Papers I Love

Daniel Frederico Lins Leite

May 14, 2017

Contents

1	Computer Science				
	1.1	Algori	thms \dots 2		
		1.1.1	Analysis		
		1.1.2	Compression		
		1.1.3	Hash		
		1.1.4	Data Structures		
		1.1.5	Elections + Consensus		
	1.2	Archit	ectures		
		1.2.1	Computer Architecture		
		1.2.2	Multi Tenancy		
		1.2.3	REST		
		1.2.4	SEDA		
		1.2.5	Servers		
		1.2.6	Other Architectures		
		1.2.7	Patterns		
		1.2.8	Overlay Networks		
		1.2.9	Distributed Systems		
		1.2.10	Process Algebra		
		1.2.11	Event Based Architecture		
		1.2.12	Resiliency		
	1.3		amming Paradigms		
		1.3.1	Language Analysis		
		1.3.2	Process Theory		
		1.3.3	Object Oriented		
		1.3.4	Generic Programming		
		1.3.5	Dynamic Dispatch		
	1.4	Datab	ase		
	1.5	Data Fusion			
	1.6		Fusion		
	1.7		Mining		
	1.8	VIPs	7		

	Mathematics					
	2.1	Real Analysis	8			
	2.2	Statistics	8			
	2.3	Forecast	8			
	Scie		8			
	3.1	Research	8			
4 Economy						
	4.1	Political Economy	8			
		4.1.1 Taxes	8			

1 Computer Science

1.1 Algorithms

1.1.1 Analysis

1. Recursive Algorithms in Computer Science Courses: Fibonacci Numbers and Binomial Coefficients

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

1.1.2 Compression

1. Data Compression Using Long Common Strings http://www.cs.brandeis.edu/~dilant/cs175/%5BSiying-Dong%5D.pdf

1.1.3 Hash

 SHA-1 and the Strict Avalanche Criterion https://arxiv.org/pdf/1609.00616.pdf

1.1.4 Data Structures

1. Bitlist New Full-Text Index for Low Space Cost and Efficient Keyword Search

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

1.1.5 Elections + Consensus

 Elections in a Distributed Computing System 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
- 3. In Search of an Understandable Consensus Algorithm https://ramcloud.atlassian.net/wiki/download/attachments/6586375/raft.pdf

1.2 Architectures

1.2.1 Computer Architecture

- 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

1.2.2 Multi Tenancy

- 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
- Towards an Elastic and Autonomic Multitenant Database http://research.microsoft.com/en-us/um/people/srikanth/netdb11/ netdb11papers/netdb11-final8.pdf

1.2.3 REST

 ${\it 1. Architectural\ Styles\ and\ the\ Design\ of\ Network-Based\ Software\ Architectures}$

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

1.2.4 SEDA

1. An Architecture for Highly Concurrent, Well-Conditioned Internet Services

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

1.2.5 Servers

 Flash an Efficient and Portable Web Server https://www.usenix.org/event/usenix99/full_papers/pai/pai.pdf

1.2.6 Other Architectures

- The Monad Manifesto http://www.jsnover.com/Docs/MonadManifesto.pdf
- 2. The Hla Tutorial http://www.pitch.se/hlatutorial

1.2.7 Patterns

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

1.2.8 Overlay Networks

1. Architectures for an Event Notification Service Scalable to Wide-Area Networks

http://academic.research.microsoft.com/Publication/314658/architecturesfor-an-event-notification-service-scalable-to-wide-area-networks http://www.inf.usi.ch/carzaniga/papers/phd_thesis.pdf

1.2.9 Distributed Systems

- 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/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

1.2.10 Process Algebra

- 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

1.2.11 Event Based Architecture

- Design of a Scalable Event Notification Service Interface and Architecture http://academic.research.microsoft.com/Publication/312680/design-of-a-scalableevent-notification-service-interface-and-architecture http://www.inf.usi.ch/carzaniga/papers/CU-CS-863-98.pdf
- Fast Forwarding for Content-Based Networking http://academic.research.microsoft.com/Publication/7217/fast-forwardingfor-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

1.2.12 Resiliency

1. Adaptive Overload Control for Busy Internet Servers http://academic.research.microsoft.com/Publication/634136/adaptive-overload-control-for-busy-internet-servers http://www.eecs.harvard.edu/~mdw/papers/control-usits03.pdf

1.3 Programming Paradigms

1.3.1 Language Analysis

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

1.3.2 Process Theory

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

1.3.3 Object Oriented

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%200bject% 20(ECOOP%20Tutorial).pdf

- 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_00thinking.pdf

1.3.4 Generic Programming

1. Design Patterns for Generic Programming in C++ https://www.lrde.epita.fr/dload/papers/coots01.html

1.3.5 Dynamic Dispatch

 Design and evaluation of C++ open multi-methods https://parasol.tamu.edu/~yuriys/papers/OMM10.pdf

1.4 Database

- 1. The Ubiquitous B-Tree 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
- 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
- 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

1.5 Data Fusion

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

1.6 Artificial Intelligence

1. Computing Machinery and Intelligence http://orium.pw/paper/turingai.pdf

1.7 Text Mining

 Text Mining Infrastructure in R https://www.jstatsoft.org/article/view/v025i05

1.8 VIPs

 Richard Bellman's contributions to computer science http://www.sciencedirect.com/science/article/pii/0022247X86901460

2 Mathematics

2.1 Real Analysis

 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
- 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
- 5. TEACHING SURVEY SAMPLING WITH THE SAMPLING R PACKAGE http://iase-web.org/documents/papers/icots8/ICOTS8_4J1_TILLE.pdf

2.3 Forecast

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

3 Science

3.1 Research

 Why Most Published Research Findings Are False http://journals.plos.org/plosmedicine/article?id=10.1371/journal. pmed.0020124

4 Economy

4.1 Political Economy

4.1.1 Taxes

- 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