); [pmid: 9959383](#); [inspire]. 36 citations as of Apr 13, 2011.
 104. **Unitarity Limit on the Gaugino-Gravitino Mass Ratio.** (T. Bhattacharya and P. Roy) TIFR report TIFR/TH/88-4, March 1988. *Physics Letters* **B206:4** (1988) 655–660; [ori:doi:10.1016/0370-2693\(88\)90713-7](#) [inspire]. 28 citations as of Apr 13, 2011.
 105. **Probing a Superlight Gravitino in Photon-Photon Collisions.** (T. Bhattacharya and P. Roy) TIFR report TIFR/TH/87-15, July 1987. *Physical Review Letters* **59:14** (1987) 1517–1520, [ori:doi:10.1103/PhysRevLett.59.1517](#); [pmid: 10035256](#); ERRATUM *ibid.* **60:14** (1988) 1455, [ori:doi:10.1103/PhysRevLett.60.1455.2](#). [inspire]. 24 citations as of Apr 13, 2011.
 106. **Constraint on Unstable Photino Mass from an Ultralight Gravitino.** (T. Bhattacharya and P. Roy) TIFR report TIFR/TH/87-1, Mar 1987. *Pramana* **28:6** (1987) L699–L703,

ori:doi:10.1007/BF02892872. [[inspire](#)]. 1 citation as of Apr 13, 2011.

107. **The Gel'fand Realization and the Exceptional Representations of $SL(2, \mathbb{R})$** . (D. Basu and T. Bhattacharya) *Journal of Mathematical Physics* **26:1** (1985) 12–17; **ori:doi:10.1063/1.526799**. [[inspire](#)].

Talks, Abstracts, and Unreferreed Publications

This section contains a bunch of refereed talk abstracts (mainly biology) that appeared in published lists of abstracts, unreferreed talks that were written up (mainly in physics and computer science), and certain miscellaneous kinds of unreferreed publications (*e.g.*, prefaces, articles for internal publication). If it is refereed and appeared as a full paper (*e.g.*, in computer science), it is included in the first section, not here. This section is likely to be incomplete since many refereed abstracts (mainly biology) and articles for internal publications need to be tracked down and listed here.

- Nucleon transverse momentum-dependent parton distributions from domain wall fermion calculations at 297 MeV pion mass.** (M. Engelhardt, B. Musch, T. Bhattacharya, R. Gupta, P. Hägler, J. Negele, A. Polchinsky, A. Schäfer, S. Syritsyn, and B. Yoon) *Los Alamos* report LA-UR-14-29420. Proceedings of the [32nd International Symposium on Lattice Field Theory](#), New York, New York, USA, 23–28 June 2014. *Proceedings of Science LATTICE2014* (2015) 167.
- The QCD Equation of State.** (Tanmoy Bhattacharya for HotQCD) *Los Alamos* report LA-UR-14-29319. **ori:oi:arXiv.org:1501.07652** [[hep-lat](#)] Proceedings of the [32nd International Symposium on Lattice Field Theory](#), New York, New York, USA, 23–28 June 2014. *Proceedings of Science LATTICE2014* (2015) 225.
- Precision calculations of nucleon charges g_A, g_S, g_T .** (Rajan Gupta, Tanmoy Bhattacharya, Boram Yoon, Anosh Joseph, and Huey-Wen Lin) *Los Alamos* report LA-UR-14-29293. **ori:oi:arXiv.org:1501.07639** [[hep-lat](#)] Proceedings of the [32nd International Symposium on Lattice Field Theory](#), New York, New York, USA, 23–28 June 2014. *Proceedings of Science LATTICE2014* (2015) 152.
- Disconnected Quark Loop Contributions to Nucleon Structure.** (Tanmoy Bhattacharya, Rajan Gupta, and Boram Yoon) *Los Alamos* report LA-UR-14-28704. Proceedings of the [32nd International Symposium on Lattice Field Theory](#), New York, New York, USA, 23–28 June 2014. *Proceedings of Science LATTICE2014* (2015) 141.
- Probing TeV Physics through Lattice Neutron-Decay Matrix Elements.** (Huey-Wen Lin, Tanmoy Bhattacharya, Saul D. Cohen, Rajan Gupta, Anosh Joseph, Boram Yoon) Proceedings of the [2013 International Workshop on Computational Science and Engineering](#), Taipei, Taiwan, 14–17 October 2013. *Proceedings of Science IWCSE2013* (2014) 055. [[inspire](#)]
- Probing TeV scale physics in precision UCN decays.** (Rajan Gupta, Tanmoy Bhattacharya, Anosh Joseph, Saul D. Cohen, and Huey-Wen Lin) *Los Alamos* report LA-UR-13-29020. **ori:oi:arXiv.org:1403.2447** [[hep-lat](#)] Proceedings of the [31st International Symposium on Lattice Field Theory](#), Mainz, Germany, 2013. *Proceedings of Science LATTICE 2013* (2013) 409.
- Neutron Electric Dipole Moments from Beyond the Standard Model Physics.** (Tanmoy Bhattacharya, Vincenzo Cirigliano, Rajan Gupta) *Los Alamos* report LA-UR-13-28859 November 2013. **ori:oi:arXiv.org:1403.2445** [[hep-lat](#)] Proceedings of the [31st International Symposium on Lattice Field Theory](#), Mainz, Germany, 2013. *Proceedings of Science LATTICE 2013* (2013) 299.
- Probing novel TeV physics through precision calculations of scalar and tensor charges of the nucleon.** (Rajan Gupta, Tanmoy Bhattacharya, Anosh Joseph, Saul Cohen, and Huey-Wen Lin) *Los Alamos* report LA-UR-12-26832 December 2012. **ori:oi:arXiv.org:1212.4889** [[hep-lat](#)] Proceedings of the [30th International Symposium on Lattice Field Theory](#), Cairns, Australia, 2012. Eds. Leinweber, *et al.* *Proceedings of Science Lattice 2012* (2012) 114. [[inspire](#)]
- Neutron Electric Dipole Moment from Beyond the Standard Model.** (Tanmoy Bhattacharya, Vincenzo Cirigliano, and Rajan Gupta) *Los Alamos* report LA-UR-12-26831 December 2012. **ori:oi:arXiv.org:1212.4918** [[hep-lat](#)] Proceedings of the [30th International Symposium on Lattice Field Theory](#), Cairns, Australia, 2012. Eds. Leinweber, *et al.* *Proceedings of Science Lattice 2012* (2012) 179. [[inspire](#)]

10. **The Chiral Transition, Deconfinement, and the Equation of State of QCD** (Frithjof Karsch, Wolfgang Söldner, A. Bazavov, T. Bhattacharya, M. Cheng, C. DeTar, H.-T. Ding, Steven Gottlieb, R. Gupta, P. Hegde, U.M. Heller, E. Laermann, L. Levkova, S. Mukherjee, P. Petreczky, C. Schmidt, R.A. Soltz, R. Sugar, D. Toussaint, W. Unger, and P. Vranas) *Proceedings of the NIC Symposium, 2012.* **18, 15.**
11. **Worldline Method for Electromagnetic Casimir Energies.** (Jonathan Mackrory, Tanmoy Bhattacharya, and Daniel Steck) 43rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics, Orange County, California, June 4–8 2012. *Bulletin of the American Physical Society* **57:5 (2012)** BAPS.2012.DAMOP.D1.153.
12. **Probing TeV scale physics via ultra cold neutron decays and calculating non-standard baryon matrix elements** (Rajan Gupta, Tanmoy Bhattacharya, Anosh Joseph, Huey-Wen Lin, and Saul D. Cohen) Los Alamos report LA-UR-12-10238 February 2012. [ori:oarXiv.org:1202.1320 \[hep-lat\]](https://arxiv.org/abs/1202.1320) Proceedings of the 29th International Symposium on Lattice Field Theory, Squaw Valley, Lake Tahoe, California, USA, 2011. Eds. Juge, *et al.* *Proceedings of Science LATTICE 2011 (2011)* 271. [[inspire](#)]
13. **Theoretical Bounds on New Four-Fermion Interactions and TeV Scale Physics** (Tanmoy Bhattacharya, Rajan Gupta, Anosh Joseph, Huey-Wen Lin, and Saul D. Cohen) Los Alamos report LA-UR-12-20294 March 2012. [ori:oarXiv.org:1203.6843 \[hep-lat\]](https://arxiv.org/abs/1203.6843) Proceedings of the 29th International Symposium on Lattice Field Theory, Squaw Valley, Lake Tahoe, California, USA, 2011. Eds. Juge, *et al.* *Proceedings of Science LATTICE 2011 (2011)* 272. [[inspire](#)]
14. **Probing TeV Physics through Lattice Neutron-Decay Matrix Elements** (Huey-Wen Lin, Saul D. Cohen, Tanmoy Bhattacharya, Rajan Gupta, and Anosh Joseph) Proceedings of the 29th International Symposium on Lattice Field Theory, Squaw Valley, Lake Tahoe, California, USA, 2011. Eds. Juge, *et al.* *Proceedings of Science LATTICE 2011 (2011)* 273.
15. **Genital tract sequestration of SIV during acute infection** (James B. Whitney, Peter Hraber, Corinne Luedemann, Tanmoy Bhattacharya, Srinivas S. Rao, John R. Mascola, Bette T. Korber, Gary J. Nabel, and Norman L. Letvin) *Journal of Medical Primatology* **40:4 (2011)** 283.
16. **Computationally identified mutations suspected to cause gp120 charge inversion and gp41-mediated allosteric effects impact IgG1b12 susceptibility.** (A.R. Geonnotti, S. Gnanakaran, M.G. Daniels, T. Bhattacharya, A.S. Lapedes, B. Korber, and D.C. Montefiori) Abstracts from AIDS Vaccine 2010, Atlanta, Georgia, USA 28 September–1 October, 2010. Published in *AIDS Research and Human Retroviruses* **26:10 (Oct 15, 2010)** A-1-A-184 [ori:doi:10.1089/aid.2010.9998](https://doi.org/10.1089/aid.2010.9998)
17. **P09-21. Deep sequencing of HIV-1 from acute infection: low initial diversity, and rapid but variable CTL escape.** (W. Fischer, B. Keele, T. Bhattacharya, C. Lo, E. Giorgi, P. Hraber, T. Leitner, C. Han, C. Gleasner, L. Green, B. Hahn, G. Shaw, B. Haynes, and B. Korber) Abstracts from AIDS Vaccine 2009, 19–22 October, 2009. *Retrovirology* **6:Suppl 3 (2009)** P401
18. **P04-54. Genetic signature analysis identifies the CD4i region of gp120 as a determinant of broadly NAb responses in HIV-1-infected individuals.** (S. Gnanakaran, T. Bhattacharya, M. Daniels, A. Lapedes, F. Gao, A. Kumar, M. Li, H. Tang, K. Greene, H. Gao, M. Seaman, B.F. Haynes, D.C. Montefiori, B.T. Korber) Abstracts from AIDS Vaccine 2009, 19–22 October, 2009. *Retrovirology* **6:Suppl 3 (2009)** P394
19. **The Petaflops Router: Harnessing FPGAs and Accelerators for High Performance Computing** (Zachary K. Baker, Tanmoy Bhattacharya, Mark Dunham, Paul S. Graham, Rajan Gupta, Jeff Inman, Andreas Klein, Gerd J. Kunde, Al McPherson, Matt Stettler, and Justin L. Tripp) *Proceedings of the Thirteenth Annual Workshop of High Performance Embedded Computing (HPEC 2009)*, Lexington, Massachusetts, USA, 22 September 2009. [Poster A.4.](#)
20. **Rational design of HCV vaccine cocktails that maximize coverage of potential CTL epitopes** (K Yusim, W Fischer, S Perkins, T Bhattacharya, J Theiler, T Allen, G Lauer, B Korber, and C Kuiken) Abstracts from the 12th International Symposium on Viral Hepatitis and Liver Disease, Paris, France, July 1–5, 2006. *Journal of Clinical Virology* **36:suppl.2 (Jul 2006)** S164–S165.
21. **Chiral lattice gauge theories from warped domain walls and Ginsparg-Wilson fermions** (Tanmoy Bhattacharya, Matthew R. Martin, Erich Poppitz) Los Alamos report LA-UR-06-7328 October 2006. Proceedings of the 24th International Symposium on Lattice Field Theory, Tucson, Arizona, USA, 2006. Eds. Morningstar, *et al.* *Proceedings of Science LAT2006 (2006)* 048;

22. **Towards a chiral gauge theory by deconstruction in AdS₅** (Tanmoy Bhattacharya, Rajan Gupta, Matthew R. Martin, Yuri Shirman, Csaba Csáki, and John Terning) Los Alamos report LA-UR-05-7739 October 2005. [ori:oai:arXiv.org:hep-lat/0510073](https://arxiv.org/abs/hep-lat/0510073) Proceedings of the 23rd International Symposium on Lattice Field Theory, Dublin, Ireland, 2005. Eds. Michael, *et al.* **Proceedings of Science LAT2005 (2005) 136**; [inspire]
23. **Chaos and Quantum Mechanics** (Salman Habib, Tanmoy Bhattacharya, Benjamin Greenbaum, Kurt Jacobs, Kosuke Shizume, and Bala Sundaram), Los Alamos report LA-UR-05-2905, April 2005. [ori:oai:arXiv.org:quant-ph/0505085](https://arxiv.org/abs/quant-ph/0505085) Proceedings of the 16th Florida Workshop in Nonlinear Astronomy and Physics; 2004. Eds. Gottesman, *et al.*, 'Nonlinear Dynamics in Astronomy and Physics: In Memory of Henry Kandrup,' **Annals of the New York Academy of Sciences 1045 (2005) 308–332**; [ori:doi:10.1196/annals.1350.026](https://doi.org/10.1196/annals.1350.026); pmid: 15980320.
24. **Nonlinear Quantum Dynamics** (Salman Habib, Tanmoy Bhattacharya, Benjamin Greenbaum, Andrew Doherty, Benjamin Greenbaum, Asa Hopkins, Kurt Jacobs, Hideo Mabuchi, and Keith Schwab, Kosuke Shizume, Daniel A. Steck, and Bala Sundaram), Los Alamos report LA-UR-05-0368, August 2004. [ori:oai:arXiv.org:quant-ph/0505046](https://arxiv.org/abs/quant-ph/0505046) NATO Advanced Research Workshop, Nonlinear Dynamics and Fundamental Interactions, Tashkent, October, 2004;
25. **Calculating ϵ'/ϵ Using HYP staggered fermions.** (T. Bhattacharya, G.T. Fleming, R. Gupta, G. Kilcup, W. Lee, and S. Sharpe), Seoul National University report SNUTP-04-015, Los Alamos report LA-UR-04-5236, August 2004. [ori:oai:arXiv.org:hep-lat/0409046](https://arxiv.org/abs/hep-lat/0409046) Proceedings of the 22nd International Symposium on Lattice Field Theory, Batavia, Illinois, USA, 2003. Eds. Bodwin, *et al.*, **Nuclear Physics (Proceedings Supplement) B140 (2005) 369–371**; [ori:doi:10.1016/j.nuclphysbps.2004.11.256](https://doi.org/10.1016/j.nuclphysbps.2004.11.256). [inspire]. 14 citations as of Apr 13, 2011.
26. **Calculating weak matrix elements using HYP fermions.** (T. Bhattacharya, G. T. Fleming, G. Kilcup, R. Gupta, W. Lee, and S. Sharpe), Los Alamos report LA-UR-03-6654, Seoul National University report SNUTP-03-020, and University of Washington report UW-PT 03-19, September 2003. [ori:oai:arXiv.org:hep-lat/0309105](https://arxiv.org/abs/hep-lat/0309105) Proceedings of the 21st International Symposium on Lattice Field Theory, Tsukuba, Japan, 2003. Eds. S. Aoki, *et al.*, **Nuclear Physics (Proceedings Supplement) B129&130 (2004) 257–259**; [ori:doi:10.1016/S0920-5632\(03\)02547-7](https://doi.org/10.1016/S0920-5632(03)02547-7). [inspire]. 4 citations as of Apr 13, 2011.
27. **Improved bilinears in unquenched lattice QCD.** (Tanmoy Bhattacharya, Rajan Gupta, Weonjong Lee, Stephen R. Sharpe, and Jackson M.S. Wu), Los Alamos report LA-UR-03-6623, Seoul National University report SNUTP-03-019, and University of Washington report UW-PT 03-12, September 2003. [ori:oai:arXiv.org:hep-lat/0309087](https://arxiv.org/abs/hep-lat/0309087) Proceedings of the 21st International Symposium on Lattice Field Theory, Tsukuba, Japan, 2003. Eds. S. Aoki, *et al.*, **Nuclear Physics (Proceedings Supplement) B129&130 (2004) 441–443**; [ori:doi:10.1016/S0920-5632\(03\)02608-2](https://doi.org/10.1016/S0920-5632(03)02608-2). [inspire]. 2 citations as of Apr 13, 2011.
28. **Quantum And Classical Dynamics Of Atoms In A Magneto-optical Lattice.** (Shohini Ghose, Paul M. Alsing, Ivan H. Deutsch, Poul S. Jessen, David L. Haycock, Tanmoy Bhattacharya, Salman Habib, and Kurt Jacobs) [ori:oai:arXiv.org:quant-ph/0210131](https://arxiv.org/abs/quant-ph/0210131). Proceedings of the 7th Experimental Chaos Conference, San Diego, California, USA, 2002, Eds. Visarath In, *et al.*, **AIP Conference Proceedings 676 (2003) 283–294**; [ori:doi:10.1063/1.1612224](https://doi.org/10.1063/1.1612224).
29. **Progress report on staggered ϵ'/ϵ project.** (T. Bhattacharya, G. T. Fleming, G. Kilcup, R. Gupta, W. Lee, and S. Sharpe) Seoul National University report SNUTP-02-028, August 2002. [ori:oai:arXiv.org:hep-lat/0208050](https://arxiv.org/abs/hep-lat/0208050). Proceedings of the 20th International Symposium on Lattice Field Theory, Boston, Massachusetts, USA, 2002, Eds. M. Edwards, *et al.*, **Nuclear Physics (Proceedings Supplement) B119 (2003) 428–430**; [ori:doi:10.1016/S0920-5632\(03\)01576-7](https://doi.org/10.1016/S0920-5632(03)01576-7); [inspire]. 3 citations as of Apr 13, 2011.
30. **Preface** (T. Bhattacharya and N. Cooper) to **Los Alamos Science 27 (2002) x–xxii**
31. **Emergence of Classical Dynamics in a Quantum World.** (T. Bhattacharya, S. Habib, and K. Jacobs) Los Alamos report LA-UR-02-0786, March 2002. [ori:oai:arXiv.org:quant-ph/0407096](https://arxiv.org/abs/quant-ph/0407096) **Los Alamos Science 27 (2002) 110–125**
32. **Scaling Behavior of Improvement and Renormalization Constants.** (T. Bhattacharya, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-01-5861, November 2001. [ori:oai:arXiv.org:hep-lat/0111001](https://arxiv.org/abs/hep-lat/0111001) Proceedings of the 19th International Symposium on Lattice Field Theory, Berlin, Germany, 2001, Eds. M. Müller-Preussker, *et al.*, **Nuclear Physics**

- (Proceedings Supplement) **B106-107** (2002) 789–791; [ori:doi:10.1016/S0920-5632\(01\)01844-8](https://doi.org/10.1016/S0920-5632(01)01844-8). [inspire]. 22 citations as of Apr 13, 2011.
33. **Weak Matrix Elements for CP Violation.** (T. Bhattacharya, G.T. Fleming, G. Kilcup, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-01-5951, November 2001. [ori:oai:arXiv.org:hep-lat/0111004](https://arxiv.org/abs/hep-lat/0111004) Proceedings of the 19th International Symposium on Lattice Field Theory, Berlin, Germany, 2001, Eds. M. Müller-Preussker, *et al.*, **Nuclear Physics (Proceedings Supplement) B106-107** (2002) 311–313; [ori:doi:10.1016/S0920-5632\(01\)01698-X](https://doi.org/10.1016/S0920-5632(01)01698-X). [inspire]. 21 citations as of Apr 13, 2011.
34. **Renormalization Constants using Quark States in Landau gauge.** (T. Bhattacharya, R. Gupta, and W. Lee) Los Alamos report LA-UR-01-5950, November 2001. [ori:oai:arXiv.org:hep-lat/0111002](https://arxiv.org/abs/hep-lat/0111002) Proceedings of the 19th International Symposium on Lattice Field Theory, Berlin, Germany, 2001, Eds. M. Müller-Preussker, *et al.*, **Nuclear Physics (Proceedings Supplement) B106-107** (2002) 786–788; [ori:doi:10.1016/S0920-5632\(01\)01843-6](https://doi.org/10.1016/S0920-5632(01)01843-6). [inspire]. 3 citations as of Apr 13, 2011.
35. **Renormalization Constants using Quark States in Fixed Gauge.** (T. Bhattacharya, R. Gupta, and W. Lee) Los Alamos report LA-UR-01-0355, June 2001. [ori:oai:arXiv.org:hep-lat/0106007](https://arxiv.org/abs/hep-lat/0106007) Proceedings of the 18th International Symposium on Lattice Field Theory, Bangalore, India, 2000, Eds. T. Bhattacharya, *et al.*, **Nuclear Physics (Proceedings Supplement) B94** (2001) 595–598; [ori:doi:10.1016/S0920-5632\(01\)00874-X](https://doi.org/10.1016/S0920-5632(01)00874-X). [inspire]. 1 citation as of Apr 13, 2011.
36. **Continuous measurement and the classical limit of the motion of an atom in a magneto-optical double-well potential.** (S. Ghose, P.M. Alsing, I.H. Deutsch, K. Jacobs, T. Bhattacharya, S. Habib) Proceedings of the Quantum Electronics and Laser Science Conference. May 11, 2001, Baltimore, MD, USA Conference Edition-6 91–92.
37. **Detailed analysis of the evolution of HIV-1 subtype C** (C Kuiken, BT Korber, B Foley, and T Bhattacharya) Proceedings of the 2000 International Meeting of Institute of Human Virology, Baltimore, Maryland, USA, 2000. **Journal of Human Virology 3:5** (Sep–Oct 2000) 272.
38. **Improvement and Renormalization Constants in $O(a)$ Improved Lattice QCD.** (T. Bhattacharya, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-00-5683, August 2000. [ori:oai:arXiv.org:hep-lat/0101007](https://arxiv.org/abs/hep-lat/0101007) Proceedings of the 18th International Symposium on Lattice Field Theory, Bangalore, India, 2000, Eds. T. Bhattacharya, *et al.*, **Nuclear Physics (Proceedings Supplement) B94** (2001) 599–602; [ori:doi:10.1016/S0920-5632\(01\)00935-5](https://doi.org/10.1016/S0920-5632(01)00935-5). [inspire].
39. **Fixed-point Pure Gauge Action using $b = \sqrt{3}$ RGT.** (T. Bhattacharya, R. Gupta, and W. Lee) Los Alamos report LA-UR-99-4709, October 1999. [ori:oai:arXiv.org:hep-lat/9910046](https://arxiv.org/abs/hep-lat/9910046) Proceedings of the 17th International Symposium on Lattice Field Theory, Pisa, Italy, 1999, Eds. M. Campostrini, *et al.*, **Nuclear Physics (Proceedings Supplement) B83-84** (2000) 860–862; [ori:doi:10.1016/S0920-5632\(00\)91827-9](https://doi.org/10.1016/S0920-5632(00)91827-9). [inspire]. 3 citations as of Apr 13, 2011.
40. **Order a Improved Renormalization Constants.** (T. Bhattacharya, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-99-4973, June 1999. [ori:oai:arXiv.org:hep-lat/9909115](https://arxiv.org/abs/hep-lat/9909115) Proceedings of the 17th International Symposium on Lattice Field Theory, Pisa, Italy, 1999, Eds. M. Campostrini, *et al.*, **Nuclear Physics (Proceedings Supplement) B83-84** (2000) 851–853; [ori:doi:10.1016/S0920-5632\(00\)00462-X](https://doi.org/10.1016/S0920-5632(00)00462-X). [inspire]. 6 citations as of Apr 13, 2011.
41. **Non-perturbative Improvement of Bilinears in Unquenched QCD.** (T. Bhattacharya, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-99-4974 and University of Washington report UW-PT/99-21, June 1999. [ori:oai:arXiv.org:hep-lat/9909092](https://arxiv.org/abs/hep-lat/9909092) Proceedings of the 17th International Symposium on Lattice Field Theory, Pisa, Italy, 1999, Eds. M. Campostrini, *et al.*, **Nuclear Physics (Proceedings Supplement) B83-84** (2000) 902–904; [ori:doi:10.1016/S0920-5632\(00\)00410-2](https://doi.org/10.1016/S0920-5632(00)00410-2). [inspire]. 8 citations as of Apr 13, 2011.
42. **Dynamics of the Conformal Mode and Simplicial Gravity.** (S. Catterall, E. Mottola, and T. Bhattacharya) [ori:oai:arXiv.org:hep-lat/9809114](https://arxiv.org/abs/hep-lat/9809114) Proceedings of the 16th International Symposium on Lattice Field Theory, Boulder, Colorado, USA, 1998, Eds. T. De Grand, *et al.*, **Nuclear Physics (Proceedings Supplement) B73** (1999) 792–794; [ori:doi:10.1016/S0920-5632\(99\)85205-0](https://doi.org/10.1016/S0920-5632(99)85205-0). [inspire]. 1 citation as of Apr 13, 2011.
43. **Non-perturbative Renormalization Constants using Ward Identities.** (T. Bhattacharya, S. Chandrasekharan, R. Gupta, W. Lee, and S. Sharpe) Los Alamos report LA-UR-98-4267, July 1998. [ori:oai:arXiv.org:hep-lat/9810018](https://arxiv.org/abs/hep-lat/9810018) Proceedings of the 16th International Symposium on

- Lattice Field Theory, Boulder, Colorado, USA, 1998, Eds. T. De Grand, *et al.*, **Nuclear Physics (Proceedings Supplement) B73 (1999) 276–278**; **ori:doi:10.1016/S0920-5632(99)85046-4**. [inspire]. 6 citations as of Apr 13, 2011.
44. **f_B and f_{B_s} using NRQCD.** (T. Bhattacharya) Los Alamos report LAUR-98-4266, July 1998. **ori:oi:arXiv.org:hep-lat/9810015** Proceedings of the 16th International Symposium on Lattice Field Theory, Boulder, Colorado, USA, 1998, Eds. T. De Grand, *et al.*, **Nuclear Physics (Proceedings Supplement) B73 (1999) 369–371**; **ori:doi:10.1016/S0920-5632(99)85076-2**. [inspire]. 2 citations as of Apr 13, 2011.
45. **Advances in Determination of Quark Masses.** (T. Bhattacharya and R. Gupta) Los Alamos report LAUR-97-4355, July 1997. **ori:oi:arXiv.org:hep-lat/9710095** Proceedings of the 15th International Symposium on Lattice Field Theory, Edinburgh, Scotland, 1997, Eds. C.T.H. Davies, *et al.*, **Nuclear Physics (Proceedings Supplement) B63 (1998) 95–107**; **ori:doi:10.1016/S0920-5632(97)00701-9**. [inspire]. 26 citations as of Apr 13, 2011.
46. **Problems with Conventional Sum Rule Analyses for the Light Quark Masses and a New Analysis of m_s .** (Kim Maltman Rajan Gupta, and Tanmoy Bhattacharya) Proceedings of the 15th International Conference On Few-Body Problems In Physics (FB 97), Groningen, the Netherlands, 1996, Eds. J.C.S. Bacelar, *et al.*, **Nuclear Physics A631 (1998) 497c–501c**; **ori:doi:10.1016/S0375-9474(98)00055-4**. [inspire]. 3 citations as of Apr 13, 2011.
47. **Sum Rule Analyses for The Light Quark Masses Revisited.** (Kim Maltman R. Gupta, and T. Bhattacharya) Proceedings of the 6th Conference On The Intersections Of Particle And Nuclear Physics (CIPANP 97), Big Sky, Montana, USA, 1997, Ed. T.W. Donnelly, **AIP Conference Proceedings 412 (1997) 736–738**; (abstract available online)
48. **B and B_c Mesons with NRQCD and Clover Actions.** (A. Ali Khan and T. Bhattacharya) Los Alamos report LA-UR-96-3338, May 1996. **ori:oi:arXiv.org:hep-lat/9609048** Proceedings of the 14th International Symposium on Lattice Field Theory, St. Louis, USA, 1996, Eds. C. Bernard, *et al.*, **Nuclear Physics (Proceedings Supplement) B53 (1997) 368–373**; **ori:doi:10.1016/S0920-5632(96)00662-7**. [inspire]. 11 citations as of Apr 13, 2011.
49. **Light Quark Masses and the CP violation parameter ϵ'/ϵ .** (R. Gupta and T. Bhattacharya) Los Alamos report LA-UR-96-3337, June 1996. **ori:oi:arXiv.org:hep-lat/9609046** Proceedings of the 14th International Symposium on Lattice Field Theory, St. Louis, USA, 1996, Eds. C. Bernard, *et al.*, **Nuclear Physics (Proceedings Supplement) B53 (1997) 292–294**; **ori:doi:10.1016/S0920-5632(96)00640-8**. [inspire]. 9 citations as of Apr 13, 2011.
50. **Comparison of Inversion Algorithms for Wilson Fermions on the CM5.** (R. Gupta, T. Bhattacharya, and G. Kilcup) Los Alamos report LA-UR-96-1115, May 1996. **ori:oi:arXiv.org:hep-lat/9605029** (Talk presented at **Workshop on Accelerating Fermion Algorithms**, Jülich, February 1996) 3 citations as of Apr 13, 2011.
51. **Testing the Chiral Behaviour of the Hadron Spectrum.** (T. Bhattacharya, R. Gupta, and S. Sharpe) Los Alamos report LA-UR-95-4224, December 1995. **ori:oi:arXiv.org:hep-lat/9512005** Proceedings of the 13th International Symposium on Lattice Field Theory, Melbourne, Australia, 1995, Eds. T. Kieu, *et al.*, **Nuclear Physics (Proceedings Supplement) B47 (1996) 549–552**; **ori:doi:10.1016/0920-5632(96)00119-3**. [inspire]. 3 citations as of Apr 13, 2011.
52. **Status Report on Weak Matrix Element Calculations.** (R. Gupta and T. Bhattacharya) Los Alamos report LA-UR-95-4223, December 1995. **ori:oi:arXiv.org:hep-lat/9512006** Proceedings of the 13th International Symposium on Lattice Field Theory, Melbourne, Australia, 1995, Eds. T. Kieu, *et al.*, **Nuclear Physics (Proceedings Supplement) B47 (1996) 473–480**; **ori:doi:10.1016/0920-5632(96)00104-1**. [inspire]. 10 citations as of Apr 13, 2011.
53. **Lattice Analysis of Semi-Leptonic Form Factors.** (T. Bhattacharya and R. Gupta) Los Alamos report LA-UR-95-4222, December 1995. **ori:oi:arXiv.org:hep-lat/9512007** Proceedings of the 13th International Symposium on Lattice Field Theory, Melbourne, Australia, 1995, Eds. T. Kieu, *et al.*, **Nuclear Physics (Proceedings Supplement) B47 (1996) 481–484**; **ori:doi:10.1016/0920-5632(96)00105-3**. [inspire]. 19 citations as of Apr 13, 2011.
54. **Phenomenology from 100 Large Lattices.** (T. Bhattacharya and R. Gupta) Los Alamos report LA-UR-95-72, September 1994. **ori:oi:arXiv.org:hep-lat/9501016** Proceedings of the 12th International Symposium on Lattice Field Theory, Bielefeld, Germany, 1994, Eds. F. Karsch, *et al.*,

- Nuclear Physics (Proceedings Supplement) B42 (1995) 935–941**; [ori:doi:10.1016/0920-5632\(95\)00427-B](#). [[inspire](#)]. 28 citations as of Apr 13, 2011.
55. **Very Large Energy Cumulants of the 2d Potts-Model.** (T. Bhattacharya, R. Lacaze, and A. Morel) Proceedings of the 12th International Symposium on Lattice Field Theory, Bielefeld, Germany, 1994, Eds. F. Karsch, *et al.*, **Nuclear Physics (Proceedings Supplement) B42 (1995) 743–745**; [ori:doi:10.1016/0920-5632\(95\)00368-J](#). [[inspire](#)].
56. **Semileptonic form factors from lattice QCD.** (T. Bhattacharya and R. Gupta) Los Alamos report LA-UR-94-3079, August 1994. [ori:oai:arXiv.org:hep-ph/9409284](#) Proceedings of 1994 Meeting of the American Physical Society, Division of Particles and Fields DPF94, Albuquerque, New Mexico, 1995, World Scientific, Ed. Sally Seidel (pages 605–607). [[inspire](#)]. 3 citations as of Apr 13, 2011.
57. **A Pot-Pourri of results in QCD from Large Lattice Simulations on the CM5.** (T. Bhattacharya and R. Gupta) Los Alamos report LA-UR-93-4459, December 1993. [ori:oai:arXiv.org:hep-lat/9312075](#) Proceedings of the 11th International Symposium on Lattice Field Theory, Dallas, Texas, 1993, Eds. T. Draper, *et al.*, **Nuclear Physics (Proceedings Supplement) B34 (1995) 341–346**; [ori:doi:10.1016/0920-5632\(94\)90385-9](#). [[inspire](#)]. 1 citation as of Apr 13, 2011.
58. **The Free Energy of the Potts Model.** (T. Bhattacharya, R. Lacaze, and A. Morel) Proceedings of the 11th International Symposium on Lattice Field Theory, Dallas, Texas, 1993, Eds. T. Draper, *et al.*, **Nuclear Physics (Proceedings Supplement) B34 (1994) 671–673**; [ori:doi:10.1016/0920-5632\(94\)90478-2](#). [[inspire](#)]. 4 citations as of Apr 13, 2011.
59. **Surface Tension in QCD.** (T. Bhattacharya, A. Gocksch, C.P. Korthals Altes, and R.D. Pisarski) Brookhaven Preprint BNL-45574, December 1990. Proceedings of the 8th International Symposium on Lattice Field Theory, Tallahassee, Florida, 1990, Eds. Fukugita, *et al.*, **Nuclear Physics (Proceedings Supplement) B20 (1991) 305–308**; [ori:doi:10.1016/0920-5632\(91\)90931-4](#). [[inspire](#)]. 1 citation as of Apr 13, 2011.

Patents and Patent Applications

- Genetic signatures in envelope glycoprotein of hiv-1.** (Barton F. Haynes, David C. Montefiori, Hua-Xin Liao, Feng Gao, Bette T. Korber, S. Gnanakaran, Marcus G. Daniels, Tanmoy Bhattacharya, Alan S. Lapedes) [WO 2011126576 A3](#), [WO 2011126576 A2](#); priority date: Apr 9, 2010; US Provisional Application 61/322,663 (filed Apr 9, 2010). Classification: International [C12N15/49](#), [A61K39/21](#), [A61P31/18](#), [C07K14/155](#), [C07K16/10](#), Cooperative [C12N2760/16023](#), [C12N2740/16034](#), [C12N7/00](#), [C07K2317/34](#), [A61K39/21](#), [C07K2317/76](#), [A61K39/00](#), [C12N2740/16122](#), [C12N2740/16134](#), [C07K16/1045](#); European [C07K16/10K1](#), [A61K39/21](#), [C07K14/005](#), [C12N7/00](#).
- Acute transmitted hiv envelope signatures.** (Barton F. Haynes, Bette T. Korber, Beatrice H. Hahn, Tanmoy Bhattacharya, Gnana S. Gnanakaran, Feng Gao, Ron Swanstrom, George Shaw) [US 20100104596 A1](#), [WO 2008118470 A3](#), [WO 2008118470 A2](#), [CA 2682206 A1](#), [CN 101969997 A](#), [EP 2129395 A4](#), [EP 2129395 A2](#), [JP 2010530356 A](#), [AU 2008231306 A1](#); priority date: Mar 27, 2007; US Provisional Application 60/907,259 (filed Mar 27, 2007). Classification: US [424/208.1](#) International [A61P37/04](#), [A61K39/21](#), Cooperative [A61K39/21](#), [C12N2740/16034](#), [C12N2740/16134](#), [C12N2740/16122](#); European [C07K14/005](#), [A61K39/21](#).
- Polyvalent vaccine or Immunogenic composition comprising human immunodeficiency virus (HIV) mosaic Nef proteins.** (Bette T. Korber, Simon Perkins, Tanmoy Bhattacharya, William M. Fischer, James Theiler, Norman Letvin, Barton F. Haynes, Beatrice H. Hahn, Karina Yusim, Carla Kuiken) [US 8119140 B2](#), [US 20090324631 A1](#), [US 20110150915 A1](#), [US 20120231028 A1](#), [WO 2007024941 A3](#), [WO 2007024941 A2](#), [CA 2620874 A1](#), [CN 101969996 A](#), [EP 1917040 A4](#), [EP 1917040 A2](#), [AU 2006283101 A1](#), [AU 2006283101 B2](#); priority date: Aug 23, 2005; US Provisional Application 60/710,154 (filed Aug 23, 2005) and US Provisional Application 60/739,413 (filed Nov 25, 2005). Classification: US [424/188.1](#), [424/208.1](#), International [A61K48/00](#), Cooperative [A61K39/21](#), [C12N2740/16034](#), [A61K39/00](#); European [A61K39/21](#).



Tanmoy Bhattacharya [Mar 18, 2015]