Papers I Love

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   http://venus.cs.qc.edu/~waxman/cs211%20spring%202009/why%20is%20recursive%20fibonacci%20so%20slow.pdf

2. Binomial Coefcient Computation: Recursion or Iteration?
   http://delab.csd.auth.gr/papers/SBI02m.pdf

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   http://www.cs.brandeis.edu/~dilant/cs175/%5BSiying-Dong%5D.pdf

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   https://arxiv.org/pdf/1609.00616.pdf

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   http://www.vldb.org/pvldb/vol6/p1522-rao.pdf

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   http://academic.research.microsoft.com/Publication/716253/elections-in-a-distributed-computing-system
   http://homepage.cs.uiowa.edu/~ghosh/Bully.pdf

2. The Part-Time Parliament
   http://research.microsoft.com/en-us/um/people/lamport/pubs/lamport-paxos.pdf

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   https://ramcloud.atlassian.net/wiki/download/attachments/6586375/raft.pdf

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1. Quantifying the Cost of Context Switch
   http://www.cs.rochester.edu/u/cli/research/switch.pdf

2. What Every Programmer Should Know About Memory
   https://people.freebsd.org/~lstewart/articles/cpumemory.pdf

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1. Enabling Multi-Tenancy an Industrial Experience Report
   http://swerl.tudelft.nl/twiki/pub/Main/TechnicalReports/TUD-SERG-2010-030.pdf

2. Multi-Tenant Saas Applications: Maintenance Dream or Nightmare
   http://swerl.tudelft.nl/twiki/pub/Main/TechnicalReports/TUD-SERG-2010-031.pdf

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   http://research.microsoft.com/en-us/um/people/srikanth/netdb11/netdb11papers/netdb11-final8.pdf

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1. Architectural Styles and the Design of Network-Based Software Architectures
   http://academic.research.microsoft.com/Publication/1309313/architectural-styles-and-the-design-of-network- based-software-architectures
   http://www.ics.uci.edu/~fielding/pubs/dissertation/top.htm

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   http://academic.research.microsoft.com/Publication/112151/seda-an-architecture-for-well-conditioned-scalable-internet-services
   http://www.eecs.harvard.edu/~mdw/papers/mdw-phdthesis.pdf

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   https://www.usenix.org/event/usenix99/full_papers/pai/pai.pdf

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   http://www.jsnover.com/Docs/MonadManifesto.pdf

2. The Hla Tutorial
   http://www.pitch.se/hlatutorial

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1. Active Object: An Object Behavioral Pattern for Concurrent Programming
   http://www.cs.wustl.edu/~schmidt/PDF/Act-Obj.pdf

2. Plop Half-Sync/half-Async: An Architectural Pattern for Efficient and Well-Structured Concurrent I/o
   http://www.cs.wustl.edu/~schmidt/PDF/PLoP-95.pdf

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1. Architectures for an Event Notification Service Scalable to Wide-Area Networks
   http://academic.research.microsoft.com/Publication/314658/architectures-for-an-event-notification-service-scalable-to-wide-area-networks
   http://www.inf.usi.ch/carzaniga/papers/phd_thesis.pdf

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1. Time, Clocks and the Ordering of Events in a Distributed System
   http://academic.research.microsoft.com/Publication/775212/time-clocks-and-the-ordering-of-events-in-a-distributed-system
   http://research.microsoft.com/en-us/um/people/lamport/pubs/pubs.html#time-clocks
   http://research.microsoft.com/en-us/um/people/lamport/pubs/time-clocks.pdf

2. Distributed Snapshots: Determining Global States of Distributed Systems
   http://academic.research.microsoft.com/Publication/803548/distributed-snapshots-determining-global-states-of-distributed-systems
   http://research.microsoft.com/en-us/um/people/lamport/pubs/pubs.html#chandy
   http://research.microsoft.com/en-us/um/people/lamport/pubs/chandy.pdf

3. Your Coffee Shop Doesnt Use Two-Phase Commit
   http://www.enterpriseintegrationpatterns.com/docs/IEEE_Software_Design_2PC.pdf

4. Life Beyond Distributed Transactions: An Apostates Opinion
   http://www.ics.uci.edu/~cs223/papers/cidr07p15.pdf

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1. A Brief History of Process Algebra
   http://alexandria.tue.nl/extra1/wskrap/publichtml/200402.pdf

2. Some of My Favourite Results in Classic Process Algebra (Version of September 9, 2003)
   https://www.researchgate.net/publication/228785318_Some_of_My_Favourite_Results_in_Classic_Process_Algebra_Version_of_September_9_2003

3. Reactive Systems: Modelling, Specication and Verication
   https://www.semanticscholar.org/paper/Reactive-Systems-Modelling-Specification-and-Ace
   454e1c72efc65270649e10efb11f4390606b7ea7

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1. Design of a Scalable Event Notification Service Interface and Architecture
   http://academic.research.microsoft.com/Publication/312680/design-of-a-scalable-event-notification-service-interface-and-architecture
   http://www.inf.usi.ch/carzaniga/papers/CU-CS-863-98.pdf

2. Fast Forwarding for Content-Based Networking
   http://academic.research.microsoft.com/Publication/7217/fast-forwarding-for-content-based-networking
   http://www.inf.usi.ch/carzaniga/papers/cucs-922-01-r1.pdf

3. Real-Time Modelling of Dds for Event-Driven Applications
   http://www.ctr.unican.es/publications/hpt-jjg-2012a.pdf

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   http://academic.research.microsoft.com/Publication/634136/adaptive-overload-control-for-busy-internet-servers
   http://www.eecs.harvard.edu/~mdw/papers/control-usits03.pdf

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1. Evaluating the Design of the R Language
   http://r.cs.purdue.edu/pub/ecoop12.pdf

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   http://alexandria.tue.nl/extra1/wskrap/publichtml/200402.pdf

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1. A Theory of Objects
   http://academic.research.microsoft.com/Publication/1354440/a-theory-of-objects

http://lucacardelli.name/Talks/1997-06%20A%20Theory%20of%20Object%20(ECOOP%20Tutorial).pdf

2. Traits: Composable Units of Behaviour
   http://scg.unibe.ch/archive/papers/Scha03aTraits.pdf

3. Applying Traits to the Smalltalk Collection Hierarchy
   http://www.researchgate.net/publication/2564879_Applying_Traits_to_the_Smalltalk_Collection_Hierarchy

4. A Laboratory for Teaching Object-Oriented Thinking
   http://www.inf.ed.ac.uk/teaching/courses/seoc/2007_2008/resources/CRC_OOthinking.pdf

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   https://www.lrde.epita.fr/dload/papers/coots01.html

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   https://parasol.tamu.edu/~yuriys/papers/OMM10.pdf

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   http://people.cs.aau.dk/~simas/aalg06/UbiquitBtree.pdf

2. Generalized Search Trees for Database Systems
   http://db.cs.berkeley.edu/papers/vldb95-gist.pdf

3. Concurrency and Recovery in Generalized Search TreeS
   http://db.cs.berkeley.edu/papers/sigmod97-gist.pdf

4. Data Cube: A Relational Aggregation Operator Generalizing Group-By, Cross-Tab, and Sub-Totals
   http://research.microsoft.com/pubs/69578/tr-95-22.pdf

5. Query Optimization in Microsoft Sql Server PDW
   http://academic.research.microsoft.com/Publication/56916436/query-optimization-in-microsoft-sql-server-pdw

6. Druid: A Real-Time Analytical Data Store http://static.druid.io/docs/druid.pdf

7. Map-Reduce: Simplified Dataprocessing on Large Clusters
   http://static.googleusercontent.com/media/research.google.com/en/us/archive/mapreduce-osdi04.pdf

8. Googles Mapreduce Programming Model Revisited
   http://www.idt.mdh.se/kurser/cd5100/ht06/MapReduce/Ralf-Laemmel-paper/paper.pdf
9. Cassandra - a Decentralized Structured Storage System
   http://www.cs.cornell.edu/projects/ladis2009/papers/lakshman-ladis2009.pdf
10. Bigtable: A Distributed Storage System for Structured Data
    http://static.googleusercontent.com/media/research.google.com/en//archive/bigtable-osdi06.pdf
11. Dynamo: Amazons Highly Available Key-Value Store
    http://s3.amazonaws.com/AllThingsDistributed/sosp/amazon-dynamo-sosp2007.pdf
12. Solving Big Data Challenges for Enterprise Application Performance Management
    http://vldb.org/pvldb/vol5/p1724_tilmannrabl_vldb2012.pdf

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1. A Generic Architecture for Fusion-Based Intrusion Detection Systems
   https://rcdeboer.home.xs4all.nl/rcdb_thesis.pdf

2 Mathematics

2.1 Real Analysis

1. COISAS QUE O LUS PRECISA APRENDER
   http://www.todasasconfiguracoes.com/wp-content/uploads/2012/04/luis.pdf

2.2 Statistics

1. A Note on the Generation of Random Normal Deviates
   http://projecteuclid.org/euclid.aoms/1177706645
2. Tidy Data
   http://vita.had.co.nz/papers/tidy-data.pdf
3. A Tutorial on Principal Component Analysis - Derivation, Discussion and Singular Value Decomposition
   https://www.cs.princeton.edu/picasso/mats/PCA-Tutorial-Intuition_jp.pdf
4. An introduction to ROC analysis
   https://ccrma.stanford.edu/workshops/mir2009/references/ROCintro.pdf

2.3 Forecast

1. Forecasting Global Climate Change
   https://faculty.wharton.upenn.edu/wp-content/uploads/2015/02/GlobalClimateChange-FWP-(2)_2.pdf

3 Economy

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1. The Laffer Curve Past, Present, and Future
   http://s3.amazonaws.com/thf_media/2004/pdf/bg1765.pdf

2. Dynamic Revenue Estimation
   https://ideas.repec.org/a/aea/jecper/v10y1996i1p141-57.html

3. Dynamic Scoring an Introduction to the Issues
   https://www.aeaweb.org/annual_mtg_papers/2005/0107_1430_1304.pdf