Using Topology to Understand Protein Folding Mechanisms – An Approximate and Simple Suggestion in the Context of HOL/Scala/Java/JikesRVM/JVM.
[HOL – Higher Order Logic]

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[I] Introduction & Inspiration :

Topological Aspects of DNA Function and Protein Folding

AND

Topological Dynamics in the Physical and Biological Sciences

From

[Source : https://www.newton.ac.uk/event/todw02]

http://www.sci.ccny.cuny.edu/~gunner/Pages-422/PDF/nrm03.fersht.pdf

https://www.gwern.net/docs/biology/1993-fraenkel.pdf

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2443096/

https://pdfs.semanticscholar.org/4ee0/da5473902486ba7efc7fbb634dc5dbc1331e.pdf

https://www.science.gov/topicpages/c/cancer+intricate+networks

http://www.scienpress.com/Upload/JAMB/Vol%202_2_6.pdf
[Nucleic Acids Data Sequencing using Higher Order Logic-A Suggestion of Basic Computational Framework Towards Bio-Sensors and Gene-Chips Design, Implementation and Verification]

https://pdfs.semanticscholar.org/ad9e/1be9a3b421d78221a785a913d34ea8529453.pdf
[Deduction and Computation in Algebraic Topology]

https://cs.vu.nl/~jhl890/pub/hoelzl2011measuretheory.pdf
[HOL formalizations of measure theory]

https://sourceforge.net/p/hol/mailman/message/34161259/

https://arxiv.org/ftp/arxiv/papers/1505/1505.07153.pdf
[Topology, Geometry, and Stability: Protein Folding and Evolution]

[II] Informatics Framework & Implementation :

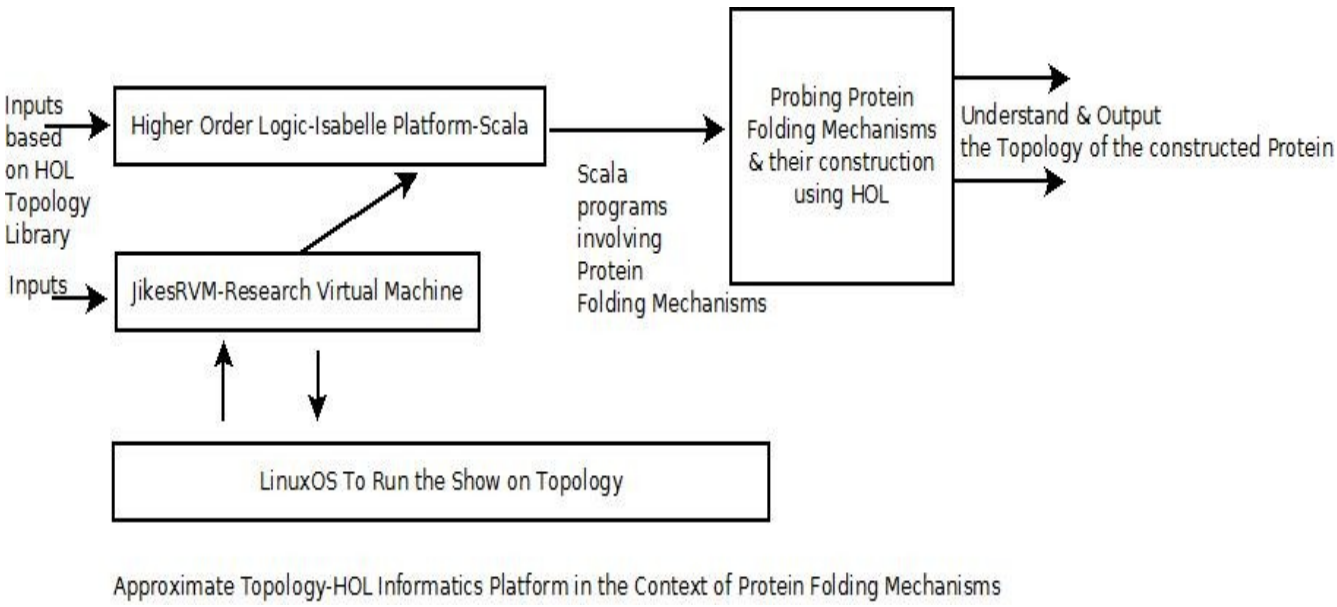

Figure I – Topological Informatics Framework Based on HOL
[Actual Implementation will vary – Please Check]

[III] Information on Mathematics & Software Used :

[i] https://www.isa-afp.org/entries/Topology.html

[ii] https://www.isa-afp.org/entries/Coinductive.html

[iii] https://www.isa-afp.org/browser_info/current/AFP/Lazy-Lists-II/session_graph.pdf

[iv] https://ieeexplore.ieee.org/document/6081277 - [**Formalization of continuous Functions in Topological Spaces using Isabelle/HOL.**]

[v] http://map.disi.unige.it/monastir/slides/rubio/Session_2.pdf

[vi] https://isabelle.in.tum.de/library/HOL/HOL/outline.pdf

[vii] https://isabelle.in.tum.de/

[viii] http://vixra.org/author/nirmal_tej_kumar

[ix] http://vixra.org/author/n_t_kumar && http://vixra.org/author/d_n_t_kumar

[x] https://www.scala-lang.org/ && https://www.jikesrvm.org/

[xi] https://nms.kcl.ac.uk/christian.urban/Cookbook/

[xii] https://www.ethz.ch/content/dam/ethz/special-interest/infk/inst-infsec/information-security-group-dam/research/publications/pub2014/lochbihler14itp.pdf

[IV] Acknowledgment :

Non Profit Academic R&D. Thanks to all who encouraged me to draft this technical note.

THE END