MADALGO
CENTER FOR MASSIVE DATA ALGORITHMICS

AARHUS UNIVERSITY

Danmarks Grundforskningsfond
Danish National Research Foundation

ANNUAL REPORT 2014

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2014 Highlights

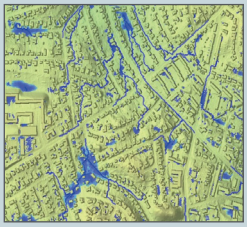
Research team

At the end of 2014 the center research team consisted of eight senior researchers (4 at AU), five Postdocs (all at AU) and seventeen PhD students (9 at AU).

Additionally, two further Postdocs and three PhD students (who obtained PhD degrees during the year) were part of the center in 2014. Almost all center Postdocs are internationals and so are all but three of the PhD students.

Research collaboration and results

In 2014 MADALGO researchers published 87 peer reviewed research papers within the center research areas. Several of these papers have appeared in highly ranked journals and conference proceedings. Some of the results in the papers have been obtained with the many international researchers that have visited MADALGO in 2014. The center also has extensive multidisciplinary and industry collaboration.



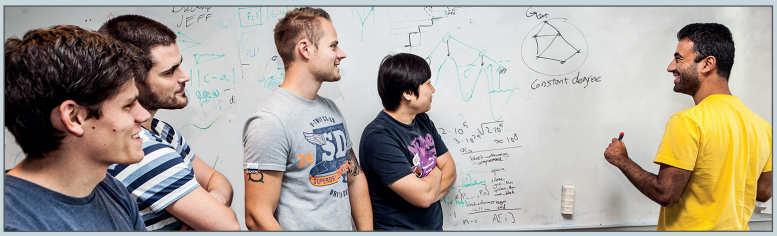
Using modern remote sensing techniques, very accurate and detailed (and thus massive) measurements of the earth surface can be obtained. For example, several hundred billion measurements (4 per square meter) is currently being collected for Denmark. Such measurements can e.g be used to model water flow in order to predict flooding from extreme rain.

In 2014 the center developed algorithms that can efficiently process massive amounts of terrain measurements to estimate risk of flooding from water flowing in rivers and on the terrain. Previously, the center has developed efficient algorithms for estimating risk from water gathering in terrain depressions and from rising sea-levels.

Centerevents

Apart from a large number of smaller research seminars and workshops, as well as a retreat for center employees, MADALGO organized a four day international summer school on “Learning at Scale” in 2014, where four international experts lectured for 67 participants (mostly PhD students) from 26 institutions and 5 companies in 14 countries. The center also organized the Fifth Workshop on Massive Data Algorithmics (MASSIVE 2014) as part of the main European algorithms event ALGO in Wroclaw, Poland.

In 2014 center researchers gave numerous presentations at international research conferences, as well as more than 35 invited presentations at research conferences, workshops and seminars. Center researchers have also participated in several public outreach activities, including as keynote speakers at several large “big data” events.



Awards and acknowledgments

Center researchers received a number of awards and acknowledgments in 2014 including the following:

Center senior researcher Mehlhorn won the Academia Europaea Erasmus Medal and Center PhD student Larsen won Aarhus University Research Foundation PhD price. Center researcher Sandel was appointed editor of Ecography and of Scientific reports, and center director Arge serve as program committee chair for the 2015 Symposium on Computational Geometry.

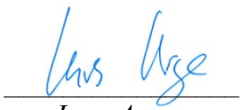
Content

This report describes the 2014 activities at the Danish National Research Foundation's *Center for Massive Data Algorithmics* (MADALGO). The report is accompanied by a number of appendices (covering external relations, conferences, educational activities, external funding, awards, public outreach, patents and applications, publications, list of personnel) as specified by the foundation. The appendices are an important part of the annual report (and information such as external funding and teaching is only covered in the appendices). Note that *some* of the appendices only cover the employees at Aarhus University (and not the participants at Max Planck Institute for Informatics, Massachusetts Institute of Technology and Frankfurt University). Finally, note that the 2014 accounts for the center with appendices (as well as the center research plan and previous yearly reports) are also important in order to obtain a complete overview of the 2014 activities of the center.

Center director statement

I hereby confirm the correctness of the information concerning 2014 annual accounts, including itemizations, submitted to the foundation. Also, I confirm that the compiled annual reporting, including the appendices, is correct, i.e. it is free of material misstatement or omissions, and that the administration of the center funds has been secure and sound, and in accordance with the conditions of the center agreement.

March 2015



Lars Arge
Center Director

1 Center background and organization

Center for Massive Data Algorithmics (MADALGO) strives to be a world-leading center in algorithms for handling massive data. The center particularly focuses on designing algorithms in theoretical models that take the hierarchical memory organization of modern machines into account. The center builds on the research strength at the main center site at Aarhus University (AU) in Denmark (with Brodal, Arge, Afshani and Larsen as senior faculty), at the center sites at the Max Planck Institute for Informatics (MPI) and at Frankfurt University (FRA) in Germany (with Mehlhorn and Meyer as senior faculty), and at Massachusetts Institute of Technology (MIT) in the US (with Demaine and Indyk as senior faculty). The center also relies on significant international research collaboration, multidisciplinary and industry collaboration, and on maintaining a vibrant international environment at the main center site. The center is led by center director Lars Arge along with the other senior faculty and with advice from an international advisory board. It is managed by center manager Trine Holmgaard with help from accountant Ellen Lindstrøm and a student assistant (Matie Bach Søgaard until May 2014 and thereafter Katrine Ø. Rasmussen). Two part time student programmers have also been associated with the center in 2014.

2 Center recruitment and research education

During 2014 Kasper Larsen was hired as an Assistant Professor in a tenure-track like arrangement. Larsen returned to the center after a year in industry and adds significant strength in data structures and lower bounds. Very recently, center Assistant Professor Peyman Afshani was also promoted to Associate Professor. With the hires of Larsen and Afshani, the center is on track to hire faculty as planned in the center contract.

Also the center Post Doc and PhD student population has developed more or less as anticipated, although with some fluctuations. Post Docs and PhD students are not only important for fulfilling the center's research plan. A key goal of the center is also to train the next generation of researchers in a world-leading and international environment. Thus PhD students and Post Docs are a very important part of the center, and the center strives to have a large population of international PhD students and Post Docs at AU.

Currently, the center houses 3 *Post Docs* (all at AU), which is a little fewer than in previous years due to one Post Doc leaving after one year and another deferring his start date. One of the Post Docs were hired in 2014, namely Constantinos Tsirogiannis (PhD Eindhoven 2011) who works with algorithmic problems in biodiversity. Tsirogiannis has previously been with the center and has served in the Greek military during the last year. One further post doc, Wanbin Son (PhD POSTECH 2013) working on problems on the boundary between algorithms and spatial databases, was hired during 2014. However, Son recently chooses to return to a position at center for geometry and its applications at POSTECH in South Korea after one year at the center. Two other Post Docs left the center in 2014 (after the normal two years), namely Zhewei Wei and Darius Sidlauskas who left for an Associate Professor position at Renmin University in Beijing and a Post Doc at École Polytechnique Fédérale de Lausaine, respectively.

Currently, the center houses 17 (9 at AU, 6 international) *PhD students*. Six of these students joined the center in 2014 and one in 2015. At AU Mathias Rav (who was previously student programmer with the center) and Yujin Shin with Arge as advisor, and Ingo van Dujin, Edvin Berglin and Konstantinos Mampentzidis with Brodal as advisor, and at MIT Ilya Razenshteyn and Arturs Backurs with Indyk as advisor. Three PhD students obtained their degrees in 2014. At AU Morten Revsbæk and Anders Skovsgaard with Arge and Jensen as advisor, respectively, and at MIT Morteza Zadimoghaddam with Demaine as advisor. They all went to industry, namely to SCALGO, TrustSkills and Google research, respectively. Furthermore, PhD student Sarfraz Raza recently left the center.

As also discussed in previous annual reports, we believe the center's *recruitment efforts* have been relatively successful. For example, 2/3 of the current AU PhD students are recruited internationally, and almost all center Post Docs continue to be internationally recruited. The centers recruitment strategy has been to try to recruit a strong and diverse PhD student and Post Doc population by both focusing on identifying the top AU students, for example through the numerous graduate level classes taught by center faculty and Post Doc, and on recruiting internationally. To recruit the best international candidates the center has advertised its positions broadly, but especially actively solicited candidates from its international network and collaborators. In recent years, we have also been able to use our by now extensive network of previous center students and especially Post Docs. However, despite an active effort to hire woman, including offering co-funding for a Post Doc position for a spouse, the center has not been able to obtain a reasonable *gender balance*. So far the center has only had one female Post Doc and two female PhD students, including the new PhD student Shin. One reason for this is obviously the general lack of woman in computer science. For this reason, the center participates in various outreach activities, in particular in relation to high school (female) students.

The centers continue to focus on research education (training of PhD students and Post Docs). This includes exchange of Post Doc and PhD students, organization of summer schools and workshops, and a 6 months stay abroad for AU PhD students. During 2014 Jesper Sindahl Nielsen, Jungwoo Yang and Bryan Wilkinson each spent approximately a semester at Waterloo University in Canada, Duke University in the US and at KAIST in South Korea. During 2014, Center Post Docs have also organized a specialized PhD class. There is also continued emphasis on initiatives designed to create a sense of community at the main center site and among the center sites. This includes a yearly fall retreat, monthly center lunches at AU and movie nights.
Recently, there has been an increasing focus in Denmark (and abroad) on *research integrity*. In the centers relatively theoretical research area there is a very collaborative research tradition and authorships are only awarded to major contributors. Thus problems in relation to competing research teams and authorships are likely less of an issue than in many other areas. Still research integrity is obviously also a focus of the center, especially in connection with research education. While research integrity issues are mostly addressed between individual advisor and the PhD students and Post Docs participating in individual research project, as well as through a very open and reflective research environment, research integrity issues are also discussed at center event (such as for example at the yearly retreat) whenever relevant.

3 Center research

The center research plan discusses a number of research challenges in the center focus research areas of *I/O-efficient*, *cache-oblivious* and *streaming* algorithms and in *algorithm engineering*, as well as challenges in a number of *other and crosscutting* areas. Overall, 2014 was a successful year in terms of research results (e.g. with 11 publications in the top conferences Symposium on Theory of Computing, Symposium on the Foundation of Computer Science, and Symposium on Discrete Algorithms). Below we *briefly* discuss *some* of the obtained results. Although progress on the different parts of the research plan varies substantially, we currently see no need to modify the plan.

I/O-efficient algorithms

In the area of I/O-efficient algorithms, that is, algorithms designed in a two-level memory-disk model, we have made good progress on a number of problems in relation to the areas outlined in the research plan.
In terms of *fundamental algorithmic problems*, we have e.g. published results on a equivalence between sorting and priority queues [C334], and in terms of *geometric data structure* we have continued our study of range searching variants, that is, the problem of storing a set of *d*-dimensional points such that properties of the points that lie inside a query range can be found efficiently. We have e.g. continued our previous work [C275] on the batch dynamic range minima problem, where one is given a batch of update and query operations and the goal is to process the batch and answer the queries with respect to the status of the structure at the time of the query. In 2014 we obtained improved results and provided a much finer analysis than previously [C326]. In the area of *terrain data processing*, we have continued our work on problems in relation to modeling of water flow and e.g. obtained I/O-efficient algorithms for mapping depression flood risk after a given rain even (or forecast). Our previous depression flood risk mapping algorithms assumed uniform rain over the terrain. We have also developed I/O-efficient algorithms for estimating the risk of flooding from water rising in rivers. Previously, we had only considered flooding risk from water gathering in depressions and from rising sea-level. Publications with these results are in preparation. We have also initiated work on maintaining various terrain analysis results under updates of a part of the terrain data without having to recompute the analysis on the entire terrain data. So far we have shown how to maintain the contour tree, which captures the topological structure of a terrain. A paper with results that are not I/O-efficient will appear at the upcoming Symposium on Computational Geometry and a paper with I/O-efficient results is in preparation. Finally, we have also published our work mentioned in last year's report on simplifying large planar subdivisions, such as contour line maps extracted from massive terrain models [C316]. Planer subdivisions are closely related to planar graphs, and in general we have continued to work on I/O-efficient *graph algorithms.* For example, we recently presented results on an I/O-efficient distance oracle for dynamic real-world graphs like the web graph. We have also started investigating the improvements obtained in our 2013 dynamic Breadth-First-Search (BFS) implementation [C283] from a theoretical point of view, which has led to a nice connection between I/O-behavior and the so-called girth of the graph. A publication with this result is in preparation.

Cache-oblivious algorithms

In the cache-oblivious algorithms area the aim is to develop algorithms that automatically adapt to the un-known multiple levels of modern memory hierarchies. Techniques to obtain cache-oblivious algorithms are

still not very developed and the fundamental limitations in the area not well understood. Thus the cache-oblivious algorithms areas is somewhat more high-risk than the other focus areas of the center, and unfortunately this has meant that we have not made as much progress in the area as we would have liked. We have obtained some results showing that cache-oblivious algorithms are also efficient when taking the cost of address translations in virtual memory into account, thus further underlining the importance of the area. A publication with these results is under submission. Our focus on cache-oblivious algorithms also continues to influence our work on I/O-efficient algorithms, often resulting in simpler algorithms than the previously known algorithms (due to the restrictiveness of the cache-oblivious model). For example, the algorithm for the dynamic range minima problem discussed above is cache-oblivious [C326]. It is the first cache-oblivious algorithm for the problem.

Streaming algorithms

Streaming algorithms models applications where only one sequential pass over the data is allowed. The research plan outlines work on fundamental streaming problems and general streaming algorithm techniques. In 2014 we have published novel algorithms for a number of *fundamental streaming problems*, including set cover [C352], clustering [C351,J154] and triangle counting [J139]. Recently, we have also obtained results on a number of other problems, such as finding the smallest ball intersecting a set of disjoint balls. In terms of *design techniques*, one of the major techniques for designing streaming algorithm involves the notion of a *core-set,* which is a subset of the input stream that approximately preserves key properties of the stream. In our clustering work we have e.g. shown how to design core-sets for a large class of such problems [C351]. Another technique for designing streaming algorithms is based on *sketching*, where the goal is to compute a small so-called sketch Ax of a vector x using an appropriately designed sketching matrix A, such that given only the sketch one can still compute the desired property of x. The vector x could for example be a representation of a data stream. A common goal is to compute *a sparse approximation* to x, that is, given Ax, reconstructing an approximation that has as few non-zero coefficients as possible while being as close to x as possible with respect to some metric. Following our prior work in this area, we have designed a collection of efficient algorithms for finding approximations in which the pattern of non-zeros must satisfy given constraints [C340, C355, C356]. Such restrictions model patterns that occur in specific application domain and allow obtaining shorter sketches. Inspired by our sketching work, we have also worked on efficient algorithms for the *Discrete Fourier Transform* (DFT), which is a foundational tool used in numerous applications. We have designed a further improved algorithm for the sparse DFT that is always sample-optimal [C338, 353]. We also applied sparse DFT algorithms to energy efficient spectrum sensing [C358].

Algorithm engineering

Algorithm engineering covers the design and analysis of practical algorithms, their efficient implementation, as well as experimentation that provides insight into their applicability. In 2014 we have made steady progress in most of the algorithm engineering areas discussed in the research plan.

In terms of *library development*, we continue to update and support the TPIE library for implementation of I/O-efficient algorithms. In 2014 we for example added increased data structure support and updated the library to the newest C++ programming language standard. We have also continued our work on engineering I/O-efficient *graphs algorithms*, and have e.g. implemented our I/O-efficient distance oracle data structure for massive evolving social network graphs. Although we have not been able to provide attractive worst-case performance guarantees for the structure, it performs very well on various interesting graph classes. In terms of *terrain data processing*, we have e.g. implemented and experimented with our new I/O-efficient algorithms for mapping depression flood risk from a given rain event and flood risk from water rising in rivers. Both algorithms perform very well in practice. For example, the new depression flood risk algorithm is actually faster than existing algorithms that compute depression flood risk for (all amounts of) uniform rain, and it opens up the possibility of considering actual predefined scenarios (such as a 100-year event) and for combination with forecasted extreme rain. In 2014 we also published our experimental work on planar subdivision simplification [C316], showing that our new algorithms match or outperform the previous less general algorithm [C203].

As discussed in previous annual reports, much of our previous engineering work on massive terrain data processing is being commercialized through the startup company SCALGO. Recently, SCALGO technology won a “highest growth potential” award in a competition held by the Danish Ministry of the Environment and the Danish municipalities, and the success of SCALGO is a good example of how basic research can lead to innovative products. It continues to give media coverage to the center, just at center director Arge is increasingly being asked to give invited talks about the centers research work and its connection to SCALGO products (in particular in connection with the increased focus on the potential benefits of “big data”). The

collaboration with SCALGO, and our massive terrain data algorithm engineering work in general, also continues to be a driver for collaboration and new projects. For example, it is at the core of our continuing multidisciplinary collaboration with *biodiversity* researchers, who are significantly involved in our work on river-water rise flood risk, which involve a significant amount of modelling work as well as statistical comparison of different mapping methods. In 2014 the collaboration e.g. also led to publications on tree cover mapping [J127] and encroachment of woody plants using LiDAR terrain scanning. We have also continued our work on computing how closely related a group of species are in an evolutionary (phylogenetic) tree [C333,J135]. In collaboration with (other) *bioinformatics* researchers, we have also worked extensively on algorithms to compute the similarity of evolutionary trees, in particular the so-called triplet and quartet distances [J141], where we in 2014 have presented experiments that document the scalability of our algorithms to trees containing millions of nodes [C333].

Other/crosscutting areas

We have continued our work in several new massive dataset areas as discussed in the research plan.

In the area of *succinct data structures* we have presented the first sub-linear (in the number of bits) space data structure for augmenting succinct suffix arrays to support term top-k term-proximity queries in a collection of documents, i.e. to report the k documents where the occurrences of a query pattern appear closest to each other [C350]. We have also improved our previous work on succinct binary counters supporting both increment and decrement, where we managed to reduce the average number of bit-reads required for each of the operations from logarithmic [C161] to double-logarithmic [J151]. In general, the center continues to have a focus on *data structures* and continue to obtain significant results on structures in classical models of computation. Many of these result (such as [C321,C323,C324,C327,J137, J138,J140]) are on range searching variants. For example, in a single authored paper, center PhD-student Wilkinson described an improved structure for the classical problem of dynamic 2-dimansional orthogonal range reporting [C327]. Recently, we have also had increased focus on data structure lower bounds, that is, proving for a given problem how efficient a data structure one can hope for. For example, we have studied the problem of creating labeling schemes for answering nearest common ancestor (NCA) queries in trees, and proved that any such labeling scheme must have exponentially more redundancy than labeling schemes for other classical problem such as adjacency and ancestor problems [C319]. Despite its long history, the complexity of the problem was unresolved before our work. We have also proved conditional lower bounds for several fundamental problems in text indexing, based on the popular conjecture that matrix multiplication is hard [C320]. A conditional lower bound shows that if one problem conjectured to be hard is indeed hard, then the problem at hand is also hard.

We did not make much progress on *faulty-memory* and *flash memory algorithms* in 2014, although we are still working on publications on improving paging for flash memory by extending some of our previous insights from classic paging [C158,C218] to the alpha-paging model [C59], as well as on implementing flash memory distribution-based algorithms that are as efficient as merging-based algorithms (thus tackling the main technical limitation of flash disks). However, we did continued our work in recent years on algorithms that are efficient in the practically realistic *internal memory RAM-model* of computation. Apart from fundamental results on linear time sorting [C332], and results on output-sensitive algorithms for computing the maxima of a set of points in three dimensions [C322] briefly discussed in last year's report, we have mostly focused on removing randomization to obtain deterministic solutions for a number of important problems. For example, we have obtained a deterministic algorithm for the offline planar rectangle enclosure problem that match the best previous randomized solution [C325]. We have also obtained deterministic data structures for the dynamic graph connectivity problem, which improves the best previous deterministic solution from 1985. A publication with these results is under preparation. We have also continued our work on massive data problems in several *parallel and distributed models* of computation. Our work from the *parallel private-cache model* for modern multi-core processors has previously proved helpful in obtaining algorithms for (massively parallel) *graphics processing units (GPUs*) and in 2014 we have e.g. obtained results on the use of GPUs for answering range queries on massive amounts of planar moving objects [C337]. We have also obtained many results on distributed algorithms in 2014, including on algorithms for computing minimum cuts [C331, 349] and for graph coloring [C329], as well as for broadcasting in distributed networks under jamming [C330]. We have also worked on algorithms in distributed streaming models and e.g. studied the communication complexity of approximating data density when computing summaries of massive data [C328] and of computing approximate set covers [352].

Finally note that as in previous years, much of our work on data structures, flash memory and RAM-efficient, parallel and distributed streaming algorithms, as well as much of our algorithm engineering work (including the work with biology researchers), are examples of the "crosscutting" work we have done in 2014, that is,

work that involves ideas from or spans several areas (models) or combines the various models/methodologies we consider. We are also continuing our "crosscutting" activity on algorithmic problems in databases, although we adjusted the research plan last year to have less emphasis on the area in connection with database researcher Jensen leaving the center. Driven by center post docs with an interest in the database area and by the center's remaining database PhD students, we have obtained a good number of results on spatial database problem in 2014 (e.g [C317, C344, C345, C346, C347,C369, J136, J142]).

4 Collaboration

The center continues to try to maintain a vibrant and international environment at the main center site at AU, e.g. through emphasis on hosting international visitors. Several MIT center participants and all FRA participants visited AU during 2014. Additionally, non-center faculty Seth Pettie from University of Michigan Ann Arbor (along with PhD student Hsin-Hao Su) visited for a year, just as Suresh Venkatasubramanian from University of Utah visited for three months, both as part of sabbaticals. The list of longer term visitors (at least three weeks) also includes Jeremy Barbay (Chile), Michael Elkin (Ben-Gurion), Nodari Sitchinava (Hawaii) and Tsvi Kopelowitz (Michigan). The list of shorter term non-center researchers includes Jack Snoeyink (UNC, Chapel Hill), Misha Belkin (Ohio State), Herman Haverkort (TU Eindhoven), Amr Agmed (Google), Ankur Moitra (MIT), Stefanie Jegelka (Berkeley) and John Iacono (NYU).
The center continues to collaborate extensively with researchers from a large number of institutions and new collaborations are continually being explored. For example, core faculty Afshani recently obtained a network grant from the Danish Agency for Science, Technology and Innovation to collaborate with discrete geometry researchers at Korea Advanced Institute of Science and Technology. The center also continues to try to be a catalyst of multidisciplinary and industry collaboration. Many of the center's activities in this direction continue to be in connection with massive terrain data. For example, the collaboration with ecoinformatics researchers centered around terrain data continues, and Biology and Computer Science Post Docs and Faculty still try to spend at least one day a week at the other site than their base. Other center multidisciplinary collaboration includes projects with researchers at the AU Bioinformatics Research Center (BiRC). Massive terrain data is also at the core of the centers existing collaboration with industry partners such as COWI, EIVA and center startup SCALGO, and collaboration with several other large engineering companies is being explored. Other industry collaboration includes a project on flight data management with DSE Airport Solutions in connection with the industrial Post Doc grant of Allan G. Jørgensen funded by Innovation Fond Denmark. As mentioned in last year's report, Jørgensen has a 2010 PhD from the center but returned after a few years in industry. During 2014 he developed a taught a graduate class on machine learning. We believe that in the longer run, addition of machine learning expertise will be of strategic importance for the center in order to be able to address "big data" issues in a comprehensive way. The department of computer science at AU recognized this and has identified the area as a strategic growth area.

5 Events

During 2014 the center participated in and/or organized a large number of research events. These included internal weekly seminars at AU and a retreat for center employees. Externally, center researchers gave numerous presentations at international research conferences, as well as more than 35 invited presentations at research conferences, workshops and seminars. Center researchers have also participated in several public outreach activities. For example, Brodal has lectured on algorithms for high school students, and Arge and Demaine has given several lectures on e.g. algorithms and big data for general audiences. Center PhD students also coached two AU student programming competition teams competing in the Northwestern European Regional Contest. Following previous year's successes, the center also organized a sixth *Workshop on Massive Data Algorithmics* (MASSIVE) in 2014, co-located with the premiere broad European algorithms conference ALGO, this year in Wroclaw, Poland. Again, the workshop was a success and the planning of the seventh in the series is underway. During ALGO 2014 the center also won the bid for organizing ALGO 2017 in front of bids from Berlin and Paris. The center also continued its series of summer schools with a school on "Learning at Scale" (in line with the strategic importance of learning). At the school, four international experts from Google and Berkeley, MIT and Ohio State Universities lectured for 67 participants (mostly PhD students) from 26 institutions and 5 companies in 14 countries. The school was a great success and the center anticipates organizing yet another summer school in 2015. Finally, center researchers were involved in the organization of a number of other international events, including two Dagstuhl seminars and several general audience big data conferences. Center director Arge is also the program committee chair of the top conference Symposium on Computational Geometry (SoCG) in 2015.

EXTERNAL RELATIONS **SECTION A**

List **includes** relevant collaboration for AU as well as MIT, MPI and FRA researchers in 2014

Collaborator Name (person and/or institution), Country	Collaboration subject	Output of collaboration	Collaboration with: (Please check the appropriate box)			
			Danish universities, research groups and institutions	Foreign universities, research groups and institutions	Danish companies	Foreign companies
Scalable Algorithmics (SCALGO), Denmark	I/O-efficient terrain algorithms	Algorithms and software			X	
Stephen Alstrup and Esben B. Halvorsen (Copenhagen), Denmark	Nearest common ancestor problems	Publication	X			
J. Ian Munro (Waterloo), Canada, and Sharma W. Thankachan (Louisiana State), USA	String problems	Publication		X		
Mayank Goswami (MPI), Germany, and Rasmus Pagh (ITU), Denmark	Approximate Range Searching	Publication	X	X		
Manindra Agrawal (IIT Kanpur), India, Benjamin Doerr, Carola Doerr and Kurt Mehlhorn (MPI), Germany	Query Complexity	Publication		X		
Jelani Nelson (Harvard) and Huy Le Nguyen (Berkeley), USA	Streaming Lower Bounds	Publication		X		
Jelani Nelson (Harvard), USA	Dimensionality Reduction	Publication		X		
Timothy Chan (Waterloo), Canada	Geometric algorithms and data structures	Publications		X		
Konstantinos Tsakalidis (HKUST), Hong Kong	Geometric algorithms and data structures	Publication		X		
Yufei Tao (Chinese University of Hong Kong)	Geometric algorithms and data structures	Publication		X		
Nodari Sitchinava (Hawaii), USA	I/O and Cache-oblivious algorithms	Publication		X		

Otfried Cheong and Juyoung Yon (KAIST), South Korea	Shape matching	Publication		X		
Anna Lubiw (Waterloo), Canada	Graph Morphing	Publication		X		
Irina Kostitsyna (Eindhoven) and Maarten Löffler and Marc Van Kreveld (Utrecht), The Netherlands	Geometric algorithms	Publication		X		
Milan Vojnovic and Bozidar Radunovic (Microsoft Cambridge), England	Communication complexity of graph problems	Publication		X		
Qin Zhang (Indiana), USA	Communication complexity, streaming algorithms and hashing	Publications		X		
Wai Ming Tai and Ke Yi (HKUST), Hong Kong	Streaming algorithms	Publication		X		
Philipp Brandes and Roger Wattenhofer (ETH Zurich), Switzerland	Online algorithms	Publication		X		
Sharma V. Thankachan and Ian Munro (Waterloo), Canada, Rahul Shah (Louisiana State), USA, Gonzalo Navarro (Chile University), Chile, and Djamal Belazzougui (Helsinki), Finland	String algorithms	Publication		X		
Graham Cormode (Warwick), England	Counting Subgraphs in Graph Streams	Publications		X		
Michael Elkin (Ben-Gurion), Israel	Distributed algorithms	Publication		X		
Danupon Nanongkai (KTH), Sweden	Distributed Algorithms	Publication		X		

Kai-Min Chung (Academia Sinica), Taiwan	Distributed Algorithms	Publication		X		
Rolf Fagerberg (SDU), Christian Nørgaard Storm Pedersen, Thomas Mailund and Andreas Sand (Aarhus University), Denmark	Evolutionary tree algorithms	Publications	X			
Group of Jens-Christian Svenning (Aarhus University), Denmark	Terrain analysis and biodiversity	Publications	X			
COWI A/S (incl. Johnny Koust Rasmussen and Jeppe Sikker Jensen), Denmark	Terrain processing and flood risk screening	Terrain processing algorithms and software			X	
Andrew Danner (Swarthmore College), USA	TPIE	TPIE software package		X		
Eiva A/S, Denmark	Sonar data processing	Software			X	
Pankaj K. Agarwal (Duke University), USA	Terrain algorithms	Publications		X		
Mikkel Thorup (Copenhagen), Denmark	I/O-efficient RAM algorithms	Publication	X			
German Priority Program Algorithms for Big Data, Germany	Parallel-external algorithms	Workshops		X		
Group of Peter Sanders (Karlsruhe), Germany	Libraries for parallel/external computation and energy-efficient sorting	Software		X		
GSI Helmholtz Centre for Heavy Ion Research, Germany	Memory-efficient information processing for FAIR	Project		X		
Norbert Zehl (Dalhousie)	I/O-efficient algorithms	Publications		X		
Deepak Ajwani (Bell Labs), Ireland)	Distance oracles	Publication				X
John Owens (University of California, Davis)	GPU Algorithms	Project		X		

Mohammad Mahdian and Vahab. S. Mirrokni (Google), USA	Composable Core-sets	Publication				X
Narayanan Sundaram, Nadathur Satish and Pradeep Dubey (Intel), USA	Streaming algorithms	Publication				X
David P. Woodruff (IBM), USA	Streaming algorithms	Publication				X
Sanjeev Khanna (Pennsylvania) and Madhu Sudan (Microsoft), USA	Streaming algorithms	Publication		X		X
Jonathan Kane, Ligang Lu and Detlef Hohl (Shell), USA	Earth Mover's Distance	Publication				X
Helge Bruelheide and Oliver Purschke (iDiv), Germany	sPlot - the global vegetation plot database	Global vegetation database		X		
Jens Kattge (MPI), Germany	Plant trait databases	Publication		X		
Miguel Mahecha (MPI), Germany	Remote sensing for biodiversity monitoring	EU project		X		
Brian Enquist (Arizona), USA	BIEN - the botanical information and ecology network	Plant distribution database; publications		X		
Chris Sandom (Wild Business Consultancy), England	Megafuana extinctions	Publication				X
Daniel Kissling (Amsterdam), The Netherlands	Mammal diet database	Publication		X		
Esther Gonzalez (Hawaii), USA	Ecological interaction networks	Publication		X		
Bo Dalsgaard (Copenhagen), Denmark	Ecological networks	Publication	X			
Tatsuya Amano and Bill Sutherland (Cambridge), England	Language extinction	Publication		X		
Christos Tsirogiannis (University of Glasgow), Scotland, UK	Algorithms for Social Network Analysis	Publication		X		

Adrija Kalvisa (SDU), Denmark	Algorithms on Phylogenetic Trees	Publication and Software	X			
Simonas Saltenis (AAU), Denmark	Spatio-temporal data management	Publication and software	X			
MohammadTaghi Hajiaghayi (Maryland), USA, and Daniel Marx (Tel Aviv), Israel	Fixed-Parameter Tractability	Publication		X		
John Iacono (NYU), USA, and Stefan Langerman (Bruxelles), Belgium	External memory tree layout	Publication		X		
Yamming Huang and Chung-Shou Liao (National Tsing Hua), Taiwanm and Kunihiko Sadakane (Tokyo), Japan	Graph algorithms	Publication		X		
Sandor Fekete (TU Braunschweig), Germay, Matthew J. Patitz (Texas), Robert T. Schweller (Texas), Andrew Winslow (Tufts) and Damien Woods (Caltech), USA	Assembly	Publication		X		
Samuel M. Felton (Harvard), Michael T. Tolley (Harvard), Daniela Rus (MIT), Robert Wood (Harvard), USA	Self-folding machines	Publication		X		

Katsuhisa Yamanaka (Iwate), Takehiro Ito (Tohoku), Jun Kawahara (Nara), Masashi Kiyomi (JAIST), Yoshio Okamoto (U. Electro-Communications), Toshiki Saitoh (Kobe), Akira Suzuki (Tohoku), Kei Uchizawa (Tohoku), Takeaki Uno (National Inst. Informatics), Japan	Graphs algorithms	Publication		X		
Byoung Kwon An (MIT), Shuhei Miyashita (MIT), Michael T. Tolley (Harvard), Daniel M. Aukes (Harvard), Laura Meeker (MIT), Martin L. Demaine (MIT), Robert Wood (Harvard), Daniela Rus (MIT), USA	Self-Folded by Uniform Heating	Publication		X		
Greg Aloupis (McGill), Canada, and Giovanni Viglietta (Pisa), Italy	Complexity og games	Publication		X		
Aaron Becker (Harvard), James McLurkin (Rice), USA, and Sandor Fekete (TU Braunschweig), Germany	Robot Swarm Control	Publication		X		

MohammadTaghi Hajiaghayi, David L. Malec, S. Raghavan, Anshul Sawant (Maryland), USA and Hamid Mahini (Sharif), Iran	Influence by Partial Incentives	Publication		X		
Glencora Borradaile (Waterloo), Canada, and Siamak Tazari (Humbolt Berlin), Germany	Graph approximation algorithms	Publication		X		
Takashi Horiyama (Saitama) and Ryuhei Uehara (JAIST), Japan	Dissection Complexity	Publication		X		
Mirela Damian (Villanova), Joseph O'Rourke (Smith) and Robert Connelly (Cornell), Jack Snoeyink (UNC), Andrew Winslow and Hugo Akitaya (Tufts), USA, Kayhan F. Qaiser and Greg Aloupis (McGill) and Anna Lubiw (Waterloo), Canada, Tomohiro Tachi (Tokyo), Jin-ichi Itoh (Kumamoto), Chie Nara (Tokai), Japan, Oswin Aichholzer (TU Graz), Austria, Sandor Fekete (TU Braunschweig), Germany, Michael Hoffmann (ETH Zurich), Switserland	Folding	Publications		X		

CONFERENCES **SECTION B**

List **includes** 2014 information for AU, as well as MIT, MPI and FRA researchers.
Only invited (and e.g. not conference contributed) talks are listed.

a) Organisation of international conferences, symposia, seminars etc.(*)

Title of event
Workshop on Massive Data Algorithmics (MASSIVE)
MADALGO Summer School on Learning at Scale
ATV Big data - big potential seminar
Aarhus University BIG data - BIG Impact conference
Bellairs Winter Workshop on Computational Geometry
Dagstuhl Seminar on Data Structures and Advanced Models of Computation on Big Data
Big data workshop at Goethe University
Dagstuhl Seminar on High-performance Graph Algorithms and Applications in Computational Science

b) Number of Invited Talks

Title of event	Venue	Name(s) of participant(s)
SUMMIT 240 plenary talk	Renyi Instute, Hungary	Pettie
Colloquium	Tel Aviv University, Israel	Pettie
Colloquium	University of Copenhagen, Denmark	Pettie
Colloquium	Bar-Ilan University, Israel	Pettie
Colloquium	Ben-Gurion University, Israel	Pettie
Colloquium	CWI-Amsterdam, The Netherlands	Pettie
Colloquium	Renyi Institute, Hungary	Pettie
Colloquium	Charles University, Czech Republic	Pettie
Colloquium	ITU Copenhagen, Denmark	Pettie
Colloquium	Charles University, Czech Republic	Brodal
Colloquium	University of Copenhagen, Denmark	Brodal
Dagstuhl Seminar on Data Structures and Advanced Models of Computation on Big Data talk	Dagstuhl, Germany	Brodal
Colloquium	Louisiana State University, USA	Sindal Nielsen
"Brain Business: Skab værdi med Big Data" plenary lecture	Aalborg Universitet, Denmark	Arge
Dagstuhl Seminar on Data Structures and Advanced Models of Computation on Big Data talk	Dagstuhl, Germany	Arge
DFG Algorithm Engineering program final meeting plenary talk	Karlsruhe Institute of Technology, Germany	Arge
AU BIG data - BIG Impact conference keynote talk	Aarhus University, Denmark	Arge
ESOF "Academic leadership: what does it take?" talk	Copenhagen, Denmark	Arge
Invited plenary talk	Changzhu National University, China	Arge
Colloquium	Renmin University, China	Arge
Colloquium	Columbia University, USA	Razenshteyn
Colloquium	Boston University, USA	Razenshteyn
Colloquium	Brown University, USA	Razenshteyn
SODA 2014 Plenary talk	Portland, USA	Indyk
Rotshild Distinguished Lecture	Haifa University, Israel	Indyk
NIPS'14 workshop on optimal transport Invited talk	Montreal, Canada	Indyk
Colloquium	Reykjavik University, Iceland	Demaine

Origami Tanteidan Convention plenary talk	Tokyo, Japan	Demaine
ASME Mechanisms & Robotics Conference plenary talk	Buffalo, New York	Demaine
Conference on Fun with Algorithms invited talk	Lipari Island, Italy	Demaine
OrigamiUSA Annual Convention plenary talk	New York, USA	Demaine
Workshop on Geometric Puzzles and Games invited talk	Kyoto, Japan	Demaine
Colloquium	Vienna University of Technology, Austria	Demaine
Colloquium	Centre College, USA	Demaine
Colloquium	North Carolina State University, USA	Demaine
Winter School lecture	Lisbon, Portugal	Mehlhorn
COLCOM 2014 plenary talk	Bogota, Colombia	Mehlhorn

EDUCATIONAL ACTIVITIES **SECTION C**

List only **includes** 2014 information for AU employees (as well as relevant information for MIT, MPI and FRA employees taught **outside** their home institution). PhD student TA'ing is not included.

Title of activity	ECTS	Length of course (number of hours)
BSc course: Algorithms and Data Structures 1. Spring 2014	5	28
BSc course: Algorithms and Data Structures 2. Spring 2014	5	28
BSc course: Computer Science in Perspective (topic Algoritms and Complexity, and Internet Algorithms, 2 out of 7 weeks). Fall 2014	5	6
BSc course: Multivariate analysis of biological data. Fall 2014	5	56
BSc course: Computability and Logic. Spring 2014	5	21
MSc course: Algorithm Engineering. Spring 2014	5	21
MSc course: Machine Learning. Fall 2014	10	56
MSc course: Computational Geometry. Fall 2014	10	36
MSc course: Topics in Discrete Geometry. Spring 2014	10	36
MSc course: I/O-efficient algorithms. Fall 2014	10	36
PhD course: Streaming algorithms and related topics. Spring 2014.	5	21
PhD course: R for macroecology and global change. Summer 2014	4	40
NCPC and NWERC Programming Contest Coaching		

Number of Master Graduates	Number of Bachelor Graduates
6	0

EXTERNAL FUNDING **SECTION D**

List **only includes** information for AU employees; it includes all active/new funding in 2014.

	Funding body	Purpose	Grant holder	Activity period	Granted amount in DKK	Partial amount allocated to the reported year
Public Danish funds	State Library	PhD Fellowship	AU (Brodal and Nielsen)	2011-2015	~1.000.000	~150.000
	Innovation Fond Denmark	Realistic large-area flood risk screening	AU (Arge), COWI A/S and SCALGO ApS	2013-2016	~2.800.000	~875.000
	Innovation Fond Denmark	Industrial Post Doc	AU (Arge and Grønlund) and Insero Software A/S	2013-2016	~1.800.000	~550.000
Private Danish funds	COWI A/S and SCALGO APS	Realistic large-area flood risk screening (co-funding)	AU (Arge), COWI A/S and SCALGO ApS	2013-2016	~1.450.000	~550.000
	Insero Sofware A/S	Industrial Post Doc (co-funding)	AU (Arge and Grønlund) and Insero Software A/S	2013-2016	~850.000	~250.000
	Aarhus University Research Foundation (AUFF)	Guest Researcher Grant, Seth Pettie (University of Michigan, Ann Arbor)	AU (Brodal and Arge)	2013-2014	250.000	~150.000
	Augustinus Fonden	Traveling Fund for Study Abroad	AU (Yang)	2014	17.500	17.500

AWARDS **SECTION E**

List **includes** relevant 2014 information for AU as well as MIT, MPI and FRA researchers.

Awards	Recipient	Granted amount in DKK, if relevant
Aarhus University Ph.D. Prize	Larsen	50.000
Appointed Software Notes Editor for Ecography	Sandel	
Appointed Editor for Scientific Reports	Sandel	
Academia Europaea Erasmus Medal	Mehlhorn	

PUBLIC OUTREACH **SECTION F**

List **only includes** 2014 information for AU employees.

a) Electronic media

Specific media (TV, radio, other)	Type of communication (interview, commentary, debate, feature program, etc.)	Subject	Contributor from the Center
Aarhus Universitet	Feature	Big data gør befolkningen sundere	Arge
Altinget	Artikel	Fem forskere på Aarhus Universitet får ph.d.-priser	Larsen
Jyllands-Posten	Artikel	Forskertalenter	Larsen
Nordjyske Stiftidende	Artikel	Prestigepriser til ph.d.'ere fra Aarhus	Larsen
Aarhus Universitet	Artikel	Analyse af oversvømmelsesrisiko med Big Data	Arge
Artikelforbundet	Artikel	De viser vejen til bedre klimatilpasning	Arge
Teknologisk.dk	Artikel	Tre vinderforslag viser vejen til bedre klimatilpasning	Arge
Alt om DATA	Artikel	Skybrudskort giver overblik over, hvor du skal bygge bro	Arge
Building-Supply.dk	Artikel	Bedste løsninger mod oversvømmelser fundet	Arge
Version2	Artikel	Ny undersøgelse: 612 danske webservere har ikke lukket Heartbleed-hullet	Skovsgaard

b) Press

Specific media (newspapers, journals, magazines, other)	Type of communication (interview, commentary, debate, feature, etc.)	Subject	Contributor from the Center
Ritzaus Bureau	News	Formand for forskningsfond: Penge giver nye patenter	Arge
Ritzaus Bureau	News	Supernøder skal løfte Danmark og skabe job	Arge
Nordjyske Stiftidende	Artikel	Supernørder skaber job	Arge
Alt om DATA	Feature	Geodata: Danmarks digitale råstof	Arge

c) Other

Specific type of communication (presentation/lecturing at open university, high school, etc.)	Subject	Contributor from the Center
Master Class in Mathematics (High School students)	Algorithms	Brodal
"Gymnasiepraktik" for high school students	Algorithms	Brodal

PATENTS AND APPLICATIONS **SECTION G**

List **only includes** 2014 information for AU employees.

Number of inventions reported to institution	Number of submitted patent applications	Number of granted patents	Number of mutually agreed licence, sale and option agreements	Names of spin-off companies established

PUBLICATIONS **SECTION H**

Publication list/counts **includes** relevant publications for AU as well as MIT, MPI and FRA researchers.

TOTAL NUMBER OF PUBLICATIONS IN THE REPORTED YEAR	**Peer reviewed**	**Not peer reviewed**
Number of journal articles	36	0
Number of conference proceedings	51	4
Number of monographs	0	0
Number of book chapters	0	0
Others	0	10

The 10 most prestegious conferences within the Center's research area

1. ACM Symposium on Theory of Computing (STOC)
2. IEEE Symposium on Foundations of Computer Science (FOCS)
3. ACM-SIAM Symposium on Discrete Algorithms (SODA)
4. Symposium on Computational Geometry (SoCG)
5. International Colloquium on Automata, Languages, and Programming (ICALP)
6. European Symposium on Algorithms (ESA)
7. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)
8. International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)/ International Workshop on Randomizationand Computation (RANDOM)
9. Scandinavian Workshop on Algorithm Theory (SWAT)/ Algorithms and Data Structures Symposium (WADS), previously Workshop on Algorithms and Data Structures
10. Workshop on Algorithm Engineering and Experiments (ALENEX)

The 10 most prestegious journals in the Center's research area

1. Journal of the ACM
2. SIAM Journal on Computing
3. ACM Transactions on Algorithms
4. Discrete & Computational Geometry
5. Algorithmica
6. Journal of Computer and System Sciences
7. Computational Geometry: Theory and Applications
8. ACM Journal of Experimental Algorithmics
9. Theoretical Computer Science
10. Journal of Discrete Algorithms

Bibliometric information

Distribution of center publications on 10 most prestigious conferences:

	2007	2008	2009	2010	2011	2012	2013	2014
STOC	1	0	0	0	3	4	1	1
FOCS	1	7	3	2	3	1	0	3
SODA	0	6	5	6	6	11	11	7
SoCG	0	5	3	3	2	3	2	2
ICALP	1	0	7	1	3	2	5	4
ESA	3	1	0	3	1	5	3	2
SPAA	3	1	0	3	1	1	0	2
APPROX/RANDOM	0	1	0	1	3	0	0	0
SWAT/WADS	1	3	6	1	3	1	2	2
ALENEX	0	0	1	0	1	0	1	2

STOC, FOCS and SODA can be rated as "best non specialized" conferences
SoCG and ALENEX can be rated as "best specialized" conferences

Center publications have been authored by 750 unique authors - 102 associated with the center and 648 not.
Only 166 center publications are by center researchers only.

Citations to center publication (according to Google scholar, which is the most reliable - but certainly not perfect - source of citation information in the area) can be found at
http://scholar.google.com/citations?user=fRowhXcAAAAJ

Conference proceedings

C1	2007	B. Escoffier, G. Moruz and A. Ribichini	Adapting Parallel Algorithms to the W-Stream Model, with Applications to Graph Problems	Proc. International Symposium on Mathematical Foundations of Computer Science (MFCS)	(PR)(CO)
C2	2007	S. Guha, P. Indyk and A. McGregor	Sketching Information Divergences	Proc. Annual Conference on Learning Theory (COLT)	(PR)(CO)
C3	2007	G. S. Brodal and A. G. Jørgensen	A Linear Time Algorithm for the k Maximal Sums Problem	Proc. International Symposium on Mathematical Foundations of Computer Science (MFCS)	(PR)(CO)
C4	2007	G. S. Brodal, L. Georgiadis, K. A. Hansen and I. Katriel	Dynamic Matchings in Convex Bipartite Graphs	Proc. International Symposium on Mathematical Foundations of Computer Science (MFCS)	(PR)(CO)
C5	2007	G. Jørgensen, G. Moruz and T. Mølhave	Resilient Priority Queues	Proc. International Workshop on Algorithms and Data Structures (WADS)	(PR)
C6	2007	G. S. Brodal, R. Fagerberg, I. Finocchi, F. Grandoni, G. Italiano, A. G. Jørgensen, G. Moruz and T. Mølhave	Optimal Resilient Dynamic Dictionaries	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C7	2007	P. K. Agarwal, L. Arge, A. Danner, H. Mitasova, T. Mølhave and K. Yi	TerraStream: From Elevation Data to Watershed Hierarchies	Proc. ACM International Symposium on Advances in Geographical Information Systems (ACM-GIS)	(PR)(CO)
C8	2007	M. Patrascu and Mikkel Thorup	Planning for Fast Connectivity Updates	Proc. IEEE Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C9	2007	G. Franceschini, S. Muthukrishnan, and M. Patrascu	Radix Sorting With No Extra Space	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C10	2007	E. D. Demaine, S. Mozes, B. Rossman and O. Weimann	An Optimal Decomposition Algorithm for Tree Edit Distance	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C11	2007	M. A. Bender, M. Farach-Colton, J. T. Fineman, Y. Fogel, B. C. Kuszmaul and J. Nelson	Cache-Oblivious Streaming B-trees	Proc. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C12	2007	E. D. Demaine, M. Ghodsi, M. Hajiaghayi, A. S. Sayedi-Roshkhar and M. Zadimoghaddam	Scheduling to Minimize Gaps and Power Consumption	Proc. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C13	2007	M. Patrascu	Lower Bounds for 2-Dimensional Range Counting	Proc. ACM Symposium on Theory of Computing (STOC)	(PR)
C14	2007	G. M. Landau, D. Tsur and O. Weimann	Indexing a Dictionary for Subset Matching Queries	Proc. Symposium on String Processing and Information Retrieval (SPIRE)	(PR)(CO)
C15	2007	T. Friedrich and D. Ajwani	Average-Case Analysis of Online Topological Ordering	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)

C16	2007	K. Chang	Multiple pass streaming algorithms for learning mixtures of distributions in R^d	Proc. Algorithmic Learning Theory (ALT)	(PR)
C17	2007	M. Westergaard, L. M. Kristensen, G. S. Brodal and L. Arge	The ComBack Method - Extending Hash Compaction with Backtracking	Proc. International Conference on Applications and Theory of Petri Nets and Other Models of Concurrency (ICATPN)	(PR)
C18	2007	M. A. Bender, G. S. Brodal, R. Fagerberg, R. Jacob and E. Vicari	Optimal Sparse Matrix Dense Vector Multiplication in the I/O-Model	Proc. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C19	2007	A. Golynski, R. Grossi, A. Gupta, R. Raman and S. S. Rao	On the Size of Succinct Indices	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C20	2007	M. Olsen	Nash Stability in Additively Separable Hedonic Games is NP-hard	Proc. Conference on Computability in Europe (CiE)	(PR)
C21	2008	M. Ruzic and P. Indyk	Near-Optimal Sparse Recovery in the L1 norm	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C22	2008	M. Patrascu	(Data) STRUCTURES	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)
C23	2008	M. Patrascu	Succincter	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)
C24	2008	E. Demaine, S. Langerman and E. Price	Confluently Persistent Tries for Efficient Version Control	Proc. Scandinavian Workshop on Algorithm Theory (SWAT)	(PR)(CO)
C25	2008	D. Ajwani, I. Malinger, U. Meyer and S. Toledo	Characterizing the Performance of Flash Memory Storage Devices and Its Impact on Algorithm Design	Proc. Workshop on Experimental Algorithms (WEA)	(PR)(CO)
C26	2008	U. Meyer	On Dynamic Breadth-First Search in External-Memory	Proc. Symposium on Theoretical Aspects (STACS)	(PR)
C27	2008	U. Meyer	On Trade-Offs in External-Memory Diameter Approximation	Proc. Scandinavian Workshop on Algorithm Theory (SWAT)	(PR)
C28	2008	G. S. Brodal and A. G. Jørgensen	Selecting Sums in Arrays	Proc.International Symposium on Algorithms and Computation (ISAAC)	(PR)
C29	2008	L. Arge, G. S. Brodal and S. S. Rao	External Memory Planar Point Location with Logarithmic Updates	Proc. Symposium on Computational Geometry (SoCG)	(PR)
C30	2008	A. Golynski, R. Raman and S. S. Rao	On the Redundancy of Succinct Data Structures	Proc. Scandinavian Workshop on Algorithm Theory (SWAT)	(PR)(CO)
C31	2008	M. Olsen	The Computational Complexity of Link Building	Proc. International Conference on Computing and Combinatorics (COCOON)	(PR)
C32	2008	M.A. Abam, M. de Berg and J. Gudmundsson	A Simple and Efficient Kinetic Spanner	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C33	2008	L. Arge, M.T. Goodrich, M. Nelson and N. Sitchinava	Fundamental Parallel Algorithms for Private-Cache Chip Multiprocessors	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)

C34	2008	L. Arge, T. Moelhave and N. Zeh	Cache-Oblivious Red-Blue Line Segment Intersection	Proc. European Symposium on Algorithm (ESA)	(PR)(CO)
C35	2008	P.K. Agarwal, L. Arge, T. Moelhave and B. Sadri	I/O-efficient Algorithms for Computing Contour Lines on a Terrain	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C36	2008	J. Feldman, S. Muthukrishnan, A. Sidiropoulos, C. Stein and Z. Svitkina	On Distributing Symmetric Streaming Computations	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C37	2008	P. Indyk	Explicit Constructions for Compressed Sensing of Sparse Signals	Proc Symposium on Discrete Algorithms (SODA)	(PR)
C38	2008	A. Andoni, P. Indyk and R. Krauthgamer	Earth Mover Distance over High-Dimensional Spaces	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C39	2008	P. Indyk and A. McGregor	Declaring Independence via the Sketching of Sketches	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C40	2008	K. Onak and A. Sidiropoulos	Circular Partitions with Applications to Visualization and Embeddings	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C41	2008	J. Matousek and A. Sidiropoulos	Inapproximability for metric embeddings into R^d	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C42	2008	N. J. A. Harvey, J. Nelson and K. Onak	Sketching and Streaming Entropy via Approximation Theory	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C43	2008	A. Andoni, D. Croitoru and M. Patrascu	Hardness of Nearest Neighbor under L-infinity	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C44	2008	T. Chan, M. Patrascu and L. Roditty	Dynamic Connectivity: Connecting to Networks and Geometry	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C45	2008	S. Mozes, K. Onak and Oren Weimann	Finding an Optimal Tree Searching Strategy in Linear Time	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C46	2008	A. Chakrabarti, T.S. Jayram and M. Patrascu	Tight Lower Bounds for Selection in Randomly Ordered Streams	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C47	2008	E. Demaine, T. Ito, Ni. J. A. Harvey, C. H. Papadimitriou, M. Sideri, R. Uehara and Yushi Uno	On the Complexity of Reconfiguration Problems	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C48	2008	E. Demaine, G. Aloupis, S. Collette, S. Langerman, V. Sacristan and S. Wuhrer	Reconfiguration of Cube-Style Modular Robots Using O(log n) Parallel Moves	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C49	2008	E. Demaine, M. Buadoiu, M. Hajiaghayi, A. Sidiropoulos and M. Zadimoghaddam	Ordinal Embedding: Approximation Algorithms and Dimensionality Reduction	Proc. International Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)	(PR)(CO)
C50	2008	E. Demaine, T. G. Abbott, Z. Abel, D. Charlton, M. L. Demaine and S. D. Kominers	Hinged Dissections Exist	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C51	2008	E. R. Hansen, S. S. Rao and P. Tiedemann	Compressing Binary Decision Diagrams	European Conference on Artificial Intelligence (ECAI)	(PR)(CO)

C52	2008	R. Berinde, P. Indyk and M. Ruzic	Practical Near-Optimal Sparse Recovery in the L1 Norm (invited paper)	Proc. Allerton Conference	(CO)
C53	2008	R. Berinde, A. Gilbert, P. Indyk, H. Karloff and M. Strauss	Combining Geometry and Combinatorics: A Unified Approach to Sparse Signal Recovery (invited paper)	Proc. Allerton Conference	(CO)
C54	2008	M.A. Abam, M. de Berg, and S-H. Poon	Fault-Tolerant Conflict-Free Coloring	Proc. Canadian Conference on Computational Geometry	(CO)
C55	2009	R. Berinde, G. Cormode, P. Indyk and M. Strauss	Space-optimal Heavyhitters with Strong Error Bounds	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)
C56	2009	V. Cevher, C. Hegde, P. Indyk and R. G. Baraniuk	Recovery of Clustered Sparse Signal from Compressive Measurements	Proc. International Conference on Sampling Theory and Applications (SAMPTA)	(PR)(CO)
C57	2009	E. Demaine, G. Landau and O. Weimann	On Cartesian Trees and Range Minimum Queries	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C58	2009	D. Hermelin, G. M. Landau, S. Landau and O. Weimann	A Unified Algorithm for Accelerating Edit-Distance Computation via Text-Compression	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)
C59	2009	A. Kovacs, U. Meyer, G. Moruz and A. Negoescu	Online Paging for Flash Memory Devices	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)
C60	2009	G. Brodal, A. Jørgensen, G. Moruz and T. Mølhave	Counting in the Presence of Memory Faults	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)
C61	2009	D. Ajwani, A. Beckmann, R. Jacob, U. Meyer and G. Moruz	On Computational Models for Flash Memory Devices	Proc. Symposium on Experimental Algorithms (SEA)	(PR)(CO)
C62	2009	U. Meyer and V. Osipov	Design and Implementation of a Practical I/O-efficient Shortest Paths Algorithm	Proc. Workshop on Algorithm Engineering and Experiments (ALENEX)	(PR)
C63	20009	U. Meyer	Via Detours to I/O-Efficient Shortest Paths	Proc. Efficient Algorithms - Essays dedicated to Kurt Mehlhorn on the Occasion of his 60th birthday	
C64	2009	D. Ajwani, R. Dementiev, U. Meyer and V. Osipov	Breadth First Search on Massive Graphs	Proc. Ninth DIMACS Implementation Challenge: The Shortest Path Problem	(PR)
C65	2009	A. Beckmann, R. Dementiev and J. Singler	Building a Parallel Pipelined External Memory Algorithm Library	Proc. International Symposium on Parallel and Distributed Processing (IPDPS)	(PR)
C66	2009	G. S. Brodal and A. Jørgensen	Data Structures for Range Median Queries	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)
C67	2009	G. S. Brodal, R. Fagerberg, M. Greve and A. López-Ortiz	Online Sorted Range Reporting	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)

C68	2009	G. S. Brodal, A. Kaporis, S. Sioutas, K. Tsakalidis and K. Tsichlas	Dynamic 3-sided Planar Range Queries with Expected Doubly Logarithmic Time	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C69	2009	G. S. Brodal, A. Jørgensen and T. Mølhave	Fault Tolerant External Memory Algorithms	Proc. Algorithms and Data Structures Symposium (WADS)	(PR)
C70	2009	A. Kaporis, A.N. Papadopoulos, S. Sioutas, K. Tsakalidis and K. Tsichlas	Efficient Processing of 3-Sided Range Queries with Probabilistic Guarantees	Proc. International Conference on Database Theory (ICDT)	(PR)(CO)
C71	2009	M. Abam, M. de Berg, M. Farshi, J. Gudmundsson and M. Smid	Geometric Spanners for Weighted Point Sets	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C72	2009	M. Abam and M. de Berg	Kinetic Spanners in R^d	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C73	2009	M. Abam, P. Carmi, M. Farshi and M. Smid	On the Power of the Semi-Separated Pair Decomposition	Proc. Algorithms and Data Structures Symposium (WADS)	(PR)(CO)
C74	2009	D. Ajwani	On P-complete Problems in Memory Hierarchy Models	Proc. Workshop on Massive Data Algorithmics (MASSIVE)	
C75	2009	A. Farzan, R. Raman and S. Srinivasa Rao	Universal Succinct Representations of Trees?	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C76	2009	R. Pagh and S. Srinivasa Rao	Secondary Indexing in One Dimension: Beyond B-trees and Bitmap Indexes	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)
C77	2009	R. Grossi, A. Orlandi, R. Raman and S. Srinivasa Rao	More Haste, Less Waste: Lowering the Redundancy in Fully Indexable Dictionaries	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)
C78	2009	J. E. Moeslund, P. K. Bøcher, J.-C. Svenning, T. Mølhave and L. Arge	Impacts of 21st Century Sea-level Rise on a Danish Major City – An Assessment Based on Fine-resolution Digital Topography and a New Flooding Algorithm	IOP Conference Series: Earth and Environmental Science 8	(PR)
C79	2009	M. de Berg and P. Hachenberger	Rotated-Box Trees: A Lightweight c-Oriented Bounding-Volume Hierarchy	Proc. International Symposium on Experimental Algorithms (SEA)	(PR)(CO)
C80	2009	P. Afshani, L. Arge and K. Dalgaard Larsen	Orthogonal Range Reporting in Three and Higher Dimensions	Proc Symposium on Foundations of Computer Science (FOCS)	(PR)
C81	2009	P. Afshani, C. Hamilton and N. Zeh	A Unified Approach for Cache-Oblivious Range Reporting and Approximate Range Counting	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C82	2009	P. Afshani, C. Hamilton and N. Zeh	Cache-Oblivious Range Reporting With Optimal Queries Requires Superlinear Space	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C83	2009	P. Afshani, J. Barbay and T. Chan	Instance-optimal Geometric Algorithms	Proc Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C84	2009	L. Arge, M.T. Goodrich and N. Sitchinava	Parallel External Memory Model	Proc. Workshop on Theory and Many-Cores	

C85	2009	L. Arge and M. Revsbæk	I/O-Efficient Contour Tree Simplification	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)
C86	2009	A. Andoni, P. Indyk, R. Krauthgamer and H.L. Nguyen	Approximate Line Nearest Neighbor in High Dimensions	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C87	2009	A. Andoni, P. Indyk and R. Krauthgamer	Overcoming the L1 Non-embeddability Barrier: Algorithms for Product Metrics	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C88	2009	R. Berinde and P. Indyk	Sequential Sparse Matching Pursuit	Proc. Allerton Conference	(PR)(CO)
C89	2009	A. Andoni, K. Do Ba, P. Indyk and D. Woodruff	Efficient Sketches for Earth-Mover Distance, with Applications	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C90	2009	A. Andoni, P. Indyk, K. Onak and R. Rubinfeld	External Sampling	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C91	2009	E. Demaine, M. Demaine, G. Konjevod and R. Lang	Folding a Better Checkerboard	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C92	2009	J. Cardinal, E. Demaine, M. Demaine, S. Imahori, S. Langerman and R. Uehara	Algorithmic Folding Complexity	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C93	2009	E. Demaine, M. Hajiaghayi, and D. Marx	Minimizing Movement: Fixed-Parameter Tractability	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C94	2009	B. Ballinger, D. Charlton, E. Demaine, M. Demaine, J. Iacono, C-H. Liu and S-H. Poon	Minimal Locked Trees	Proc. Algorithms and Data Structures Symposium (WADS)	(PR)(CO)
C95	2009	E. Demaine, D. Kane and G. Price	A Pseudopolynomial algorithm for Alexandrov's Theorem	Proc. Algorithms and Data Structures Symposium (WADS)	(PR)(CO)
C96	2009	T. Ito, M. Kaminski and E. Demaine	Reconfiguration of List Edge-Colorings in a Graph	Proc. Algorithms and Data Structures Symposium (WADS)	(PR)(CO)
C97	2009	E. Demaine, M. Hajiaghayi and K. Kawarabayashi	Approximation Algorithms via Structural Results for Apex-Minor-Free Graphs	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C98	2009	E. Demaine, M. Hajiaghayi and P. Klein	Node-Weighted Steiner Tree and Group Steiner Tree in Planar Graphs	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C99	2009	E. Demaine, G. Borradaile and S. Tazari	Polynomial-Time Approximation Schemes for Subset-Connectivity Problems in Bounded-Genus Graphs	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)
C100	2009	E. Demaine, D. Harmon, J. Iacono, D. Kane and M. Patrascu	The Geometry of Binary Search Trees	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C101	2009	E. Demaine, K. Kawarabayashi and M. Hajiaghayi	Additive Approximation Algorithms for List-Coloring Minor-Closed Class of Graphs	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)

C102	2009	E. Demaine, M. Hajiaghayi, H. Mahini and M. Zadimoghaddam	The Price of Anarchy in Cooperative Network Creation Games	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)
C103	2009	J. Cardinal, E. Demaine, S. Fiorini, G. Joret, I. Newman and O. Weimann	The Stackelberg Minimum Spanning Tree Game on Planar and Bounded-Treewidth Graphs	Proc. Workshop on Internet and Network Economics (WINE)	(PR)(CO)
C104	2009	J. McLurkin and E. Demaine	A Distributed Boundary Detection Algorithm for Multi-Robot Systems	Proc. International Conference on Intelligent Robots and Systems	(PR)(CO)
C105	2009	G. Aloupis, N. Benbernou, M. Damian, E. Demaine, R. Flatland, J. Iacono and S. Wuhrer	Efficient Reconfiguration of Lattice-Based Modular Robots	Proc. European Conference on Mobile Robots	(PR)(CO)
C106	2009	M. Ajtai, V. Feldman, A. Hassidim and J. Nelson	Sorting and Selection with Imprecise Comparisons	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C107	2009	R. Yuster and O. Weimann	Computing the Girth of a Planar Graph in O(n log n) time	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)
C108	2009	R. Backofen, G. Landau, M. Möhl, D. Tsur and O. Weimann	Fast RNA Structure Alignment for Crossing Input Structures	Proc. Symposium on Combinatorial Pattern Matching (CPM)	(PR)(CO)
C109	2009	P. Klein, S. Mozes and O. Weimann	Shortest Paths in Directed Planar Graphs with Negative Lengths: A Linear-Space O(n log n)-Time Algorithm	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C110	2010	K. Do Ba, P. Indyk, E. Price and D.P. Woodruff	Lower Bounds for Sparse Recovery	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C111	2010	P. Indyk, H.Q. Ngo and A. Rudra	Efficiently Decodable Non-adaptive Group Testing	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C112	2010	D.M. Kane, J. Nelson and D.P. Woodruff	An Optimal Algorithm for the Distinct Elements Problem	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)
C113	2010	J. Nelson and D.P. Woodruff	Fast Manhattan Sketches in Data Streams	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)
C114	2010	I. Diakonikolas, D.M. Kane and J. Nelson	Bounded Independence Fools Degree-2 Threshold Functions	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C115	2010	D.M. Kane, J. Nelson and D.P. Woodruff	On the Exact Space Complexity of Sketching and Streaming Small Norms	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C116	2010	A. Beckmann , U. Meyer, P. Sanders and J. Singler	Energy-Efficient Sorting using Solid State Disks	Proc. International IEEE Green Computing Conference	(PR)(CO)
C117	2010	M. Greve, A.G. Jørgensen, K.D. Larsen and J. Truelsen	Cell Probe Lower Bounds and Approximations for Range Mode	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)
C118	2010	M. Olsen	Maximizing PageRank with new Backlinks	Proc. International Conference on Algorithms and Complexity (CIAC)	(PR)

C119	2010	G.S. Brodal, E. Demaine, J. T. Fineman, J. Iacono, S. Langerman and J.I. Munro	Cache-Oblivious Dynamic Dictionaries with Optimal Update/Query Tradeoff	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C120	2010	A. Kaporis, A.N. Papadopoulos, S. Sioutas, K. Tsakalidis and K. Tsichlas	Efficient Processing of 3-Sided Range Queries with Probabilistic Guarantees	Proc. International Conference on Database Theory (ICDT)	(PR)(CO)
C121	2010	M.A. Abam and S. Har-Peled	New constructions of SSPDs and their applications	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C122	2010	M.B. Kjærgaard, H. Blunck, T. Godsk, T. Toftkjær, D.L. Christensen, and K. Grønbæk	Indoor Positioning using GPS Revisited	Proc. International Conference on Pervasive Computing (Pervasive)	(PR)
C123	2010	L. Arge, M.T. Goodrich and N. Sitchinava	Parallel external memory graph algorithms	Proc. International Parallel & Distributed Processing Symposium (IPDPS)	(PR)(CO)
C124	2010	P. Afshani, L. Arge and K.D. Larsen	Orthogonal Range Reporting: Query Lower Bounds, Optimal Structures in 3-d, and Higher Dimensional Improvements	Proc. Symposium on Computational Geometry (SoCG)	(PR)
C125	2010	P. Afshani, L. Arge and K.D Larsen	I/O-Efficient Orthogonal Range Reporting in Three and Higher Dimensions	Proc. Workshop on Massive Data Algorithmics (MASSIVE)	
C126	2010	T. Mølhave, P.K. Agarwal, L. Arge and M. Revsbæk	Scalable Algorithms for Large High-Resolution Terrain Data	Proc. International Conference on Computing for Geospatial Research & Application (COM.GEO)	(PR)(CO)
C127	2010	L. Arge, M. Revsbæk and Norbert Zeh	I/O-Efficient Computation of Water Flow Across a Terrain	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C128	2010	G.S. Brodal, P. Davoodi and S.S. Rao	On Space Efficient Two Dimensional Range Minimum Data Structures	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C129	2010	D. Ajwani, N. Sitchinava and N. Zeh	Geometric Algorithms for Private-Cache Chip Multiprocessors	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C130	2010	Z. Abel, N. Benbernou, M. Damian, E.D. Demaine, M.L. Demaine, R. Flatland, S. Kominers and R. Schwelle	Shape Replication Through Self-Assembly and RNase Enzymes	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C131	2010	E.D. Demaine, M. Hajiaghayi and K. Kawarabayashi	Decomposition, Approximation, and Coloring of Odd-Minor-Free Graphs	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C132	2010	N. Gershenfeld, D. Dalrymple, K. Chen, A. Knaian, F. Green, E.D. Demaine, S. Greenwald and P. Schmidt-Nielsen	Reconfigurable Asynchronous Logic Automata	Proc. Symposium on Principles of Programming Langauges (POPL)	(PR)(CO)
C133	2010	G. Aloupis, J. Cardinal, S. Collette, E.D. Demaine, M.L. Demaine, M. Dulieu, R. Fabila-Monroy, V. Hart, F. Hurtado, S. Langerman, M. Saumell, C. Seara and P. Taslakian	Matching Points with Things	Proc. Latin American Theoretical Informatics Symposium (LATIN)	(PR)(CO)

C134	2010	E.D. Demaine and M. Zadimoghaddam	Scheduling to Minimize Power Consumption using Submodular Functions	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)
C135	2010	S. Gilbert, R. Guerraoui, F. Malakouti and M. Zadimoghaddam	Collaborative Scoring in the Presence of Malicious Players	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C136	2010	N. Alon, E.D. Demaine, M. Hajiaghayi and T. Leighton	Basic Network Creation Games	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C137	2010	E.D. Demaine and M. Zadimoghaddam	Minimizing the Diameter of a Network using Shortcut Edge	Proc. Scandinavian Workshop on Algorithm Theory (SWAT)	(PR)
C138	2010	M. Bateni, M.H. Hajiaghayi and M. Zadimoghaddam	Submodular Secretary Problem and Extensions	Proc. Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)	(PR)(CO)
C139	2010	B. Ballinger, N. Benbernou, P. Bose, M. Damian, E.D. Demaine, V. Dujmović, R. Flatland, F. Hurtado, J. Iacono, A. Lubiw, P. Morin, V. Sacristán, D. Souvaine and R. Uehara	Coverage with k-Transmitters in the Presence of Obstacles	Proc. International Conference on Combinatorial Optimization and Applications (COCOA)	(PR)(CO)
C140	2010	E.D. Demaine and M. Zadimoghaddam	Constant Price of Anarchy in Network Creation Games via Public Service Advertising	Proc. International Workshop on Algorithms and Models for the Web-Graph	(PR)
C141	2010	G. S. Brodal, C. Kejlberg-Rasmussen and J. Truelsen	A Cache-oblivious Implicit Dictionary with the Working Set Property	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)
C142	2010	L. Arge, K. D. Larsen, T. Mølhave and F. van Walderveen	Cleaning Massive Sonar Point Clouds	Proc. International Conference on Advances in Geographic Information System (ACM-GIS)	(PR)
C143	2010	G.S Brodal, Ss.Sioutas, K. Tsichlas and C. Zaroliagis	D2-Tree: A New Overlay with Deterministic Bounds	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C144	2010	F. Gieseke, G. Moruz and J. Vahrenhold	Resilient kd-trees: K-means in space revisited	Proc. Conference on Data Mining (ICDM)	(PR)(CO)
C145	2010	J. Brody and E. Verbin	The Coin Problem and Pseudorandomness for Branching Programs	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C146	2011	H. Blunck, M. B. Kjærgaard and T. S. Toftegaard	Sensing and Classifying Impairments of GPS Reception on Mobile Devices	Proc. International Conference on Pervasive Computing (Pervasive)	(PR)(CO)
C147	2011	A. G. Jorgensen and K. G. Larsen,	Range Selection and Median: Tight Cell Probe Lower Bounds and Adaptive Data Structures	Proc. Symposium on Discrete Algorithms (SODA)	(PR)
C148	2011	P. Afshani, P. K. Agarwal, L. Arge, K. G. Larsen and J. M. Phillips	(Approximate) Uncertain Skylines	Proc. International Conference on Database Theory (ICDT)	(PR)(CO)

C149	2011	T. M. Chan, K. G. Larsen and M. Patrascu	Orthogonal Range Searching on the RAM, Revisited	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C150	2011	K. G. Larsen	On Range Searching in the Group Model and Combinatorial Discrepancy	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)
C151	2011	M. de Berg and C. Tsirogiannis	Exact and Approximate Computations of Watersheds on Triangulated Terrains	Proc. International Conference on Advances in Geographic Information Systems (ACM-GIS)	(PR)(CO)
C152	2011	H.Haverkort and C. Tsirogiannis	Flow on Noisy Terrains: An Experimental Evaluation	Proc. International Conference on Advances in Geographic Information Systems (ACM-GIS)	(PR)(CO)
C153	2011	D. Ajwani, N. Sitchinava and N. Zeh	I/O-Optimal Distribution Sweeping on Private-Cache Chip Multiprocessors	Proc. International Symposium on Parallel and Distributed Processing (IPDPS)	(PR)(CO)
C154	2011	M.T. Goodrich, N. Sitchinava and Q. Zhang	Sorting, Searching, and Simulation in the MapReduce Framework	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C155	2011	M. A. Abam, S. Daneshpajouh, L. Deleuran, S. Ehsani and M. Ghodsi	Computing Homotopic Line Simplification in a Plane	Proc. European Workshop on Computational Geometry (EuroCG)	(CO)
C156	2011	P. Afshani and N. Zeh	Improved Space Bounds for Cache-Oblivious Range Reporting	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C157	2011	P. Afshani, G.S. Brodal and N. Zeh	Ordered and Unordered Top-K Range Reporting in Large Data Sets	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C158	2011	G.S. Brodal, G. Moruz, and A. Negoescu	OnlineMin: A Fast Strongly Competitive Randomized Paging Algorithm	Proc. Workshop on Approximation and Online Algorithms (WAOA)	(PR)
C159	2011	G.S. Brodal, P. Davoodi, and S.S. Rao	Path Minima Queries in Dynamic Weighted Trees	Proc. Workshop on Algorithms and Data Structures (WADS)	(PR)(CO)
C160	2011	G.S. Brodal and K. Tsakalidis	Dynamic Planar Range Maxima Queries	Proc. International Colloquium on Automata, Languages, and Programming (ICALP)	(PR)
C161	2011	G.S. Brodal, M. Greve, V. Pandey and S.S. Rao	Integer Representations towards Efficient Counting in the Bit Probe Model	Proc. Conference on Theory and Applications of Models of Computation (TAMC)	(PR)(CO)
C162	2011	H.L. Chan, T.W. Lam, L.K. Lee, J. Pan, H.F. Ting and Q. Zhang	Edit Distance to Monotonicity in Sliding Windows	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR) (CO)
C163	2011	D. Ajwani, A. Cosgaya-Lozano and N. Zeh	Engineering a Topological Sorting Algorithm for Massive Graphs	Proc. Workshop on Algorithm Engineering and Experiments (ALENEX)	(PR)(CO)
C164	2011	S.H. Chan, T.W. Lam, L.K. Lee, C.M. Liu and H.F. Ting	Sleep management on multiple machines for energy and flow time	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR) (CO)

C165	2011	A.G. Jørgensen, M. Loffler and J. Phillips	Geometric Computations on Indecisive Points	Proc. International Workshop on Algorithms and Data Structures (WADS)	(PR)(CO)
C166	2011	P. Davoodi and S. Srinivasa Rao	Succinct Dynamic Cardinal Trees with Constant Time Operations for Small Alphabet	Proc. Theory and Applications of Models of Computation (TAMC)	(PR)(CO)
C167	2011	E. Verbin and W. Yu	The Streaming Complexity of Cycle Counting, Sorting By Reversals, and Other Problems	Proc. Symposium on Discrete Algorithms (SODA)	(PR)
C168	2011	U. Meyer, A. Negoescu and V. Weichert	New bounds for old algorithms: On the average-case behavior of classic single-source shortest path approaches	Proc. Conference on Theory and Practice of Algorithms in (Computer) Systems (TAPAS)	(PR)
C169	2011	M. Manjunath, K. Mehlhorn, K. Panagiotou and H. Sun	Approximate Counting of Cycles in Streams	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C170	2011	E. Price	Efficient Sketches for the Set Query Problem	Proc. Symposium on Discrete Algorithms (SODA)	(PR)
C171	2011	P. Indyk and E. Price	K-Median Clustering, Model-Based Compressive Sensing, and Sparse Recovery for Earth Mover Distance	Proc. Symposium on Theory of Computing (STOC)	(PR)
C172	2011	P. Indyk, E. Price and D. P. Woodruff	On the Power of Adaptivity in Sparse Recovery	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C173	2011	R. Gupta, P. Indyk, E. Price and Y. Rachlin	Compressive Sensing with Local Geometric Features	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C174	2011	E. Price and D. P. Woodruff	(1+eps)-approximate sparse recovery	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)
C175	2011	D. M. Kane, J. Nelson, E. Porat and D. P. Woodruff	Fast Moment Estimation in Data Streams in Optimal Space	Proc. Symposium on Theory of Computing (STOC)	(PR)(CO)
C176	2011	D. M. Kane, R. Meka and J. Nelson	Almost Optimal Explicit Johnson-Lindenstrauss Transformations	Proc. International Workshop on Randomization and Computation (RANDOM)	(PR)(CO)
C177	2011	D. B. Khanh and P. Indyk	Sparse recovery with partial support knowledge	Proc. Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)	(PR)(CO)
C178	2011	K. Kawarabayashi, P. N. Klein and C. Sommer	Linear-Space Approximate Distance Oracles for Planar, Bounded-Genus, and Minor-Free Graphs	Proc. International Colloquium on Automata, Languages, and Programming (ICALP)	(PR)(CO)
C179	2011	C. Gavoille and C. Sommer	Sparse Spanners vs. Compact Routing	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)

C180	2011	H. N. Djidjev and C. Sommer	Approximate Distance Queries for Weighted Polyhedral Surfaces	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C181	2011	D. Alistarh, J. Aspnes, K. Censor-Hillel, S. Gilbert and M. Zadimoghaddam	Optimal-Time Adaptive Tight Renaming, with Applications to Counting	Proc. Symposium on Principles of Distributed Computing (PODC)	(PR)(CO)
C182	2011	A. Karbasi and M. Zadimoghaddam	Compression with Graphical Constraints: An Interactive Browser	Proc. International Symposium on Information Theory (ISIT)	(PR)(CO)
C183	2011	B. Haeupler, V. Mirrokni and M. Zadimoghaddam	Online Stochastic Weighted Matching: Improved Approximation Algorithms	Proc. Workshop on Internet & Network Economics	(PR)(CO)
C184	2011	Z. Abel, E. D. Demaine, M. L. Demaine, S. Eisenstat, J. Lynch, T. B. Schardl and I. Shapiro-Ellowitz	Folding Equilateral Plane Graphs	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)
C185	2011	E. D. Demaine, S. Eisenstat, M. Ishaque and A. Winslow	One-Dimensional Staged Self-Assembly	Proc. International Conference on DNA Computing and Molecular Programming	(PR)(CO)
C186	2011	E. D. Demaine, M. L. Demaine, S. Eisenstat, A. Lubiw and A. Winslow	Algorithms for Solving Rubik's Cubes	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C187	2011	E. D. Demaine and S. Eisenstat	Flattening Fixed-Angle Chains Is Strongly NP-Hard	Proc. International Workshop on Algorithms and Data Structures (WADS)	(PR)
C188	2011	P. Christiano, E. D. Demaine and S. Kishore	Lossless Fault-Tolerant Data Structures with Additive Overhead	Proc. International Workshop on Algorithms and Data Structures (WADS)	(PR)(CO)
C189	2011	P. Berman, E. D. Demaine and M. Zadimoghaddam	O(1)-Approximations for Maximum Movement Problems	Proc. Workshop on Approximation Algorithms for Combinatorial Optimization Problems (APPROX)	(PR)(CO)
C190	2011	G. Aloupis, E. D. Demaine, M. L. Demaine, V. Dujmovic and J. Iacono	Meshes preserving minimum feature size	Proc. Spanish Meeting on Computational Geometry	(CO)
C191	2011	E. D. Demaine and A. Lubiw	A generalization of the source unfolding of convex polyhedra	Proc. Spanish Meeting on Computational Geometry	(CO)
C192	2011	E. D. Demaine, M. Hajiaghayi and K. Kawarabayashi	Contraction Decomposition in H-Minor-Free Graphs and Algorithmic Applications	Proc. Symposium on Theory of Computing (STOC)	(PR)(CO)
C193	2011	E. D. Demaine, M. J. Patitz, R. T. Schweller and S. M. Summers	Self-Assembly of Arbitrary Shapes Using RNAse Enzymes: Meeting the Kolmogorov Bound with Small Scale Factor	Proc. Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)
C194	2011	E. D. Demaine and A. Schulz	Embedding Stacked Polytopes on a Polynomial-Size Grid	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C195	2012	P. Davoodi, M. Smid and F. van Walderveen	Two-Dimensional Range Diameter	Proc. Latin American Symposium on Theoretical Informatics (LATIN)	(PR)(CO)
C196	2012	L. Arge, M.T. Goodrich and F. van Walderveen	Computing betweenness centrality in external memory	Workshop on Massive Data Algorithmics (MASSIVE)	(CO)

C197	2012	K. G. Larsen and R. Pagh	I/O-Efficient Data Structures for Colored Range and Prefix Reporting	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C198	2012	T. M. Chan, S. Durocher, K. G. Larsen, J. Morrison and B. T. Wilkinson	Linear-Space Data Structures for Range Mode Query in Arrays	Proc. Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)
C199	2012	K. G. Larsen	The Cell Probe Complexity of Dynamic Range Counting	Proc. Symposium on Theory of Computing (STOC)	(PR)
C200	2012	P. Afshani, L. Arge and K. G. Larsen	Higher-dimensional Orthogonal Range Reporting and Rectangle Stabbing in the Pointer Machine Model	Proc. Symposium on Computational Geometry (SoCG)	(PR)
C201	2012	K. G. Larsen and H. L. Nguyen	Improved Range Searching Lower Bounds	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)
C202	2012	K. G. Larsen	Higher Cell Probe Lower Bounds for Evaluating Polynomials	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)
C203	2012	L. Arge, L. Deleuran, T. Mølhave, M. Revsbæk and J. Truelsen	Simplifying Massive Contour Maps	Proc. European Symposium on Algorithms (ESA)	(PR)
C204	2012	Z. Huang, K. Yi and Q. Zhang,	Randomized Algorithms for Tracking Distributed Count, Frequencies, and Ranks	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)
C205	2012	D.P. Woodruff and Q. Zhang	Tight Bounds for Distributed Functional Monitoring	Proc. Symposium on Theory of Computing (STOC)	(PR)(CO)
C206	2012	J. M. Phillips, E. Verbin and Q. Zhang	Lower Bounds for Number-in-Hand Multiparty Communication Complexity, Made Easy	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C207	2012	E. Verbin and Q. Zhang	Rademacher-Sketch: A Dimensionality-Reducing Embedding for Sum-Product Norms, with an Application to Earth-Mover Distance	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)
C208	2012	H.L. Chan, S.H. Chan, T.W. Lam, L.K. Lee, and J. Zhu	Non-clairvoyant weighted flow time scheduling with rejection penalty	Proc. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C209	2012	G. S. Brodal, J. A. S. Nielsen and J. Truelsen	Finger search in the implicit model	Proc. International Symposium on Algorithms and Computation (STACS)	(PR)
C210	2012	G.S. Brodal and C. Kejlberg-Rasmussen	Cache-Oblivious Implicit Predecessor Dictionaries with the Working-Set Property	Proc. Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)
C211	2012	X. Sun , C. Wang and W. Yu	The Relationship between Inner Product and Counting Cycles	Proc. Latin American Theoretical Informatics Symposium (LATIN)	(PR)(CO)
C212	2012	P. Davoodi, R. Raman and S. S. Rao	Succinct Representations of Binary Trees for Range Minimum Queries	Proc. International Computing and Combinatorics Conference (COCOON)	(PR)(CO)
C213	2012	G.S. Brodal, S. Sioutas, K. Tsakalidis and K. Tsichlas	Fully Persistent B-trees	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)

C214	2012	G.S. Brodal, G. Lagogiannis and R.E. Tarjan.	Strict Fibonacci Heaps	Proc. Symposium on Theory of Computing (STOC)	(PR)(CO)
C215	2012	G.S Brodal, P. Davoodi, M. Lewenstein, R. Raman and S. S. Rao	Two Dimensional Range Minimum Queries and Fibonacci Lattices	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C216	2012	D. Ajwani, A. Beckmann, U. Meyer and D. Veith	I/O-efficient approximation of graph diameter by parallel cluster growing - a first experimental study	Proc. Workshop on Parallel Systems and Algorithms (PASA)	(PR)(CO)
C217	2012	A. Beckmann, J. Fedorowicz, J.Keller and U. Meyer	A structural analysis of the A5/1 state transition graph	Proc. Workshop on Graph Inspection and Traversal Engineering (GRAPHite)	(PR)(CO)
C218	2012	G. Moruz and A. Negoescu	Outperforming LRU via Competitive Analysis on Parametrized Inputs for Paging	Proc. Symposium on Discrete Algorithms (SODA)	(PR)
C219	2012	G. Moruz, A. Negoescu, C. Neumann and V. Weichert	Engineering Efficient Paging Algorithms	Proc. Symposium on Experimental Algorithms (SEA)	(PR)
C220	2012	H. Hassanieh, P. Indyk, D. Katabi and E. Price	Simple and Practical Algorithm for Sparse Fourier Transform	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C221	2012	H. Hassanieh, P. Indyk, D. Katabi and E. Price	Nearly Optimal Sparse Fourier Transform	Proc. Symposium on Theory of Computing (STOC)	(PR)(CO)
C222	2012	S. Mozes and C. Sommer	Exact Distance Oracles for Planar Graphs	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C223	2012	T. Akiba, C. Sommer and K-i Kawarabayashi	Shortest-Path Queries for Complex Networks: Exploiting Low Tree-width Outside the Core	Proc. International Conference on Extending Database Technology (EDBT)	(PR)(CO)
C224	2012	S. Kreutzer and S. Tazari	Directed Nowhere Dense Classes of Graphs	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C225	2012	V.S. Mirrokni, S. O. Gharan and M. Zadimoghaddam	Simultaneous approximations for adversarial and stochastic online budgeted allocation	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C226	2012	D. M. Kane and J. Nelson	Sparser Johnson-Lindenstrauss Transforms	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C227	2012	C. Tsirogiannis, B. Sandel and D. Cheliotis	Efficient Computation of Popular Phylogenetic Tree Measures	Proc. Workshop on Algorithms in Bioinformatics (WABI)	(PR)(CO)
C228	2012	L. Arge, H. Haverkort and C. Tsirogiannis	Fast Generation of Multiple Resolution Instances of Raster Data Sets	Proc. International Conference on Advances in Geographic Information Systems (ACM-GIS)	(PR)(CO)
C229	2012	P. Afshani and N. Zeh	Lower Bounds for Sorted Geometric Queries in the I/O Model	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C230	2012	P. Afshani	Improved pointer machine and I/O lower bounds for simplex range reporting and related problems	Proc. ACM Symposium on Computational Geometry (SoCG)	(PR)
C231	2012	T. M. Chan, S. Durocher, M. Skala, and B. T. Wilkinson	Linear-Space Data Structures for Range Minority Query in Arrays	Proc. Scandinavian Workshop on Algorithm Theory (SWAT)	(PR)(CO)

C232	2012	H. Jowhari	Efficient Communication Protocols for Deciding Edit Distance	Proc. European Symposium on Algorithms (ESA)	(PR)
C233	2012	L. K. Lee, M. Lewenstein and Q. Zhang.	Parikh matching in the streaming model	Proc. International Symposium on String Processing and Information Retrieval (SPIRE)	(PR)(CO)
C234	2012	D. Belazzougui and R. Venturini	Compressed String Dictionary Look-up with Edit Distance One	Proc. Symposium on Combinatorial Pattern (CPM)	(PR)(CO)
C235	2012	B. Ammitzbøll Jurik and J.A.S. Nielsen	Audio Quality Assurance: An Application of Cross Correlation	Proc. iPRES Conference	(PR)(CO)
C236	2012	N. Sitchinava and N. Zeh	A parallel buffer tree	Proc. ACM Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)
C237	2012	D. Ajwani, U. Meyer and D. Veith	I/O-efficient Hierarchical Diameter Approximation	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)
C238	2012	D. Kane, K. Mehlhorn, T. Sauerwald and H. Sun	Counting Arbitrary Subgraphs in Data Streams	Proc. International Colloquium on Automata, Languages, and Programming (ICALP)	(PR)
C239	2012	M. Wibral, P. Wollstadt, U. Meyer, N. Pampu, V.Priesemann and R. Vicente	Revisiting Wiener's principle of causality — interaction-delay reconstruction using transfer entropy and multivariate analysis on delay-weighted graphs	Proc. International Confonference in Medicine & Biology Society (EMBC)	(PR)(CO)
C240	2012	P. Indyk, R. Levi and R. Rubinfeld	Approximating and Testing k-Histogram Distributions in Sub-linear Time	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)
C241	2012	J. Wang, H. Hassanieh, D. Katabi and P. Indyk	Efficient and Reliable Low-Power Backscatter Networks	Proc. International Conference on Mobile Computing and Networking (SIGCOMM)	(PR)(CO)
C242	2012	H. Hassanieh, F. Adib, D. Katabi and P. Indyk	Faster GPS Via the Sparse Fourier Transform	Proc. MOBICOM	(PR)(CO)
C243	2012	E. Price and D. Woodruff	Applications of the Shannon-Hartley Theorem to Data Streams and Sparse Recovery	Proc. International Symposium on Information Theory (ISIT)	(PR)(CO)
C244	2012	L. Hamilton, D. Parker, C. Yu and P. Indyk	Focal Plane Array Folding for Efficient Information Extraction and Tracking	Proc. Applied Imagery Patterns Recognition Workshop (AIPR)	(PR)(CO)
C245	2013	E. Price and D. Woodruff	Lower Bounds for Adaptive Sparse Recovery	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C246	2013	A. Andoni, H. Hassanieh, P. Indyk and D. Katabi	Shift Finding in Sub-linear Time	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)
C247	2012	E.D. Demaine, M.L. Demaine, Y. N. Minsky, J.S.B. Mitchell, R.L. Rivest and M. Patrascu	Picture-Hanging Puzzles	Proc. International Conference on Fun with Algorithms	(CO)
C248	2012	E. D. Demaine, M.L. Demaine, J-i. Itoh, A. Lubiw, C. Nara and J. O'Rourke	Refold Rigidity of Convex Polyhedra	Proc. European Workshop on Computational Geometry	(CO)

C249	2012	S. Lim, C. Sommer, E. Nikolova and D. Rus	Practical Route Planning Under Delay Uncertainty: Stochastic Shortest Path Queries	Proc. Robotics: Science and Systems VIII	(PR)(CO)
C250	2012	C. Ratti and C. Sommer	Approximating Shortest Paths in Spatial Social Networks	Proc. International Conference on Social Computing	(PR)(CO)
C251	2012	M. Zadimoghaddam and A. Roth	Efficiently Learning from Revealed Preference	Proc. International Workshop on Internet and Network Economics	(PR)(CO)
C252	2012	C. Guo, Y. Ma, B. Yang, C. S. Jensen and M. Kaul	Evaluating Models of Vehicular Environmental Impact	Proc. International Conference on Advances in Geographic Information Systems (ACM-GIS)	(PR)(CO)
C253	2012	X. Li, P. Karras, L. Shi, K.-L. Tan and C. S. Jensen	Cooperative Scalable Moving Continuous Query Processing	Proc. International Conference on Mobile Data Management (MDM)	(PR)(CO)
C254	2012	D. Šidlauskas, C. S. Jensenand S. Šaltenis	A Comparison of the Use of Virtual Versus Physical Snapshots for Supporting Update-Intensive Workloads	Proc. International Workshop on Data Management on New Hardware (DaMoN)	(PR)(CO)
C255	2012	J. Rishede, M. L. Yiu and C. S. Jensen	Effective Caching of Shortest Paths for Location-Based Services	Proc. International Conference on the Management of Data (SIGMOD)	(PR)(CO)
C256	2012	D. Šidlauskas, S. Šaltenis and C. S. Jensen	Parallel Main-Memory Indexing for Moving-Object Query and Update Workloads	Proc. International Conference on the Management of Data (SIGMOD)	(PR)(CO)
C257	2012	H. Lu, X. Cao and C. S. Jensen	A Foundation for Efficient Indoor Distance-Aware Query Processing	Proc. International Conference on Data Engineering (ICDE)	(PR)(CO)
C258	2012	H. Lu and C. S. Jensen	Upgrading Uncompetitive Products Economically	Proc. International Conference on Data Engineering (ICDE)	(PR)(CO)
C259	2012	X. Cao, L. Chen, G. Cong, C. S. Jensen, Q. Qu, A. Skovsgaard, D. Wu and M. L. Yiu	Spatial Keyword Querying (invited paper)	Proc. International Conference on Conceptual Modeling (ER)	(CO)
C260	2013	M. Olsen and M. Revsbæk	Alliances and Bisection Width for Planar Graphs	Proc. International Workshop on Algorithms and Computation (WALCOM)	(PR)(OA)
C261	2013	K.G. Larsen and F. van Walderveen	Near-Optimal Range Reporting Structures for Categorical Data	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(OA)
C262	2013	K. Bringmann and K.G. Larsen	Succinct Sampling from Discrete Distributions	Proc. ACM Symposium on Theory of Computing (STOC)	(PR)(CO)(OA)
C263	2013	Chr. Tsirogiannis and Con. Tsirogiannis	Uncovering the Missing Routes : An Algorithmic Study on the Illicit Antiquities Trade Network	Proc. Conference on Computer Applications and Quantitative Methods in Archaeology (CAA)	(PR)(CO)(OA)
C264	2013	C. Tsirogiannis and B. Sandel	Computing the Skewness of the Phylogenetic Mean Pairwise Distance in Linear Time	Proc. Workshop on Algorithms in Bioinformatics (WABI)	(PR)(CO)(OA)
C265	2013	L. Arge, G.S. Brodal, J. Truelsen and C. Tsirogiannis	An Optimal and Practical Cache-Oblivious Algorithm for Computing Multiresolution Rasters	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)(OA)

C266	2013	L. Arge, M. de Berg and C. Tsirogiannis	Algorithms for Computing Prominence on Grid Terrains	Proc. International Conference on Advances in Geographic Information System (ACM-GIS)	(PR)(CO)(OA)
C267	2013	L. Arge and M. Thorup	RAM-Efficient External Memory Sorting	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR) (CO)(OA)
C268	2013	L. Arge, M.T. Goodrich and F. van Walderveen	Computing betweenness centrality in external memory	Proc. IEEE International Symposium on Big Data	(PR)(CO)(OA)
C269	2013	L. Arge, J. Fischer, P. Sanders and N. Sitchinava	On (Dynamic) Range Maximum Queries in External Memory	Proc. Workshop on Algorithms and Data Structures (WADS)	(PR)(CO)(OA)
C270	2013	L. Arge, F. van Walderveen and N. Zeh	Multiway simple cycle separators and I/O-efficient algorithms for planar graphs	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C271	2013	G.S. Brodal, A. Brodnik and P. Davoodi	The Encoding Complexity of Two Dimensional Range Minimum Data Structures	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)(OA)
C272	2013	A. Sand, G.S. Brodal, R. Fagerberg, C.N.S. Pedersen and T. Mailund	A practical O(n log n) time algorithm for computing the triplet distance on binary trees	Proc. Asia Pacific Bioinformatics Conference (APBC)	(PR)(CO)(OA)
C273	2013	G.S. Brodal, R. Fagerberg, C.N.S. Pedersen, T. Mailund and A. Sand	Efficient Algorithms for Computing the Triplet and Quartet Distance Between Trees of Arbitrary Degree	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C274	2013	S. Pettie and H.-H. Su	Fast Distributed Coloring Algorithms for Triangle-Free Graphs	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)(OA)
C275	2013	C. Kejlberg-Rasmussen, Y. Tao, J. Yoon, K. Tsichlas and K. Tsakalidis	I/O-Efficient Planar Range Skyline and Attrition Priority Queues	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)(OA)
C276	2013	Z. Wei and K. Yi	The Space Complexity of 2-Dimensional Approximate Range Counting	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C277	2013	E. Verbin and W. Yu	Data Structure Lower Bounds on Random Access to Grammar-Compressed Strings	Proc. Symposium on Combinatorial Pattern Matching (CPM)	(PR)(OA)
C278	2013	D. Belazzougui and R. Venturini	Compressed Static Functions with Applications	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C279	2013	T.M. Chan and B.T. Wilkinson	Adaptive and Approximate Orthogonal Range Counting	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C280	2013	S. Alamdari, P. Angelini, T.M. Chan, G. Di Battista, F. Frati, A. Lubiw, M. Patrignani, V. Roselli, S. Singla and B.T. Wilkinson	Morphing Planar Graph Drawings with a Polynomial Number of Steps	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C281	2013	T. Jurkiewicz and K. Mehlhorn	The Cost of Address Translation	Proc. Workhop on Algorithm Engineering and Experiments (ALENEX)	(PR)(OA)

C282	2013	G. Moruz and A. Negoescu	Improved space bounds for strongly competitive randomized paging algorithms	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(OA)
C283	2013	A. Beckmann, U. Meyer, and D. Veith	An Implementation of I/O-Efficient Dynamic Breadth-First Search Using Level-Aligned Hierarchical Clustering	Proc. European Symposium on Algorithms (ESA)	(PR) (CO)(OA)
C284	2013	L. Radaelli and C.S. Jensen	Towards Fully Organic Indoor Positioning	Proc. International Workshop on Indoor Spatial Awareness (ISA)	(PR)(CO)(OA)
C285	2013	X. Li, V. Ceikute, C.S. Jensen and K.-L. Tan	Trajectory Based Optimal Segment Computation in Road Network Databases	Proc. International Conference on Advances in Geographic Information Systems (ACM-GIS)	(PR)(CO)(OA)
C286	2013	M.B. Kjærgaard, M.V. Krarup, A. Stisen, T.S. Prentow, H. Blunck, K. Grønbæk and C.S. Jensen	Indoor Positioning using Wi-Fi—How Well Is the Problem Understood?	Proc. International Conference on Indoor Positioning and Indoor Navigation (IPIN)	(PR)(CO)(OA)
C287	2013	V. Ceikute and C.S. Jensen	Routing Service Quality—Local Driver Behavior Versus Routing Services	Proc. International Conference on Mobile Data Management (MDM)	(PR)(CO)(OA)
C288	2013	M. Kaul, B. Yang and C.S. Jensen	Building Accurate 3D Spatial Networks to Enable Next Generation Intelligent Transportation Systems	Proc. International Conference on Mobile Data Management (MDM)	(PR)(CO)(OA)
C289	2013	L. Radaelli, D. Sabonis, H. Lu and C.S. Jensen	Identifying Typical Movements Among Indoor Objects—Concepts and Empirical Study	Proc. International Conference on Mobile Data Management (MDM)	(PR)(CO)(OA)
C290	2013	A. Baniukevic, C.S. Jensen and H. Lu	Hybrid Indoor Positioning With Wi-Fi and Bluetooth: Architecture and Performance	Proc. International Conference on Mobile Data Management (MDM)	(PR)(CO)(OA)
C291	2013	O. Andersen, C.S. Jensen, K. Torp and B. Yang	EcoTour: Reducing the Environmental Footprint of Vehicles Using Eco-Routes	Proc. International Conference on Mobile Data Management (MDM)	(PR)(CO)(OA)
C292	2013	L.R.A. Derczynski, B. Yang and C.S. Jensen	Towards Context-Aware Search and Analysis on Social Media Data	Proc. International Conference on Extending Database Technology (EDBT)	(PR)(CO)(OA)
C293	2013	B. Yang, N. Fantini and C.S. Jensen	iPark: Identifying Parking Spaces from Trajectories	Proc. International Conference on Extending Database Technology (EDBT)	(PR)(CO)(OA)
C294	2013	E. Grant, C. Hegde and P. Indyk	Nearly Optimal Linear Embeddings into Very Low Dimensions	Proc. Global Conference on Signal and Information Processing (GlobalSIP)	(PR)(CO)(OA)
C295	2013	S. Abbar, S. Amer-Yahia, P. Indyk, S. Mahabadi and K.R. Varadarajan	Diverse near neighbor problem	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)(OA)
C296	2013	E. Grant and P. Indyk	Compressive sensing using locality-preserving matrices	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)(OA)

C297	2013	L. Schmidt, C. Hegde and P. Indyk	The Constrained Earth Movers Distance Model, with Applications to Compressive Sensing	Proc. International Conference on Sampling Theory and Applications (SampTA)	(PR)(CO)(OA)
C298	2013	S. Abbar, S. Amer-Yahia, P. Indyk and S. Mahabadi	Real-time recommendation of diverse related articles	Proc. International conference on World Wide Web (WWW)	(PR)(CO)(OA)
C299	2013	P. Indyk and I. Razenshteyn	On Model-Based RIP-1 Matrices	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)(OA)
C300	2013	B. Ghazi, H. Hassanieh, P. Indyk, D. Katabi, E. Price and L. Shi	Sample-optimal average-case sparse fourier transform in two dimensions	Proc. Allerton Conference	(PR)(CO)(OA)
C301	2013	E. Price and D. Woodruff	Lower Bounds for Adaptive Sparse Recovery	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C302	2013	A. Andoni, H. Hassanieh, P. Indyk and D. Katabi	Shift Finding in Sub-linear Time	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C303	2013	S. Har-Peled, P. Indyk and A. Sidiropoulos	Euclidean spanners in high dimensions	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C304	2013	E.D. Demaine, P. Panchekha, D. Wilson and E.Z. Yang	Blame Trees	Proc. Algorithms and Data Structures Symposium (WADS)	(PR)(CO)(OA)
C305	2013	E.D. Demaine, M.J. Patitz, T.A. Rogers, R.T. Schweller, S.M. Summers and D. Woods	The two-handed tile assembly model is not intrinsically universal	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)(OA)
C306	2013	E.D. Demaine, J. Iacono, S. Langerman and O. Ozkan	Combining Binary Search Trees	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)(OA)
C307	2013	S. Cannon, E.D. Demaine, M.L. Demaine, S. Eisenstat, M.J. Patitz, R. Schweller, S.M. Summers and A. Winslow	Two Hands Are Better Than One (up to constant factors): Self-Assembly In The 2HAM vs. aTAM	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)(OA)
C308	2013	Z. Abel, E.D. Demaine, M.L. Demaine, S. Eisenstat, A. Lubiw, A. Schulz, D. Souvaine, G. Viglietta and A. Winslow	Algorithms for Designing Pop-Up Cards	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)(OA)
C309	2013	E.D. Demaine and M. Zadimoghaddam	Learning Disjunctions: Near-Optimal Trade-off between Mistakes and "I Don't Know's"	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(OA)
C310	2013	A. Karbasi and M. Zadimoghaddam	Constrained Binary Identification Problem	Proc. International Symposium on Theoretical Aspects of Computer Science (STACS)	(PR)(CO)(OA)
C311	2013	M. Bateni, N. Haghpanah, B. Sivan and M. Zadimoghaddam	Revenue Maximization with Nonexcludable Goods	Proc. International Conference on Web and Internet Economics (WINE)	(PR)(CO)(OA)
C312	2013	N. Korula, V.S. Mirrokni and M. Zadimoghaddam	Bicriteria Online Matching: Maximizing Weight and Cardinality	Proc. International Conference on Web and Internet Economics (WINE)	(PR)(CO)(OA)

C313	2013	G.S. Brodal	A Survey on Priority Queues	Proc. Conference on Space Efficient Data Structures, Streams and Algorithms	(OA)
C314	2013	P. Afshani, M. Agrawal, B. Doerr, C. Doerr, K.G. Larsen, K. Mehlhorn	The Query Complexity of Finding a Hidden Permutation	Proc. Conference on Space Efficient Data Structures, Streams and Algorithms	(CO)(OA)
C315	2013	E.D. Demaine, M.L. Demaine, S. Eisenstat, T.D. Morgan and R. Uehara	Variations on Instant Insanity	Proc. Conference on Space Efficient Data Structures, Streams and Algorithms	(CO)(OA)
C316	2013	N. Sundaram, A. Turmukhametova, N. Satish, T. Mostak, P. Indyk, S. Madden and P. Dubey	Streaming Similarity Search over one Billion Tweets using Parallel Locality-Sensitive Hashing	Proc. International Conference on Very Large Data Bases (VLDB)	(PR)(CO)(OA)
C317	2014	A. Skovsgaard, D. Sidlauskas and C.S. Jensen	Scalable Top-k Spatio-Temporal Term Querying	Proc. International Conference on Data Engineering (ICDE)	(PR)(OA)
C318	2014	A. Skovsgaard, D. Sidlauskas and C.S. Jensen	A Clustering Approach to the Discovery of Points of Interest from Geo-Tagged Microblog Posts	Proc. International Conference on Mobile Data Management (MDM)	(PR)(OA)
C319	2014	S. Alstrup, E. B. Halvorsen and K.G. Larsen,	Near-Optimal Labeling Schemes for Nearest Common Ancestors	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C320	2014	K.G. Larsen, I.J. Munro, J.S. Nielsen and S.V. Thankachan	On Hardness of Several String Indexing Problems	Proc. Symposium on Combinatorial Pattern Matching (CPM)	(PR)(CO)(OA)
C321	2014	G. S. Brodal and K. G. Larsen	Optimal Planar Orthogonal Skyline Counting Queries	Proc. Scandinavian Workshop on Algorithm Theory (SWAT)	(PR)(OA)
C322	2014	P. Afshani	Fast Computation of Output-Sensitive Maxima in a Word RAM	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(OA)
C323	2014	P. Afshani and K. Tsakalidis	Optimal Deterministic Shallow Cuttings for 3D Dominance Ranges	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C324	2014	P. Afshani, C. Sheng, Y. Tao and B.T. Wilkinson	Concurrent Range Reporting in Two-Dimensional Space	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C325	2014	P. Afshani, T.M. Chan and K. Tsakalidis	Deterministic Rectangle Enclosure and Offline Dominance Reporting on the RAM	Proc. International Colloquium on Automata, Languages, and Programming (ICALP)	(PR)(CO)(OA)
C326	2014	P. Afshani and N. Sitchinava	I/O-efficient Range Minima Queries	Proc. Workshops on Algorithm Theory (SWAT)	(PR)(CO)(OA)
C327	2014	B. T. Wilkinson	Amortized bounds for dynamic orthogonal range reporting	Proc. European Symposium on Algorithms (ESA)	(PR)(OA)
C328	2014	Z. Huang and K. Yi	The Communication Complexity of Distributed epsilon-Approximations	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)(OA)
C329	2014	K-M. Chung, S. Pettie and H.-H. Su	Distributed Algorithms for the Lovász Local Lemma and Graph Coloring	Proc. Symposium on Principles of Distributed Computing (PODC)	(PR)(CO)(OA)
C330	2014	S. Gilbert, V. King, S. Pettie, E. Porat, J. Saia and M. Young	(Near) Optimal Resource-Competitive Broadcast with Jamming	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(CO)(OA)

C331	2014	H.-H. Su	Brief Announcement: A Distributed Minimum Cut Approximation Scheme	Proc. Symposium on Parallelism in Algorithms and Architectures (SPAA)	(PR)(OA)
C332	2014	D.Belazzougui, G. S. Brodal and J. S. Nielsen	Expected Linear Time Sorting for Word Size Ω(log n loglogn)	Proc. Workshops on Algorithm Theory (SWAT)	(PR)(CO)(OA)
C333	2014	M.K. Holt, J. Johansen and G.S. Brodal	On the Scalability of Computing Triplet and Quartet Distances	Proc.Workshop on Algorithm Engineering and Experiments (ALENEX)	(PR)(OA)
C334	2014	Z. Wei and K. Yi	Equivalence between Priority Queues and Sorting in External Memory	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)(OA)
C335	2014	L Radaelli, Y. Moses and C.S. Jensen	Using Cameras to Improve Wi-Fi Based Indoor Positioning	Proc. International Symposium on Web and Wireless Geographical Information Systems	(PR)(CO)(OA)
C336	2014	B. Yang, C. Guo, C. S. Jensen, M. Kaul and S. Shang	Multi-Cost Optimal Route Planning under Time-Varying Uncertainty	Proc. International Conference on Data Engineering (ICDE)	(PR)(CO)(OA)
C337	2014	C. Silvestri, F. Lettich, S. Orlando and C.S. Jensen	GPU-based Computing of Repeated Range Queries over Moving Objects	Proc. Euromicro International Conference on Parallel, Distributed, and Network-Based Processing	(PR)(CO)(OA)
C338	2014	P. Indyk, M. Kapralov and E. Price	(Nearly) Sample-Optimal Sparse Fourier Transform	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C339	2014	A. Andoni, P. Indyk, H.L. Nguyen and I. Razenshteyn	Beyond Locality-Sensitive Hashing	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C340	2014	C. Hegde, P. Indyk and L. Schmidt	Approximation-Tolerant Model-Based Compressive Sensing	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(CO)(OA)
C341	2014	Z. Abel, E. D. Demaine, M. L. Demaine, D. Eppstein, A. Lubiw and R. Uehara	Flat Foldings of Plane Graphs with Prescribed Angles and Edge Lengths	Proc. International Symposium on Graph Drawing (GD)	(PR)(CO)(OA)
C342	2014	E. D. Demaine, M. Hajiaghayi, H. Mahini, D. L. Malec, S. Raghavan, A. Sawant and M. Zadimoghaddam	How to Influence People with Partial Incentives	Proc. International World Wide Web Conference	(PR)(CO)(OA)
C343	2014	C.Tsirogiannis, B.Sandel and A. Kalvisa.	New algorithms for computing phylogenetic biodiversity.	Proc. Workshop on Algorithms in Bioinformatics (WABI)	(PR)(CO)(OA)
C344	2014	D. Sidlauskas and C. S. Jensen	Spatial Joins in Main Memory: Implementation Matters!	Proc. International Conference on Very Large Data Bases (VLDB)	(PR)(CO)(OA)
C345	2014	K. S. Bøgh, S. Chester, D. Sidlauskas and I. Assent	Hashcube: A Data Structure for Space- and Query-Efficient Skycube Compression	Proc. International Conference on Conference on Information and Knowledge Management (CIKM)	(PR)(CO)(OA)
C346	2014	A. Skovsgaard and C.S. Jensen	Top-k point of interest retrieval using standard indexes.	Proc. International Conference on Advances in Geographic Information Systems (ACM-GIS)	(PR)(OA)

C347	2014	D. Chen, C. Konrad, K. Yi, W. Yu and Q. Zhang	Robust Set Reconciliation	Proc. International Conference on Management of Data (SIGMOD)	(PR)(CO)(OA)
C348	2014	A. Grønlund and S. Pettie	Threesomes, Degenerates, and Love Triangles	IEEE Symposium on Foundations of Computer Science (FOCS 2014)	(PR)(OA)
C349	2014	D. Nanongkai and H.-H. Su	Almost-Tight Distributed Minimum Cut Algorithms	Proc. International Symposium Distributed Computing (DISC)	(PR)(CO)(OA)
C350	2014	J. I. Munro, G. Navarro, J. S. Nielsen, R. Shah and S. V. Thankachan	Top-k Term-Proximity in Succinct Space	Proc. International Symposium on Algorithms and Computation (ISAAC)	(PR)(CO)(OA)
C351	2014	P. Indyk, S.Mahabadi, M. Mahdian and V. S. Mirrokni	Composable Core-sets for Diversity and Coverage Maximization	Proc. Symposium on Principles of Database Systems (PODS)	(PR)(CO)(OA)
C352	2014	E.D. Demaine, P. Indyk, S. Mahabadi and A. Vakilian	On Streaming and Communication Complexity of the Set Cover Problem	Proc. International Symposium Distributed Computing (DISC)	(PR)(CO)(OA)
C353	2014	P. Indyk and M. Kapralov	Sample-Optimal Fourier Sampling in Any Constant Dimension	Proc. Symposium on Foundations of Computer Science (FOCS)	(PR)(CO)(OA)
C354	2014	L. Schmidt, C. Hegde, P. Indyk, J. Kane, L. Lu and D. Hohl	Automatic Fault Localization Using the Generalized Earth Mover's Distance	Proc. International Conference on Acoustics, Speech and Signal Processing (ICASSP)	(PR)(CO)(OA)
C355	2014	C. Hegde, P. Indyk and L. Schmidt	A Fast Approximation Algorithm for Tree-Sparse Recovery	Proc. International Symposium on Information Theory (ISIT)	(PR)(CO)(OA)
C356	2014	C. Hegde, P. Indyk and L. Schmidt	Nearly Linear-Time Model-Based Compressive Sensing	Proc. International Colloquium on Automata, Languages, and Programming (ICALP)	(PR)(CO)(OA)
C357	2014	A. Backurs and P. Indyk	Better embeddings for planar Earth-Mover Distance over sparse sets	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)(OA)
C358	2014	H. Hassanieh, L. Shi, O. Abari, E. Hamed and D. Katabi	GHz-wide sensing and decoding using the sparse Fourier transform	Proc. INFOCOM	(PR)(CO)
C359	2014	E. D. Demaine, Y. Huang, C.-S. Liao and K. Sadakane	Canadians Should Travel Randomly	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)(OA)
C360	2014	E. D. Demaine, M. L. Demaine, S. P. Fekete, M. J. Patitz, R. T. Schweller, A. Winslow and D. Woods	One Tile to Rule Them All: Simulating Any Tile Assembly System with a Single Universal Tile	Proc. International Colloquium on Automata, Languages and Programming (ICALP)	(PR)(CO)(OA)
C361	2014	G. Aloupis, E. D. Demaine, A. Guo and G. Viglietta	Classic Nintendo Games are (NP-)Hard	Proc. International Conference on Fun with Algorithms	(CO)(OA)
C362	2014	E. D. Demaine, F. Ma and E. Waingarten	Playing Dominoes is Hard, Except by Yourself	Proc. International Conference on Fun with Algorithms	(CO)(OA)

C363	2014	K. Yamanaka, E. D. Demaine, T. Ito, J. Kawahara, M. Kiyomi, Y. Okamoto, T. Saitoh, A. Suzuki, K. Uchizawa and T. Uno	Swapping Labeled Tokens on Graphs	Proc. International Conference on Fun with Algorithms	(CO)(OA)
C364	2014	E. D. Demaine and M. L. Demaine	Fun with Fonts: Algorithmic Typography	Proc. International Conference on Fun with Algorithms	(CO)(OA)
C365	2014	Z. Abel, E. D. Demaine, M. L. Demaine, J.-I. Itoh, A. Lubiw, C. Nara and J. O'Rourke	Continuously Flattening Polyhedra Using Straight Skeletons	Proc. Symposium on Computational Geometry (SoCG)	(PR)(CO)(OA)
C366	2014	B. An, S. Miyashita, M. T. Tolley, D. M. Aukes, L. Meeker, E. D. Demaine, M. L. Demaine, R. J. Wood and D. Rus	An End-To-End Approach to Making Self-Folded 3D Surface Shapes by Uniform Heating	Proc. International Conference on Robotics and Automation	(PR)(CO)(OA)
C367	2014	A. Becker, E. D. Demaine, S. Fekete and J. McLurkin	Particle Computation: Designing Worlds to Control Robot Swarms with Only Global Signals	Proc. International Conference on Robotics and Automation	(PR)(CO)(OA)
C368	2014	Y. Bachrach, O. Lev, S. Lovett, J. S. Rosenschein and M. Zadimoghaddam	Cooperative weakest link games	Proc. International Conference on Autonomous Agents and Multiagent Systems	(PR)(CO)(OA)
C369	2014	A. Termehchy, A. Vakilian, Y. Chodpathumwan and M. Winslett	Which Concepts are Worth Extracting?	Proc. International Conference on the Management of Data (SIGMOD)	(PR)(CO)(OA)
C370	2014	A. Ene and A. Vakilian	Improved Approximation Algorithms for Degree-bounded Network Design Problems with Node Connectivity Requirements	Proc. Symposium on Theory of Computing (STOC)	(PR)(CO)(OA)
C371	2014	L. Arge, J. Truelsen and J. Yang	Simplifying massive planar subdivisions	Proc. Workshop on Algorithm Engineering and Experiments (ALENEX)	(PR)(OA)

Journals

J1	2007	G. S. Brodal, R. Fagerberg and G. Moruz	On the Adaptiveness of Quicksort	ACM Journal of Experimental Algorithmics, 12	(PR) (CO)
J2	2008	D. Ajwani, T. Friedrich and U. Meyer	An O(n^{2.75}) Algorithm for Incremental Topological Ordering	ACM Transactions on Algorithms, 4(4)	(PR)
J3	2008	M. Stissing, T. Mailund, C. N. S. Pedersen, G. S. Brodal and R. Fagerberg	Computing the All-Pairs Quartet Distance on a set of Evolutionary Trees	Journal of Bioinformatics and Computational Biology, 6(1)	(PR)(CO)
J4	2008	L. Arge, M. de Berg, H. J. Haverkort and K. Yi	The Priority R-Tree: A Practically Efficient and Worst-Case Optimal R-Tree	ACM Transactions on Algorithms, 4(1)	(PR)(CO)
J5	2009	M. Olsen	Nash Stability in Additively Separable Hedonic Games and Community Structures	Theory of Computing Systems, 45(4)	(PR)
J6	2009	M. Abam, M. de Berg, M. Farshi and J. Gudmundsson	Region-Fault Tolerant Geometric Spanners	Discrete & Computational Geometry, 41(4)	(PR)(CO)
J7	2009	M. Abam, M. de Berg and B. Speckmann	Kinetic kd-Trees and Longest-Side kd-Trees	SIAM Journal of Computing, 39(4)	(PR)(CO)

J8	2009	L. Arge, V. Samoladas and K. Yi	Optimal External-Memory Planar Point Enclosure	Algorithmica, 54(3)	(PR)(CO)
J9	2009	L. Arge, M. de Berg and H. Haverkort	Cache-Oblivious R-Trees	Algorithmica, 53(1)	(PR)(CO)
J10	2009	H. Iben, J. O'Brien and E. Demaine	Refolding Planar Polygons	Discrete & Computational Geometry, 41(3)	(PR)(CO)
J11	2009	E. Demaine, M. Hajiaghayi, H. Mahini, A. Sayedi-Roshkhar, S. Oveisgharan and M. Zadimoghaddam	Minimizing Movement	ACM Transactions on Algorithms, 5(3)	(PR)(CO)
J12	2009	E. Demaine, M. Hajiaghayi and K. Kawarabayashi	Algorithmic Graph Minor Theory: Improved Grid Minor Bounds and Wagner's Contraction	Algorithmica, 54(2)	(PR)(CO)
J13	2009	T. Abbott, M. Burr, T. Chan, E. Demaine, M. Demaine, J. Hugg, D. Kane, S. Langerman, J. Nelson, E. Rafalin, K. Seyboth and V. Yeung	Dynamic Ham-Sandwich Cuts in the Plane	Computational Geometry: Theory and Applications, 42(5)	(PR)(CO)
J14	2009	E.D. Demaine, M. Hajiaghayi, H. Mahini and M. Zadimoghaddam	The Price of Anarchy in Network Creation Games	ACM SIGECOM Exchanges, 8(2)	(PR)(CO)
J15	2009	E.D. Demaine, M.L. Demaine, J. Iacono and S. Langerman	Wrapping Spheres with Flat Paper	Computational Geometry: Theory and Applications, 42(8)	(PR)(CO)
J16	2010	P. Indyk and A. Gilbert	Sparse Recovery Using Sparse Matrices	Proceedings of the IEEE June 2010	(PR)(CO)
J17	2010	E.D. Demaine, S.Langerman and E. Price	Confluently Persistent Tries for Efficient Version Control	Algorithmica 57(3)	(PR)(CO)
J18	2010	M.A. Abam, M. de Berg, P. Hachenberger and A. Zarei	Streaming Algorithms for Line Simplification	Discrete & Computational Geometry 43(3)	(PR)(CO)
J19	2010	M.A. Abam, M. de Berg and J. Gudmundsson	A Simple and Efficient Kinetic Spanner	Computational Geometry: Theory and Applications 43(3)	(PR)(CO)
J20	2010	D. Ajwani and T. Friedrich	Average-case Analysis of Incremental Topological Ordering	Discrete Applied Mathematics 158	(PR)(CO)
J21	2010	H. Blunck and J. Vahrenhold	In-Place Algorithms for Computing (Layers of) Maxima	Algorithmica 57(1)	(PR)(CO)
J22	2010	P. Indyk, Z. Syed, C. Stultz, M. Kellis and J. Guttag	Motif discovery in physiological datasets: A methodology for inferring predictive elements	ACM Transactions on Knowledge Discovery in Data 4(1)	(PR)(CO)
J23	2010	E. Hawkes, B. An, N. M. Benbernou, H. Tanaka, S. Kim, E.D. Demaine, D. Rus and R.J. Wood	Programmable matter by folding	Proceedings of the National Academy of Sciences of the United States of America 107(28)	(PR)(CO)
J24	2010	J.L. Bredin, E.D. Demaine, M. Hajiaghayi and D. Rus	Deploying Sensor Networks with Guaranteed Fault Tolerance	IEEE/ACM Transactions on Networking 18(1)	(PR)(CO)
J25	2010	E.D. Demaine, J. Iacono and S. Langerman	Grid Vertex-Unfolding Orthostacks	International Journal of Computational Geometry and Applications 20(3)	(PR)(CO)

J26	2010	E.D. Demaine, S.P. Fekete, G. Rote, N. Schweer, D. Scymura and M. Zelke	Integer Point Sets Minimizing Average Pairwise L_1 Distance: What is the Optimal Shape of a Town?	Computational Geometry: Theory and Applications 44(2)	(PR)(CO)
J27	2010	R. Connelly, E.D. Demaine, M.L. Demaine, S. Fekete, S. Langerman, J. S. B. Mitchell, A. Ribó and G. Rote	Locked and Unlocked Chains of Planar Shapes	Discrete & Computational Geometry 44(2)	(PR)(CO)
J28	2010	P.K. Agarwal, L. Arge and K. Yi	I/O-Efficient Batched Union-Find and Its Applications to Terrain Analysis	ACM Transactions on Algorithms 7(1)	(PR)(CO)
J29	2010	P. Afshani, C. Hamilton and N. Zeh	A General Approach for Cache-Oblivious Range Reporting and Approximate Range Counting	Computational geometry: Theory and applications 43(8)	(PR)(CO)
J30	2010	J. Katajainen and S. S. Rao	A compact data structure for representing a dynamic multiset	Information Processing Letters 110(23)	(PR)(CO)
J31	2010	M.A. Bender, G.S. Brodal, R. Fagerberg, R. Jacob and E. Vicari	Optimal Sparse Matrix Dense Vector Multiplication in the I/O-Model	Theory of Computing Systems 47(4)	(PR)(CO)
J32	2010	C. Demetrescu, B. Escoffier, G. Moruz and A. Ribichini	Adapting Parallel Algorithms to the W-Stream Model, with Applications to Graph Problems	Theoretical Computer Science 411(44-46)	(PR)(CO)
J33	2011	J. E. Moeslund, L. Arge, P. K. Bøcher, B. Nygaard and J.-C. Svenning	Geographically Comprehensive Assessment of Salt-Meadow Vegetation-Elevation Relations Using LiDAR	Wetlands 31(3)	(PR)(CO)
J34	2011	B. Sandel, L. Arge, B. Dalsgaard, R. Davies, K. Gaston, W. Sutherland and J.-C. Svenning	The influence of Late Quaternary climate-change velocity on species endemism	Science 334	(PR)(CO)
J35	2011	B. Dalsgaard, E. Magård, J. Fjeldså, A.M. Martín González, C. Rahbek, J. Olesen, J. Ollerton, R. Alarcón, A.C. Araujo, P.A. Cotton, C. Lara, C.G. Machado, I. Sazima, M. Sazima, A. Timmermann, S. Watts, B. Sandel, W. Sutherland and J.-C. Svenning	Specialization in Plant-Hummingbird Networks Is Associated with Species Richness, Contemporary Precipitation and Quaternary Climate-Change Velocity	PLoS ONE 6	(PR)(CO)
J36	2011	B. Sandel, M. Krupa and J. Corbin	Using plant functional traits to guide restoration: A case study in California coastal grassland	Ecosphere 2	(PR)(CO)
J37	2011	P. Afshani, C. Hamilton and N. Zeh	Cache-Oblivious Range Reporting With Optimal Queries Requires Superlinear Space	Discrete & Computational Geometry 45(4)	(PR)(CO)
J38	2011	G.S. Brodal, B. Gfeller, A.G. Jørgensen and P. Sanders	Towards Optimal Range Medians	Theoretical Computer Science 412(24)	(PR)(CO)

J39	2011	M. Kutz, G.S: Brodal, K. Kaligosi and I. Katriel	Faster Algorithms for Computing Longest Common Increasing Subsequences	Journal of Discrete Algorithms 9(4)	(PR)(CO)
J40	2011	M.A. Bender, G.S. Brodal, R. Fagerberg, D. Ge, S. He, H. Hu, J. Iacono and A. López-Ortiz	The Cost of Cache-Oblivious Searching	Algorithmica 61(2)	
J41	2011	H.L. Chan, T.W. Lam, L.K. Lee and H.F. Ting	Approximating frequent items in asynchronous data stream over a sliding window	Algorithmica 4(3)	(PR) (CO)
J42	2011	C. Daskalakis, R. M. Karp, E. Mossel, S. Riesenfeld and E. Verbin	Sorting and Selection in Posets	SIAM Journal of Computing	(PR)(CO)
J43	2011	M. A. Abam and M. de Berg	Kinetic Spanners in R^d	Discrete & Computational Geometry 45(4)	(PR)(CO)
J44	2011	M. A. Abam, M. de Berg, M. Farshi, J. Gudmundsson and M. H. M. Smid	Geometric Spanners for Weighted Point Sets	Algorithmica 61(1)	(PR)(CO)
J45	2011	M. A. Abam, P. K. Agarwal, M. de Berg and H. Yu	Out-of-Order Event Processing in Kinetic Data Structures	Algorithmica 60(2)	(PR)(CO)
J46	2011	J. Freixas, X. Molinero, M. Olsen and M. J. Serna	On the Complexity of Problems on Simple Games	RAIRO - Operations Research 45(4)	(PR)(CO)
J47	2011	A. Beckman, U. Meyer, P. Sanders and J. Singler	Energy-Efficient Sorting using Solid State Disks	Sustainable Computing: Informatics and Systems 1(2)	(PR)(CO)
J48	2011	E. D. Demaine, S. P. Fekete, G. Rote, N. Schweer, D. Schymura and M. Zelke	Integer Point Sets Minimizing Average Pairwise L1 Distance: What is the Optimal Shape of a Town?	Computational Geometry: Theory and Applications 44(2)	(PR)(CO)
J49	2011	B. An, N. Benbernou, E. D. Demaine and D. Rus	Planning to Fold Multiple Objects from a Single Self-Folding Sheet	Robotica 29(1)	(PR)(CO)
J50	2011	G. Aloupis, S. Collette, M. Damian, E. D. Demaine, R. Flatland, S. Langerman, J. O'Rourke, V. Pinciu, S. Ramaswami, V. Sacristan and S. Wuhrer	Efficient constant-velocity reconfiguration of crystalline robots	Robotica 29(1)	(PR)(CO)
J51	2011	E. D. Demaine, M. L. Demaine, V. Hart, G. N. Price and T. Tachi	(Non)existence of Pleated Folds: How Paper Folds Between Creases	Graphs and Combinatorics 27(3)	(PR)(CO)
J52	2011	E. D. Demaine, M. L. Demaine, V. Hart, J. Iacono, S. Langerman and J. O'Rourke	Continuous Blooming of Convex Polyhedra	Graphs and Combinatorics 27(3)	(PR)(CO)
J53	2011	J. Cardinal, E. D. Demaine, M. L. Demaine, S. Imahori, T. Ito, M. Kiyomi, S. Langerman, R. Uehara and T. Uno	Algorithmic Folding Complexity	Graphs and Combinatorics 27(3)	(PR)(CO)
J54	2011	K. C. Cheung, E. D. Demaine, J. Bachrach and S. Griffith	Programmable Assembly With Universally Foldable Strings (Moteins)	IEEE Transactions on Robotics 27(4)	(PR)(CO)

J55	2011	G. Aloupis, P. Bose, E. D. Demaine, S. Langerman, H. Meijer, M. Overmars and G. T. Toussaint	Computing Signed Permutations of Polygons	International Journal of Computational Geometry and Applications 21(1)	(PR)(CO)
J56	2011	T. Ito, E. D. Demaine, N. J. A. Harvey, C. H. Papadimitriou, M. Sideri, R. Uehara and Y. Uno	On the Complexity of Reconfiguration Problems	Theoretical Computer Science 412(12-14)	(PR)(CO)
J57	2011	H. Ahn, S. Bae, E. D. Demaine, M. L. Demaine, S. Kim, M. Korman, I. Reinbacher and W. Son	Covering points by disjoint boxes with outliers	Computational Geometry: Theory and Applications 44(3)	(PR)(CO)
J58	2011	J. Cardinal, E. D. Demaine, S. Fiorini, G. Joret, S. Langerman, I. Newman and O. Weimann	The Stackelberg Minimum Spanning Tree Game	Algorithmica 59(2)	(PR)(CO)
J59	2011	H. Haverkort and F. van Walderveen	Four-Dimensional Hilbert Curves for R-Trees	Journal of Experimental Algorithmics 16	(PR)(CO)
J60	2012	B. Sandel and J. Corbin	Scale and diversity following manipulation of productivity and disturbance in Californian coastal grasslands.	Journal of Vegetation Science 23	(PR)(CO)
J61	2012	M. Schleuning, J. Fründ, A-M. Klein, S. Abrahamczyk, R. Alarcón, M. Albrecht, G.K.S. Andersson, S. Bazarian, K. Böhning-Gaese, R. Bommarco, B. Dalsgaard, D.M. Dehling, A. Gotlieb, M. Hagen, T. Hickler, A. Holzschuh, C.N. Kaiser-Bunbury, H. Kreft, R.J. Morris, B. Sandel, W.J. Sutherland, J-C. Svenning, T. Tscharntke, S. Watts, C.N. Weiner, M. Werner, N.M. Williams, C. Winqvist, C.F. Dormann and N. Blüthgen	Specialization of Mutualistic Interaction Networks Decreases toward Tropical Latitudes	Current Biology 22	(PR)(CO)
J62	2012	B. Sandel and E. Dangremond	Climate change and the invasion of California by grasses	Global Change Biology 18	(PR)(CO)
J63	2012	P. Afshani, P. K. Agarwal, L. Arge, K. G. Larsen and J. M. Phillips	(Approximate) Uncertain Skylines	Theory of Computing Systems	(PR)(CO)
J64	2012	P. K. Agarwal, L. Arge, H. Kaplan, E. Molad, R. E. Tarjan and K Yi	An Optimal Dynamic Data Structure for Stabbing-Semigroup Queries	SIAM Journal on Computing 41(1)	(PR)(CO)
J65	2012	L. Arge, G.S. Brodal and S. S. Rao	External memory planar point location with logarithmic updates	Algorithmica 63(1-2)	(PR)(CO)
J66	2012	G. S. Brodal, P. Davoodi and S. S. Rao	On Space Efficient Two Dimensional Range Minimum Data Structures	Algorithmica 63(4)	(PR)(CO)
J67	2012	G.S. Brodal, G. Moruz and A. Negoescu	OnlineMin: A Fast Strongly Competitive Randomized Paging Algorithm	Theory of Computing Systems	(PR)

J68	2012	H.L. Chan, T.W. Lam, L.K. Lee and H.F. Ting	Continuous monitoring of distributed data streams over a time-based sliding window	Algorithmica 62(3-4)	(PR)(CO)
J69	2012	G. Cormode, S. Muthukrishnan, K. Yi and Q. Zhang	Continuos sampling from distributed streams	Journal of the ACM 59(2)	(PR)(CO)
J70	2012	U. Meyer and N. Zeh	I/O-efficient shortest path algorithms for undirected graphs with random and bounded edge lengths	ACM Transactions on algorithms 8(3)	(PR)(CO)
J71	2012	F. Gieseke, G. Moruz and J. Vahrenhold	Resilient K-d Trees: K-Means in Space Revisited.	Frontiers of Computer Science 6(2)	(PR)(CO)
J72	2012	E.D. Demaine, M. Hajiaghayi, H. Mahini and M. Zadimoghaddam	The Price of Anarchy in Network Creation Games	ACM Transactions on Algorithms 8(2)	(PR)(CO)
J73	2012	O. Aichholzer, F. Aurenhammer, E.D. Demaine, F. Hurtado, P. Ramos and J. Urrutia	On k-convex polygons	Computational Geometry: Theory and Applications 45(3)	(PR)(CO)
J74	2012	T.G. Abbott, Z. Abel, D. Charlton, E.D. Demaine, M.L. Demaine and S.D. Kominers	Hinged Dissections Exist	Discrete & Computational Geometry 47(1)	(PR)(CO)
J75	2012	M. Greve, A.M. Lykke, C.W. Fagg, J. Bogaert, I. Friis, R. Marchant, A.R. Marshall, J. Ndayishimiye, B. Sandel, C. Sandom, M. Schmidt, J.R. Timberlake, J.J. Wieringa, G. Zizka and J.-C. Svenning	Continental-scale variability in browser diversity is a major driver of diversity patterns in acacias across Africa	Journal of Ecology 100	(PR)(CO)
J76	2012	R. Gupta, P. Indyk, E. Price and Y. Rachlin	Compressive Sensing with Local Geometric Features	International Journal of Computational Geometry and Applications 22(4)	(PR)(CO)
J77	2012	D. Charlton, E.D. Demaine, M.L. Demaine, V. Dujmovic, P. Morin and R. Uehara	Ghost Chimneys	International Journal of Computational Geometry and Applications 47(1)	(PR)(CO)
J78	2012	E.D. Demaine, M.L. Demaine and R. Uehara	Any Monotone Boolean Function Can Be Realized by Interlocked Polygons	Algorithms 5(1)	(PR)(CO)
J79	2012	E.D. Demaine and M. Zadimoghaddam	Constant Price of Anarchy in Network-Creation Games via Public-Service Advertising	Internet Mathematics 8(1-2)	(PR)
J80	2012	L. Moll, S. Tazari and M. Thurley	Computing hypergraph width measures exactly	Information Processing Letters 112(6)	(PR)(CO)
J81	2012	S. Tazari	Faster approximation schemes and parameterized algorithms on (odd-) H-minor-free graphs	Theoretical Computer Science 417	(PR)
J82	2012	D. Wu, G. Cong and C. S. Jensen	A Framework for Efficient Spatial Web Object Retrieval	VLDB Journal 21(6)	(PR)(CO)
J83	2012	D. Wu, M. L. Yiu, G. Cong and C. S. Jensen	Joint Top-K Spatial Keyword Query Processing	IEEE Transaction on Knowledge and Data Engineering 24(10)	(PR)(CO)

J84	2012	X. Cao, G. Cong, B. Cui, C. S. Jensen and Q. Yuan	Approaches to Exploring Category Information for Question Retrieval in Community Question Answer Archives	ACM Transactions on Information Systems 30(2)	(PR)(CO)
J85	2012	M. Yiu, L., I. Assent, C. S. Jensen and P. Kalnis	Outsourced Similarity Search on Metric Data Assets	IEEE Transactions on Knowledge and Data Engineering 24(2)	(PR)(CO)
J86	2012	X. Cao, G. Cong, C. S. Jensen, J. J. Ng, B. C. Ooi, N.-T. Phan and and D. Wu	SWORS: A System for the Efficient Retrieval of Relevant Spatial Web Objects	Proceedings of the VLDB Endowment 5(12)	(PR)(CO)
J87	2013	J.E. Moeslund, L. Arge, P.K. Bøcher, T. Dalgaard, R. Ejrnæs, M.V. Odgaard and J.-C. Svenning	Topographically controlled soil moisture drives plant diversity patterns within grasslands	Biodiversity and Conservation 22(10)	(PR)(CO)(OA)
J88	2013	J.E. Moeslund, L. Arge, P.K. Bøcher, T. Dalgaard and J.-C. Svenning	Topography as a driver of local terrestrial vascular plant diversity patterns	Nordic Journal of Botany 31(2)	(PR)(CO)(OA)
J89	2013	J.E. Moeslund, L. Arge, P.K. Bøcher, T. Dalgaard, M.V. Odgaard, B. Nygaard and J.-C. Svenning	Topographically controlled soil moisture is the primary driver of local vegetation patterns across a lowland region	Ecosphere 4(7)	(PR)(CO)(OA)
J90	2013	C. Alexander, J.E. Moeslund, P.K. Bøcher, L. Arge and J.-C. Svenning	Airborne laser scanner (LiDAR) proxies for understory light conditions	Remote Sensing of Environment 134	(PR)(CO)(OA)
J91	2013	C. Sandom, L. Dalby, C. Fløjgaard, W.D. Kissling, J. Lenoir, B. Sandel, K. Trøjelsgaard, R. Ernæs and J.-C. Svenning	Mammal predator and prey species richness are strongly linked at macroscales	Ecology 94(5)	(PR)(CO)(OA)
J92	2013	B. Dalsgaard, K. Trøjelsgaard, A.M. Martin González, D. Nogués-Bravo, J. Ollerton, T. Petanidou, B. Sandel, M. Schleuning, Z. Wang, C. Rahbek, W.J. Sutherland, J.-C. Svenning and J.M. Olesen	Historical climate-change influences modularity of pollination networks	Ecography 36(12)	(PR)(CO)(OA)
J93	2013	J.-C. Svenning and B. Sandel	Disequilibrium vegetation dynamics under future climate change	American Journal of Botany	(PR)(OA)
J94	2013	A.B. Smith, B. Sandel, N.J.B. Kraft and S. Carey	Characterizing scale-dependent community assembly using the functional-diversity-area relationship	Ecology 94(11)	(PR)(CO)(OA)
J95	2013	B. Sandel and J.-C. Svenning	Human impacts drive a global topographic signature in tree cover	Nature Communications 4	(PR)(OA)
J96	2013	M. Olsen and M. Revsbæk	Alliance Partitions and Bisection Width for Planar Graphs	Journal of Graph Algorithms and Applications 17(6)	(PR)(OA)
J97	2013	P.K. Agarwal, L. Arge, S. Govindarajan, J. Yang and K. Yi	Efficient external memory structures for range-aggregate queries	Computational Geometry: Theory and Application 46(3)	(PR)(CO)(OA)

J98	2013	A. Sand, G.S. Brodal, R. Fagerberg, C.N.S. Pedersen and T. Mailund	A practical O(n log n) time algorithm for computing the triplet distance on binary trees	BMC Bioinformatics 14	(PR)(CO)(OA)
J99	2013	G.S. Brodal, M. Greve, V. Pandey and S.S. Rao	Integer Representations towards Efficient Counting in the Bit Probe Model	Journal of Discrete Algorithms	(PR)(CO)(OA)
J100	2013	A. Sand, M.K. Holt, J. Johansen, R. Fagerberg, G.S. Brodal, C.N.S. Pedersen and T. Mailund	Algorithms for Computing the Triplet and Quartet Distances for Binary and General Trees	MDPI Biology - Special Issue on Developments in Bioinformatic Algorithms 2(4)	(PR)(CO)(OA)
J101	2013	K. Yi and Q. Zhang	Optimal Tracking of Distributed Heavy Hitters and Quantiles	Algorithmica 65(1)	(PR)(CO)(OA)
J102	2013	P.K. Agarwal, G. Cormode, Z. Huang, J.M. Phillips, Z. Wei and K. Yi.	Mergeable Summaries	ACM Transactions on Database Systems 38(4)	(PR)(CO)(OA)
J103	2013	R. Pagh, Z. Wei, K. Yi and Q. Zhang	Cache-Oblivious Hashing	Algorithmica	(PR)(CO)(OA)
J104	2013	U. Meyer and V. Weichert	Algorithm Engineering für moderne Hardware	Informatik-Spektrum	(PR)(OA)
J105	2013	X. Li, V. Ceikute, C.S. Jensen and K.-L. Tan	Effective Online Group Discovery in Trajectory Databases	IEEE Transactions on Knowledge and Data Engineering 25(12)	(PR)(CO)(OA)
J106	2013	M. Kaul, R.C.-W. Wong, B. Yang and C.S. Jensen	Finding Shortest Paths on Terrains by Killing Two Birds with One Stone	Proceedings of the VLDB Endowment 7(1)	(PR)(CO)(OA)
J107	2013	K. S. Bøgh, A. Skovsgaard and C.S. Jensen	GroupFinder: A New Approach to Top-K Point-of-Interest Group Retrieval	Proceedings of the VLDB Endowment 6(12)	(PR)(CO)(OA)
J108	2013	B. Yang, C. Guo and C.S. Jensen	Travel Cost Inference from Sparse, Spatio-Temporally Correlated Time Series Using Markov Models	Proceedings of the VLDB Endowment 6(9)	(PR)(CO)(OA)
J109	2013	D. Wu, M.L. Yiu and C.S. Jensen	Moving Spatial Keyword Queries: Formulation, Methods, and Analysis	ACM Transactions on Database Systems 38(1)	(PR)(CO)(OA)
J110	2013	L. Chen, G. Cong, C.S. Jensen and D. Wu	Spatial Keyword Query Processing: An Experimental Evaluation	Proceedings of the VLDB Endowment 6(3)	(PR)(CO)(OA)
J111	2013	K. Tzoumas, A. Deshpande and C.S. Jensen	Efficiently Adapting Graphical Models for Cardinality Estimation	The VLDB Journal 22(1)	(PR)(CO)(OA)
J112	2013	B. Ballinger, N. Benbernou, P. Bose, M. Damian, E.D. Demaine, V. Dujmovic, R. Flatland, F. Hurtado, J. Iacono, A. Lubiw, P. Morin, V. Sacristan, D. Souvaine and R. Uehara	Coverage with k-Transmitters in the Presence of Obstacles	Journal of Combinatorial Optimization 25(2)	(PR)(CO)(OA)
J113	2013	S. Butler, E.D. Demaine, R. Graham and T. Tachi	Constructing Points through Folding and Intersection	International Journal of Computational Geometry and Applications 23(1)	(PR)(CO)(OA)

J114	2013	G. Barequet, N. Benbernou, D. Charlton, E.D. Demaine, M.L. Demaine, M. Ishaque, A. Lubiw, A. Schulz, D.L. Souvaine, G.T. Toussaint and A. Winslow	Bounded-Degree Polyhedronization of Point Sets	Computational Geometry: Theory and Applications 46(2)	(PR)(CO)(OA)
J115	2013	J. Cardinal, E.D. Demaine, S. Fiorini, G. Joret, I. Newman and O. Weimann	The Stackelberg Minimum Spanning Tree Game on Planar and Bounded-Treewidth Graphs	Journal of Combinatorial Optimization 25(1)	(PR)(CO)(OA)
J116	2013	G. Aloupis, J. Cardinal, S. Collette, E.D. Demaine, M.L. Demaine, M. Dulieu, R. Fabila-Monroy, V. Hart, F. Hurtado, S. Langerman, M. Saumell, C. Seara and P. Taslakian	Non-crossing matchings of points with geometric objects	Computational Geometry: Theory and Applications 46(1)	(PR)(CO)(OA)
J117	2013	N. Alon, E.D. Demaine, M. Hajiaghayi and T. Leighton	Basic Network Creation Games	SIAM Journal on Discrete Mathematics 27(2)	(PR)(CO)(OA)
J118	2013	E.D. Demaine, S. Eisenstat, M. Ishaque and A. Winslow	One-Dimensional Staged Self-Assembly	Natural Computing 12(2)	(PR)(CO)(OA)
J119	2013	E.D. Demaine, M.L. Demaine, J. Itoh, A. Lubiw, C. Nara and J. O'Rourke	Refold Rigidity of Convex Polyhedra	Computational Geometry: Theory and Applications 46(8)	(PR)(CO)(OA)
J120	2013	G. Aloupis, N. Benbernou, M. Damian, E.D. Demaine, R. Flatland, J. Iacono and S. Wuhrer	Efficient Reconfiguration of Lattice-Based Modular Robots	Computational Geometry: Theory and Applications 46(8)	(PR)(CO)(OA)
J121	2013	Z. Abel, E.D. Demaine, M.L. Demaine, S. Eisenstat, J. Lynch and T.B. Schardl	Finding a Hamiltonian Path in a Cube with Specified Turns is Hard	Journal of Information Processing 21(3)	(PR)(CO)(OA)
J122	2013	E.D. Demaine, M. Ghodsi, M. Hajiaghayi, A.S. Sayedi-Roshkhar and M. Zadimoghaddam	Scheduling to Minimize Gaps and Power Consumption	Journal of Scheduling 16(2	(PR)(CO)(OA)
J123	2013	Z. Abel, E.D. Demaine, M.L. Demaine, S. Eisenstat, J. Lynch, T.B. Schardl and I. Shapiro-Ellowitz	Folding Equilateral Plane Graphs	International Journal of Computational Geometry and Applications 23(2)	(PR)(CO)(OA)
J124	2013	M. Bateni, M. Hajiaghayi and M. Zadimoghaddam	Submodular secretary problem and extensions	ACM Transactions on Algorithms 9(4)	(PR)(CO)(OA)
J125	2013	A. Elmasry, A. Farzan and J. Iacono	On the hierarchy of distribution-sensitive properties for data structures	Acta Informatica 50(4)	(PR)(CO)(OA)
J126	2013	P. Afshani	Improved pointer machine and I/O lower bounds for simplex range reporting and related problems	International Journal of Computational Geometry and Applications 23 (4-5)	(PR)(OA)
J127	2014	C. Alexander, P.K. Bøcher, L. Arge and J.-C. Svenning	Regional-scale mapping of tree cover, height and main phenological tree types using airborne laser scanning data	Remote Sensing of Environment 147	(PR)(CO)(OA)

J128	2014	M. Schleuning, L. Ingmann, R. Strauß, S. Fritz, B. Dalsgaard, D.M. Dehling, M. Plein, F.V. Saavedra, B. Sandel, J.-C. Svenning, K. Böhning-Gaese and C.F. Cormann	Ecological, historical and evolutionary determinants of modularity in weighted seed-dispersal networks	Ecology Letters 17(4)	(PR)(CO)(OA)
J129	2014	G. Feng, X.C. Mi, P.K. Bøcher, L.F. Mao, B. Sandel, M. Cao, W.H. Ye, Z.Q. Hao, H.D. Gong, Y.T. Zhang, X.H. Zhao, G.Z. Jin, K.P. Ma and J.-C. Svenning	Relative roles of local disturbance, current climate and palaeoclimate in determining phylogenetic and functional diversity in Chinese forests	Biogeosciences 11	(PR)(CO)(OA)
J130	2014	R. Ø. Pedersen, B. Sandel and J.-C. Svenning	Macroecological evidence for competitive regional-scale interactions between the two major clades of mammal carnivores (Feliformia and Caniformia)	PLoS ONE 9(6)	(PR)(CO)(OA)
J131	2014	Dalsgaard, B., D.W. Carstensen, J. Fjeldså, P.K. Maruyama, C. Rahbek, B. Sandel, J. Sonne, J.-C. Svenning, Z. Wang and W.J. Sutherland	Does geography, current climate or historical climate determine bird species richness, endemism and island network roles in Wallacea and the West Indies?	Ecology and Evolution 4(20)	(PR)(CO)(OA)
J132	2014	J.Y. Barnagaud, W.D. Kissling, B. Sandel, W. Eiserhardt, H. Balslev, C.H. Sekercioglu, B. Enquist, C. Tsirogiannis and J.-C. Svenning	Ecological traits influence the phylogenetic structure of bird species co-occurrences worldwide	Ecology Letters 17(7)	(PR)(CO)(OA)
J133	2014	T. Amano, B. Sandel, H. Eager, E. Bulteau, J.-C. Svenning, B. Dalsgaard, C. Rahbek, R.G. Davies and W.J. Sutherland	Global distribution and drivers of language extinction risk	Proceedings of the Royal Academy of Science B: Biological Sciences 281(1793)	(PR)(CO)(OA)
J134	2014	C. Lamanna, B. Blonder, C. Violle, N.J.B. Kraft, B. Sandel, I. Simova, J. Donoghue, J.-C. Svenning, B. McGill, B. Boyle, S. Dolins, P.M. Jørgensen, A. Marcuse-Kubitza, N. Morueta-Holme, R.K. Peet, W.H. Piel, J. Regetz, M. Schildhauer, N. Spencer, B. Theirs, S.K. Wiser and B.J. Enquist	The latitudinal species richness gradient does not arise from a larger functional trait space in the tropics	Proceedings of the National Academy of Sciences 111(38)	(PR)(CO)(OA)
J135	2014	C. Tsirogiannis and B. Sandel	Computing the Skewness of the Phylogenetic Mean Pairwise Distance in Linear Time	Algorithms for Molecular Biology 9(15)	(PR)(OA)
J136	2014	D. Sidlauskas, S. Saltenis and C.S. Jensen	Processing of Extreme Moving-Object Update and Query Workloads in Main Memory	The VLDB Journal 23(5)	(PR)(CO)(OA)
J137	2014	T.M. Chan, S. Durocher, K.G. Larsen, J. Morrison and B.T. Wilkinson	Linear-Space Data Structures for Range Mode Query in Arrays	Theory of Computing Systems 55(4)	(PR)(CO)(OA)

J138	2014	K.G. Larsen	On Range Searching in the Group Model and Combinatorial Discrepancy	SIAM Journal on Computing 43(2)	(PR)(OA)
J139	2014	G. Cormode and H. Jowhari	A second look at counting triangles in graph streams	Theoretical Computer Science 552	(PR)(CO)(OA)
J140	2014	G. S. Brodal, A. C. Kaporis, A. N. Papadopoulos, S. Sioutas, K. Tsakalidis and K. Tsichlas	Dynamic 3-sided planar range queries with expected doubly-logarithmic time	Theoretical Computer Science 526	(PR)(CO)(OA)
J141	2014	A. Sand, M.K. Holt, J. Johansen, G.S. Brodal, T. Mailund and C.N.S. Pedersen	tqDist: A Library for Computing the Quartet and Triplet Distances Between Binary or General Trees	Bioinformatics 30(14)	(PR)(CO)(OA)
J142	2014	K. Yi, L. Wang and Z. Wei	Indexing for Summary Queries: Theory and Practice	ACM Transactions on Database Systems	(PR)(CO)(OA)
J143	2014	M. Abam, S. Daneshpajouh, L. Deleuran, S. Ehsani and M. Ghodsi	Computing Homotopic Line Simplification in a Plane	Computational Geometry: Theory and Applications 47(7)	(PR)(CO)
J144	2014	S. Shang, R. Ding, K. Zheng, C.S. Jensen, P. Kalnis and X. Zhou	Personalized Trajectory Matching in Spatial Networks	The VLDB Journal 23(3)	(PR)(CO)
J145	2014	B. Yang, B., M. Kaul and C.S. Jensen	Using Incomplete Information for Complete Weight Annotation of Road Networks	IEEE Transactions on Knowledge and Data Engineering 26(5)	(PR)(CO)(OA)
J146	2014	G. Moruz, A. Negoescu, C.Neumann and V. Weichert	Engineering Efficient Paging Algorithms	Journal of Experimental Algorithmics 19	(PR)(CO)(OA)
J147	2014	E. D. Demaine, M. Hajiaghayi and D. Marx	Minimizing Movement: Fixed-Parameter Tractability	ACM Transactions on Algorithms 11(2)	(PR)(CO)(OA)
J148	2014	E. D. Demaine, M. L. Demaine, R. Uehara, T. Uno and Y. Uno	UNO is hard, even for a single player	Theoretical Computer Science 521	(PR)(CO)(OA)
J149	2014	M. Damian, E. D. Demaine and R. Flatland	Unfolding Orthogonal Polyhedra with Quadratic Refinement: The Delta-Unfolding Algorithm	Graphs and Combinatorics 30(1)	(PR)(CO)(OA)
J150	2014	G. Borradaile, E. D. Demaine and S.Tazari	Polynomial-Time Approximation Schemes for Subset-Connectivity Problems in Bounded-Genus Graphs	Algorithmica 68(2)	(PR)(CO)(OA)
J151	2014	G. S. Brodal, M. Greve, V. Pandey and S. S. Satti	Integer representations towards efficient counting in the bit probe model	Journal of Discrete Algorithms 26	(PR)(CO)(OA)
J152	2014	Sandom, C., S. Faurby, B. Sandel, J.-C. Svenning	Global Late Quaternary megafauna extinctions linked to humans, not climate change.	Proceedings of the Royal Society B: Biological Sciences 281(1787)	(PR)(CO)(OA)

J153	2014	Kissling, D., L. Dalby, C. Fløjgaard, J. Lenoir, B. Sandel, C. Sandom, K. Trøjelsgaard, J.-C. Svenning.	Establishing macroecological trait datasets: digitalization, extrapolation and validation of diet preferences in terrestrial mammals worldwide	Ecology and Evolution 4(14)	(PR)(CO)(OA)
J154	2014	H.-K. Ahn, H.-S. Kim, S.-S. Kim and W. Son	Computing k Centers over Streaming Data for Small k	International Journal of Computational Geometry and Applications 24(2)	(PR)(CO)(OA)
J155	2014	T. Jurkiewicz and K. Mehlhorn	On a Model of Virtual Address Translation	Journal of Experimental Algorithmics 19	(PR)(CO)(OA)
J156	2014	A. C. Gilbert, P. Indyk, M. Iwen and L. Schmidt	Recent Developments in the Sparse Fourier Transform: A compressed Fourier transform for big data	Signal Processing Magazine 31(5)	(PR)(CO)(OA)
J157	2014	S. Felton, M. Tolley, E. Demaine, D. Rus and R. Wood	A method for building self-folding machines	Science 345(6197)	(PR)(CO)(OA)
J158	2014	E. D. Demaine, M. L. Demaine, Y. N. Minsky, J. S. B. Mitchell, R. L. Rivest and M. Patrascu	Picture-Hanging Puzzles	Theory of Computing Systems 54(4)	(PR)(CO)(OA)
J159	2014	O. Aichholzer, G. Aloupis, E. D. Demaine, M. L. Demaine, S. P. Fekete, M. Hoffmann, A. Lubiw, J. Snoeyink and A. Winslow	Covering Folded Shapes	Journal of Computational Geometry 5(1)	(PR)(CO)(OA)
J160	2014	E. D. Demaine, Y. Okamoto, R. Uehara and Y. Uno	Computational complexity and an integer programming model of Shakashaka	IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences 97-A(6)	(PR)(CO)(OA)
J161	2014	Z. Abel, E. D. Demaine, M. L. Demaine, T. Horiyama and R. Uehara	Computational Complexity of Piano-Hinged Dissections	IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences 97-A(6)	(PR)(CO)(OA)
J162	2014	T. Ito and E. D. Demaine	Approximability of the Subset Sum Reconfiguration Problem	Journal of Combinatorial Optimization 28(3)	(PR)(CO)(OA)

Thesis

T1	2007	I. Brudaru	Heuristics for Average Diameter Approximation with External Memory Algorithms	MPI	MS Thesis
T2	2007	G. Moruz	Hardware-Aware Algorithms and Data Structures	AU	PhD Thesis
T3	2008	M. Patrascu	Lower Bound Techniques for Data Structures	MIT	PhD Thesis
T4	2008	A. Sidiropoulos	Computational metric embeddings	MIT	PhD Thesis
T5	2008	D. Ajwani	Traversing large graphs in realistic settings	MPI	PhD Thesis

T6	2008	K. Do Ba	Testing closeness of distributions under the EMD metric	MIT	MS Thesis
T7	2008	K. Lai	Complexity of Union-Split-Find Problems	MIT	MS Thesis
T8	2008	J. M. Larsen og M. Nielsen	En undersøgelse af algoritmer til løsning af generalized movers problem i 3D	AU	MS Thesis
T9	2008	C. Andersen	An optimal minimum spanning tree algorithm	AU	MS Thesis
T10	2008	M. Revsbæk	I/O-efficient Algorithms for Batched Union-Find with Dynamic Set Properties and its Applications to Hydrological Conditioning	AU	MS Thesis
T11	2008	A. H. Jensen	I/O-efficient Processing of LIDAR Data	AU	MS Thesis
T12	2009	M. Olsen	Link Building	AU	PhD Thesis
T13	2009	T. Mølhave	Handling Massive Terrains and Unreliable Memory, AU	AU	PhD Thesis
T14	2009	H. B. Kirk	Searching with Dynamic Optimality: In Theory and Practice	AU	MS Thesis
T15	2009	K. Piatkowski	Implementering og udvikling af maksimum delsum algoritmer	AU	MS Thesis
T16	2009	O. Weimann	Accelerating Dynamic Programming	MIT	PhD Thesis
T17	2009	V. Weichert	Radiation parameterization of the climate model COSMO/CLM in CUDA	FRA	MS Thesis
T18	2009	R. Berinde	Advances in Sparse Signal Recovery Methods	MIT	MS Thesis
T19	2009	P. Davoodi	Two Dimensional Range Minimum Queries	AU	MS Thesis
T20	2009	K. Tsakalidis	External Memory 3-sided Planar Range Reporting and Persistent B-Trees	AU	MS Thesis
T21	2009	L. Deleuran	Polygonal Line Simplification	AU	MS Thesis
T22	2010	A. G. Jørgensen	Data Structures: Sequence Problems, Range Queries, and Fault Tolerance	AU	PhD Thesis
T23	2010	J. Moeslund	Fine-resolution geospatial modelling of contemporary and potential future plant diversity in Denmark	AU	MS Thesis
T24	2010	J. Truelsen	Working Set Implicit Dictionaries and Range Mode Lower Bounds and Approximations	AU	MS Thesis
T25	2010	M. Greve	Online Sorted Range Reporting and Approximating the Mode	AU	MS Thesis
T26	2010	D. Kjær	Range Media Algorithms	AU	MS Thesis

T27	2010	J. Suhr Christensen	Experimental Study of Kinetic Geometric t-Spanner Algorithms	AU	MS Thesis
T28	2011	K. G. Larsen	Optimal Orthogonal Range Reporting in 3-d	AU	MS Thesis
T29	2011	C. Kejlberg-Rasmussen	On Implicit Dictionaries with the Working-Set Property and Catenable Priority Queues with Attrition	AU	MS Thesis
T30	2011	P. Davoodi	Data Structures: Range Queries and Space Efficiency	AU	PhD Thesis
T31	2011	K. Tsakalidis	Dynamic Data Structures: Orthogonal Range Queries and Update Efficiency	AU	PhD Thesis
T32	2011	J. Nelson	Sketching and Streaming High-Dimensional Vectors	MIT	PhD Thesis
T33	2012	J. E. Moeslund	The role of topography in determining local plant diversity patterns across Denmark	AU	PhD Thesis
T34	2012	F. van Walderveen	External Memory Graph Algorithms and Range Searching Data Structures	AU	PhD Thesis
T35	2012	L. Deleuran	Homotopic Polygonal Line Simplification	AU	PhD Thesis
T36	2012	C. Neumann	Practical Paging Algorithms	FRA	MS Thesis
T37	2012	D. Veith	Implementation of an External-Memory Diameter Approximation	FRA	MS Thesis
T38	2012	M. Sturmann	k-Dimensionale Orthogonale Bereichsanfragen für GPUs auf großen Instanzen	FRA	MS Thesis
T39	2012	P. Wollstadt	A Graph Algorithmic Approach to Separate Direct from Indirect Neural Interactions by Identifying Alternative Paths with Similar Weights	FRA	BS Thesis
T40	2012	E. Deza	An efficient implementation of the optimal paging algorithm	FRA	BS Thesis
T41	2012	T. Morgan	Map Folding	MIT	MS Thesis
T42	2012	R. Gupta	A Compressive Sensing Algorithm for Attitude Determination	MIT	MS Thesis
T43	2012	A. Koefoed-Hansen	Representations for Path Finding in Planar Environments	AU	MS Thesis
T44	2013	K.G. Larsen	Models and Techniques for Proving Data Structure Lower Bounds	AU	PhD Thesis (OA)
T45	2013	C. Kejlberg-Rasmussen	Dynamic Data Structures: The Interplay of Invariants and Algorithm	AU	PhD Thesis (OA)

T46	2013	J. Fogh	Engineering a Fast Fourier Transform	AU	MS Thesis (OA)
T47	2013	M. Holt and J. Johansen	Computing Triplet and Quartet Distances	AU	MS Thesis (OA)
T48	2013	J. Schou	Range Minimum Data Structures	AU	MS Thesis
T49	2013	A. Negoescu	Design of Competitive Paging Algorithms with Good Behaviour in Practice	FRA	PhD Thesis (OA)
T50	2013	D. Pick	Effiziente Algorithmen auf Eingebetteten Plattformen	FRA	MS Thesis
T51	2013	T. Timmer	I/O-effiziente Durchmesser-Approximierung auf gewichteten Graphen	FRA	MS Thesis
T52	2013	D. Frascaria	Improved results for (h,k)-paging	FRA	MS Thesis
T53	2013	S. Försch	An efficient implementation of PARTITION2	FRA	MS Thesis
T54	2013	A. Kehlenbach	Interaktive Stadtplanungsmaßnahmen auf der GPU	FRA	MS Thesis
T55	2013	S. Bechtold	Shortest Paths with Multiple Constraints in Flight Networks	FRA	MS Thesis
T56	2013	V. Ceikute	Inferring Groups of Objects, Preferred Routes, and Facility Locations from Trajectories	AU	PhD Thesis (OA)
T57	2013	E. Price	Sparse Recovery and Fourier Sampling	MIT	PhD Thesis
T58	2013	L. Schmidt	Model-Based Compressive Sensing with Earth Mover's Distance Constraints	MIT	MS Thesis
T59	2013	S. Mahabadi	Approximate Nearest Neighbor And Its Many Variants	MIT	MS Thesis
T60	2013	F. Mogensen	Locating Points of Interest Based on Geo-tagged Tweets	AU	MS Thesis
T61	2013	C.W. Schmidt	Indicering af spatio-tekstuelle data – et empirisk studie	AU	MS Thesis
T62	2014	J.M. Friis and S.B. Olesen	An Experimental Comparison of Max Flow Algorithms	AU	MS Thesis (OA)
T63	2014	D. W. Petersen	Orthogonal Range Skyline Counting Queries	AU	MS Thesis (OA)
T64	2014	J. Kunert	Hashing and Random Graphs	AU	MS Thesis (OA)
T65	2014	B. Mortensen	Algorithms for Computing Convex Hulls Using Linear Programming	AU	MS Thesis (OA)
T66	2014	M. Revsbæk	Handling Massive and Dynamic Terrain Data	AU	MS Thesis (OA)
T67	2014	A. Skovsgaard	Indexing, Query Processing, and Clustering of Spatio-Temporal Text Objects	AU	PhD Thesis

T68	2014	Samir van de Sand	Eine adaptive Tabusuche für das Vehicle Routing Problem mit Zeitfenstern	FRA	MS Thesis
T69	2014	Morteza Zadimoghaddam	Online Allocation Algorithms with Applications in Computational Advertising	MIT	PhD Thesis

Other

O1	2008	E. Demaine, B. Gassend, J. O'Rourke, and G. T. Toussaint	All Polygons Flip Finitely ... Right?	In "Surveys on Discrete and Computational Geometry: Twenty Years Later", Contemporary Mathematics 453	(CO)
O2	2008	A. Andoni and P. Indyk	Near-Optimal Hashing Algorithms for Approximate Nearest Neighbor in High Dimensions	Communications of the ACM, 51(1)	(CO)
O3	2008	K. Mehlhorn and P. Sanders	Algorithms and Data Structures: The Basic Toolbox	Springer Verlag	(CO)
O4	2009	D. Ajwani and U. Meyer	Design and Engineering of External Memory Traversal Algorithms for general graphs	In Algorithmic of Large and Complex Networks, Springer Verlag	(PR)
O5	2009	L. Arge and N. Zeh	External-memory Algorithms and Data Structures	In Algorithms and Theory of Computation Handbook, CRC Press	(PR)(CO)
O6	2009	R. Hearn and E. Demaine	Games, Puzzles, and Computation	A.K. Peters	(CO)
O7	2010	D. Ajwani and H. Meyerhenke	Realistic Computer Models	In Algorithm Engineering. Bridging the Gap Between Algorithm Theory and Practice, Springer Verlag	(CO)
O8	2011	H. Balslev, L. Arge, J.-C. Svenning, M. H. Schierup and C. S. Jensen	Abstracts of Royal Danish Academy of Sciences Symposium on Biodiversity in the Silicon Age		(CO)
O9	2012	L. Arge and K. G. Larsen	I/O-Efficient Spatial Data Structures for Range Queries	Invited abstract in SIGSPATIAL Special, July, 2012.	
O10	2012	B. Sandel, L. Arge, B. Dalsgaard, R.G. Davies, K.J. Gaston, W.J. Sutherland and J.-C. Svenning	Response - Global endemism needs spatial integration	Science 335	(CO)
O11	2014	U. Meyer and N. Zeh	I/O-model	Encyclopedia of Algorithms, second edition	(CO)
O12	2014	U. Meyer and N. Zeh	List-Ranking	Encyclopedia of Algorithms, second edition	(CO)

Personel		Hiring	Finansing (fraction of year) *)			Forign	For PhD and	For PhD:	Gender
Name	**Position**	**period in 2012 **)**	**Foundation**	**AU**	**Other finan-sing ***)**	**employee**	**Post Doc: Previous education**	**Finished degree**	
Centerleder									
Lars Arge (AU)	Professor	all period	0,1	0,9					M
Faculty									M
Gerth S. Brodal (AU)	Associate Professor	all period		1					M
Peyman Afshani (AU)	Assistant Professor	all period		1		x			M
Kasper G. Larsen (AU)	Assistant Professor	01.05-	0,7						M
Piotr Indyk (MIT)	Professor	all period	0,1		0,1	x			M
Erik Demaine (MIT)	Professor	all period	0,1		0,1	x			M
Kurt Mehlhorn (MPI)	Professor	all period			0,1	x			M
Ulrich Meyer (FRA)	Professor	all period			0,2	x			M
Brody Sandel (AU)	Assistant Professor	all period		0,5	0,5	x	PhD		M
Zhewei Wei (AU)	Post Doc	-31.08	0,7			x	PhD		M
Darius Sidlauskas (AU)	Post Doc	-20.08	0,7			x	PhD		M
Allan G. Jørgensen (AU)	Post Doc	all period	0,3		0,7		PhD		M
Zenfeng Huang (AU)	Post Doc	all period	1			x	PhD		M
Constantinos Tsirogiannis (AU)	Post Doc	01.09-			0,3	x	PhD		M
Wanbin Son (AU)	Post Doc	01.03-	0,8			x	PhD		M
Guests									
Seth Pettie	Associate Professor	-30.06			0,5	x			M
Jeremy Barbay	Associate Professor	10.01-01.02			0,1	x			M
Suresh Venkatasubramanian	Associate Professor	12.05-15.08	0,3			x			M
Michael Elkin	Assistant Professor	02.02-01.03			0,1	x			M
Nodari Sitchinava	Assistant Professor	21.06-17.07			0,1	x			M
Tsvi Kopelowitz	Post Doc	16.02-06.03			0,1	x			M
Hsin-Hao Su	PhD student	-30.06			0,5	x	MS		M
Tehnical staff									
Mathias Rav	Programmer	-31.07	0,6						M
Sven Svendsen	Programmer	all period	1						M
Administrative staff									
Trine Holmgaard	Center manager	all period	0,5	0,5					F
Ellen Kjemtrup	Accountant	all period		0,5					F
Matie Bach Søgaard	Student assistant	-15.05		0,4					F
Katrine Ø. Rasmussen	Student assistant	01.06-		0,6					F
Ph.d.-studerende									
Morten Revsbæk (AU)	PhD student	-14.11			0,9		MS	x	M
Jacob Truelsen (AU)	PhD student	all period		1			BS + 1 year		M
Jesper Asbjørn Sindahl Nielsen (AU)	PhD student	all period			1		BS + 1/2 year		M
Anders Skovsgaard (AU)	PhD student	-31.07	0,6	0,6			MS	x	M
Jungwoo Yang (AU)	PhD student	all period	1			x	MS		M
Bryan Wilkinson (AU)	PhD student	all period	0,9	0,1		x	MS		M
Sarfraz Raza (AU)	PhD student	all period			1	x	MS		M
Mathias Rav (AU)	PhD student	01.08-		0,4			BS+0.5 year		M
Edvin Berglin (AU)	PhD student	01.04-	0,8			x	MS		M
Ingo van Duijn (AU)	PhD student	01.06-	0,6			x	MS		M
Konstantinos Mampentzidis (AU)	PhD student	01.08-		0,4		x	BS + 1 year		M
Volker Weichert (MPI/FRA)	PhD student	all period			1	x	MS		M
David Veith (MPI/FRA)	PhD student	all period	1			x	MS		M
Morteza Zadimoghaddam (MIT)	PhD student	-31.01			0,1	x	BS	x	M
Ludwig Schmidt (MIT)	PhD student	all period			1	x	BS		M
Haitham Hassanieh (MIT)	PhD student	all period			1	x	BS		M
Ali Vakilian (MIT)	PhD student	all period	0,3		0,7	x	BS		M
Jayson Lynch (MIT)	PhD student	all period			1	x	BS		M
Ilya Razenshteyn (MIT)	PhD student	01.10-	0,3			x	MS		M
Arturs Backurs (MIT)	PhD student	01.09-	0,3		0,1	x	BS		M

*) Approximation. Max one decimal.

**) More then three weeks.

***) Including no financing.