



## ANNUAL REPORT 2013



## CENTER FOR MASSIVE DATA ALGORITHMICs

## 2013 Highlights

### Research team

At the end of 2013 the center research team consisted of eight senior researchers (4 at AU), five Postdocs (all at AU) and fourteen PhD students (7 at AU).

Additionally, five further Postdocs and six PhD students (who obtained PhD degrees during the year) were part of the center in 2013. Almost all center Postdocs are internationals and so are well over half of the PhD students.



### Research collaboration and results

In 2013 MADALGO researchers published 92 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 2013. The center also has extensive multidisciplinary and industry collaboration.



Sorting is one of the most fundamental computational tasks. In 2013 MADALGO researchers developed sorting algorithms that are simultaneously efficient in terms of CPU time and movement of data between internal and external memory. The results received the best paper award at the 2013 Int. Symposium on Algorithms and Computation.

### Center Events

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 Data Structures in 2013, where four international experts, including Turing Award winner Robert Tarjan from Princeton University, lectured for a record number of 82 participants (mostly PhD students) from 44 institutions in 18 countries. The center also organized the Fifth



Workshop on Massive Data Algorithms (MASSIVE 2013) as part of the main European algorithms event ALGO in Sophia Antipolis, France.



In 2013 center researchers gave numerous presentations at international research conferences, as well as more than 30 invited presentations at research conferences, workshops and seminars. Center researchers have also participated in several public outreach activities, and in April the then Danish Minister for Science, Innovation and Higher Education, Morten Østergaard visited MADALGO to discuss how MADALGO has successfully integrated basic research and innovation.

### Awards and acknowledgments

Center researchers received a number of awards and acknowledgments in 2013 including the following:

Center Director Arge received the ISACC 2013 best paper award and was appointed Associate Editor of ACM Transactions on Spatial Algorithms and Systems. Center senior researcher Jensen was elected member of Academia Europaea, Demaine was elected a Guggenheim Fellow and received the EATCS Presburger Award, and Indyk received the ACM Paris Kanellakis Theory and Practice Award.

Center Advisory Board member Pankaj K. Agarwal was appointed Honorary Doctor at Aarhus University.



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This report describes the 2013 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 2013 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 2013 activities of the center.

## Center director statement

*By signing I confirm that this annual report and the accounts therein, including notes and summaries, contain all relevant information relating to this year's main activities in the Danish National Research Foundation's Center for Massive Data Algorithmics.*

March 2014

  
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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, Jensen and Afshani 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 has seen some organizational changes in 2013. It continues to be led by center director Lars Arge along with the other senior faculty and with advice from an international advisory board (where Pankaj K. Agarwal received an honorary degree from AU in 2013), but unfortunately center senior faculty Christian S. Jensen decided to leave AU in August 2013. As a consequence, it was decided that he would also leave the center by the end of 2013. On the administrative side, center manager Else Magård decided to take up new challenges at a larger center at AU and Trine Holmgård was hired to replace her. She is now managing the main center site along with accountant Ellen Lindstrøm and student assistant Matie Bach Søgaard. Two part time student programmers have also been associated with the center in 2013. On the research personnel side, the center Post Doc and PhD student population has developed more or less as anticipated (see section 5).

## 2 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, 2013 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, except in relation to the database area as a consequence of senior faculty Jensen leaving the center. These changes are discussed at the end of this section.

### *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 considered algorithms that are both efficient in terms of I/O and internal memory computation in the RAM model. We have illustrated that existing I/O-efficient algorithms are not RAM-efficient, and developed a new sorting algorithm that is both efficient in terms of I/O and RAM time, as well as a priority queue that can be used in such an efficient algorithm [C267]. We also proved a lower bound that shows that in some sense the two results are optimal. The result received the best paper award at the 2013 International Symposium on Algorithms and Computation.

In terms of *geometric data structures*, we have e.g. 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 expanded the set of variants we consider to include categorical range reporting, where each point also has a category and the goal is to report all the categories present in the query range. We have considered three-sided planar ranges and shown that they can be answered in optimal I/O using almost linear space [C261]. As already mentioned in last year's report, we have also developed efficient and dynamic structures for the two-dimensional skyline range query problem, where the objective is to report the skyline of the points inside a rectangular query range [C275]. We have also considered the batch dynamic version of the range minima problem, where one is given a batch of operations that includes both updates and queries. 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. We studied three natural approaches to model the problem and proved that they are all essentially equivalent. Using this result, we obtained algorithms that are efficient compared to algorithms for the case where the batch only contains queries [C269].

In the area of *terrain data processing*, we have e.g. continued our work on simplifying contour line maps extracted from massive terrain model, where we have developed an efficient algorithm for the more general problem of simplifying a planar subdivision, such that no point is moved more than a given distance and such that neighbor relations between faces (homotopy) are preserved. The recently published algorithm is not only more general but also much simpler than our previous contour simplification algorithm [C203].

Planer subdivisions are closely related to planar graphs, and in general we have continued to work on I/O-efficient *graph algorithms*. We have e.g. developed a deterministic variant [C283] of our earlier randomized dynamic approach for performing a Breadth-First-Search traversal of a graph [C26]. As already discussed in last year's report, we have also presented I/O-efficient algorithms for computing betweenness centrality of each node in a graph, which is a key problem in social network analysis [C268]. Like in the case of the fundamental sorting and priority queue problems mentioned above, we have also considered graph algorithms that are both efficient in terms of I/O and internal memory computation. More precisely, using a new multiway version of a planar cycle separator, we developed such efficient algorithms for a number of fundamental problems on planar graphs [C270].

We have also worked on *paging algorithms*, that is, algorithms that perform I/Os for algorithms that are not designed with I/O in mind [T49,T52]. In particular, we have developed so-called strongly competitive algorithms requiring only a sub-linear number of bookmarks (references to memory pages) [C282].

### ***Cache-oblivious algorithms***

In the cache-oblivious algorithms area the aim is to develop algorithms that automatically adapt to the unknown multiple levels of modern memory hierarchies. Unfortunately, techniques to obtain cache-oblivious algorithms are still not very developed and the fundamental limitations in the area not well understood. Overall, we have not made as much progress on cache-oblivious algorithms as we would have liked in 2013. However, we did publish a journal paper with fundamental results on cache-oblivious hashing [J103], and our focus on cache-oblivious algorithms continued to influence our work on I/O-efficient algorithms. Several of the I/O-algorithms we have developed are cache-oblivious (e.g. our algorithms for betweenness centrality discussed above [C268]), and by developing cache-oblivious algorithms we have obtained simpler algorithms for problems we have previously considered in the I/O-model. For example, we have developed an elegant, and in fact optimal, cache-oblivious (and thus also I/O-efficient) algorithm for the problem of generating multi-resolution instances of a raster (e.g. representing a terrain), that is, for generating a series of successively more simplified (and smaller) versions of the raster [C265]. As mentioned in last year's report, this problem has important applications in biology (biodiversity).

### ***Streaming algorithms***

Streaming algorithms are designed in a model 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 2013 we have submitted journal publications on *fundamental problems* such as finding periodicity in streams and counting triangles in streams. In terms of general *design techniques*, we have previously worked extensively 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. We have also investigated the related problem of *recovery of 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 the work reported last year in this area, we have developed further theoretical understanding of matrices  $A$  that are amenable to hardware implementations [C296]. We have also constructed sketching matrices that are very sparse while almost matching the performance of fully general matrices on important signal models [C299]. We have also studied the problem of efficient sparse recovery for seismic sensory data, where we have developed a new structured-sparsity model for sparse recovery based on the Earth Mover's Distance, and demonstrated its advantages both theoretically and empirically [C297]. These algorithmic developments were complemented by lower bounds. Specifically, we have proved lower bounds for sparse recovery that hold even for adaptive sketches [C301].

Inspired by our streaming and sketching work, we have also continued our work from last year 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 in some cases is provably optimal [C300]. The algorithm is simple and easy to implement, and variants of it have subsequently been used for a diverse set of applications, including spectrum sensing and light field recovery.

### ***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 2013 we have made steady progress in most of the algorithm engineering areas discussed in the research plan, as well as in a few others.

In terms of *library development*, we have continued our work on multicore and, in particular, pipelining support in the TPIE library for implementation of I/O-efficient algorithms. We have released a major new version of the library, and are finishing a publication describing our novel pipelining mechanism.

We have also continued our work on engineering I/O-efficient *graphs algorithms*, and e.g. implemented our newly developed I/O-efficient and deterministic Breadth-First-Search approach mentioned above [C283], and demonstrated its practical advantages over the best static solution [C64]. For the problem of approximating the diameter of a weighted graph, we also considered initial heuristic extensions of our previous unweighted approach [T51] (developed in 2012 [C216]).

In terms of *terrain data processing*, we have engineered and experimented with both our multi-resolution generation algorithm [C265] and our planar subdivision simplification algorithm discussed in the cache-oblivious and I/O-efficient sections above, respectively. In both cases the algorithms performed very well in practice, matching or outperforming our previous less general algorithms [C203, C228]. We have also developed and engineered efficient algorithms for computing the prominence of each cell in a grid terrain [266]. Intuitively, a cell has high prominence if it is higher than a large percentage of cells close to the cell. Prominence has many applications in e.g. archaeology.

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. During 2013 SCALGO released several improved software packages. SCALGO has also delivered flood risk mapping to more than one third of the Danish local governments. The flood risk mapping technology of SCALGO based on MADALGO research was also highlighted several times in the media, for example in an interview in a (“DR2 dagen”) tv program. The importance of the frontier research behind the SCALGO products was also one of the central themes when the Danish Minister for Science, Innovation and Higher Education visited MADALGO in April 2013. Our massive terrain data algorithms engineering work is also at the core of our extensive multidisciplinary collaboration with *biodiversity* researchers. In 2013 the collaboration for example led to results on the influence of topography on diversity [J87,J88,J89] and on classification of understory light conditions [J90], mapping of tree cover, and encroachment of woody plants using LiDAR terrain scanning. Journal papers with the last two results are under submission. The collaboration has also led to results on computing how closely related a group of species are in an evolutionary tree [C264]. In collaboration with *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. Theoretically we have obtained the best known algorithms [C273], and experimentally we have documented the scalability of the algorithms to trees containing millions of nodes [T47]. The experimental results were recently presented at Workshop on Algorithms Engineering and Experiments, and the implementations, which are currently the state-of-the-art in similarity measure computation, are distributed in the tqDist software package. We have also worked on a simplified implementation restricted to computing the triplet distance between binary trees [C272,J98], as well as surveyed and compared all existing implementations [J100].

Finally, we have investigated engineering and implementation of paging algorithms [T49,8T53], and as mentioned we have also experimented with our sparse recovery and sparse DFT algorithms.

### ***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 continued our research on space efficient data structures supporting range minimum queries. We have obtained asymptotic optimal space bounds for two-dimensional range minimum queries [C271], and recently also obtained the first space efficient data structures for reporting the two smallest elements in one-dimensional arrays. We have also presented the first retrieval-only dictionaries simultaneously obtaining constant query time, compressed space, and sublinear space overhead [C278]. In general, much of the center work described above is on data structures, and we have continued to obtain significant results on data structure problems in more classical models of computation. These include numerous results on various range searching variants [C261,276,C279,T44,T45].

We did not make much progress on *faulty-memory algorithms* in 2013, but we did obtain some results on algorithms and models for *flash memory*. In recent (still unpublished) work we extended our previous insights from classic paging [C158,C218] to the alpha-paging model [C59] in order to improve paging for flash memory. We have also recently investigated techniques for implementing flash memory distribution-based algorithms that are as efficient as merging-based algorithms, thus tackling the main technical limitation of flash disks. The intriguing difference between distribution- and merging-based algorithms (as discussed in the research plan) is also at the core of our work on sorting algorithms that are simultaneously I/O-efficient and *RAM-efficient in internal memory* discussed above [C267]. Surprisingly, we show that distribution-based algorithms are more efficient in this scenario. In 2013 we also obtained several results on

fundamental problems in the RAM-model, including an output-sensitive algorithm for computing the maxima of a set of points in three dimensions. The result was presented at the recent Symposium on Discrete Algorithms. Recently, we have obtained a randomized algorithm that can sort a set of integers in linear time if the word size is sufficiently small, thus shedding further light on the fundamental integer sorting problem. We have also considered massive data problems in several parallel and distributed models of computation. For example, in recent work we have extended our work from *the parallel private-cache model*, which models modern multi-core processors, to achieve new comparison-based sorting algorithms for modern (massively parallel) *graphics processing units (GPUs)*. We have also applied GPU algorithms to several problems in databases, such as similarity search in high dimensional data. The latter result uses our previous results on locality sensitive hashing and is to be presented at the upcoming Conference on Very Large Data Bases. In *distributed computing* we have published results on symmetry-breaking in connection with vertex coloring for various graph classes [C274], and also recently obtained results on minimum cut approximation, edge coloring, and locally sparse graph coloring.

Much of the work on data structures and on flash memory, RAM-efficient, parallel and distributed algorithms discussed above, 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 2013, that is, work that involves ideas from or spans several areas (models) or combines the various models/methodologies we consider. Good examples of how we are utilizing techniques from one area in another and considering combined models are our work on distribution- and merging-based algorithms in flash memory and I/O- and RAM-efficient algorithms, respectively. Another “crosscutting” activity of the center is our focus on algorithmic problems in databases. This activity was added to the research plan when the center was renewed in 2011. It was to a large extent driven by database faculty Jensen joining AU and the center. In 2013 we have obtained a large number of results on spatial database problems, in particular in relation to problems involving moving objects (e.g. [C285,C287,C289,C291,C293,T56]). However, with Jensen leaving the center by the end of 2013, we have decided to adjust the research plan in relation to database problems. While we will continue to focus on theoretical algorithmic foundation for problems in databases, we will put less emphasis on issues that require substantial practical database insight, such as the research plan work on moving objects, uncertain data and the parts of the plan that relates to comparison of data structures from the algorithms and database area. We will continue to try to hire Post Docs with an interest in the database area. Currently, database Post Doc Sidlauskas fulfills this role and just hired algorithms Post Doc Wanbin Son also has worked substantially on problems on the boundary between algorithms and spatial databases.

### 3 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 2013. Additionally, non-center student Stijn Koopal (TU Eindhoven) visited AU for a longer period of time in 2013, and non-center Faculty Seth Pettie along with PhD student Hsin-Hao Su is visiting AU for a year (as part of Pettie’s sabbatical). The list of shorter term non-center researchers visiting AU includes Valerie King (Victoria), Mikkel Thorup (Copenhagen), Michael Mitzenmacher (Harvard), Michael Goodrich (UC Irvine), Ian Munro (Waterloo), Rasmus Pagh (ITU), Robert Tarjan (Princeton), Pankaj K. Agarwal (Duke), Michael Elkin (Ben-Gurion), Thomas Mølhave (Duke) and Tsvi Kopelowitz (Michigan). The center also continues to have a strong collaboration with Sino-Danish Center for the Theory of Interactive Computation (CTIC).

As can be seen in Appendix A, the center continues to collaborate extensively with researchers from a large number of institutions. The center also continues to try to be a catalyst of multidisciplinary and industry collaboration. Many of the center’s activities in this direction are in connection with massive terrain data, where center researchers e.g. collaborate intensively with ecoinformatics researchers at the Department of Bioscience, researchers at Duke in the US and at Primorska in Slovenia, as well as with industry partners COWI, EIVA and center startup SCALGO. During 2013 the collaboration also resulted in a new grant to MADALGO, SCALGO and COWI from the Danish National Advanced Technology Foundation for further development of flood risk assessment technology based on detailed and massive terrain data. Much of the collaboration with ecoinformatics researchers is in the context of *Center for Interdisciplinary Geospatial Informatics Research* (CiGIR), where Biology and Computer Science Post Docs and Faculty try to spend at least one day a week at the other site than their base. Other center multidisciplinary collaboration includes various projects with researchers at the AU Bioinformatics Research Center (BiRC), and a project with the State Library in Aarhus (joint advising of PhD student Sindahl), just as center researchers continue to explore collaboration in connection with the truly massive data that will be generated by the future FAIR and ESS

physics experiment. The center's industry collaborations also include a project with Lufthansa Systems concerning flight route optimization and with Draper Labs on sparse recovery for astronomical imaging, just as the center in 2013 started a project on flight data management with DSE Airport Solutions in connection with a industrial Post Doc grant from the Danish National Advanced Technology Foundation.

## 4 Events

During 2013 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 30 invited presentations at research conferences, workshops and seminars. Center researchers have also participated in several public outreach activities. Brodal has for example lectured on algorithms for both primary and high school students, including at the IT camp for high school girls, and Demaine has given numerous lectures for high school students and general audiences. As mentioned, MADALGO research has also been featured on TV and at other events in connection with SCALGO. Center PhD students also coached two AU student programming competition teams competing in the Northwestern European Regional Contest. We also organized the Aarhus part of the Danish programming championship.

Following previous year's successes, the center organized a fifth *Workshop on Massive Data Algorithmics* (MASSIVE) in 2013. As in 2012, the workshop was co-located with the broad European algorithms conference ALGO, this year in Sophia Antipolis, France. Again, the workshop was a success and the planning of the sixth in the series (with ALGO 2014) is underway. The hope is still to eventually make MASSIVE a full-fledged conference. The center also continued its series of summer schools with a school on Data Structures in 2013. At the school, four international experts, including Turing award (the "Computer Science Nobel Price") winner Robert Tarjan from Princeton University, lectured for a record number of 82 participants from 44 different institutions in 18 countries. The school was a great success and the center anticipates organizing yet another summer school in 2014. Finally, center staff wereas involved in the organization of a number of other international events, including a FOCS tutorial and three workshops.

## 5 Research education

One key goal of the center is 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 6 Post Docs (all at AU, five internationals). Two of these were hired in 2013 and one in 2014: Allan G. Jørgensen (PhD AU 2010) working on the project with DSE Airport Solutions, Zengfeng Huang (PhD HKUST 2013) working on I/O-efficient and streaming algorithms, and Wanbin Son (PhD POSTECH 2013) working on problems on the boundary between algorithms and spatial databases. Five Post Docs left the center in 2013. At AU, Cicimol Alexander left to become a Post Doc at TU Freiberg and Wei Yu went to Facebook. Hossein Jowhari and Constantinos Tsirogiannis both went to do their military service. At FRA, Gabriel Moruz went to industry.

Currently, the center houses 15 PhD students (8 at AU, 4 internationals). Three of these PhD students joined the center in 2013 and one in 2014. At AU, Sarfraz Raza (with Arge as advisor) and Ingo van Duijn (with Brodal and Afshani as advisors), and at MIT, Ali Vakilian and Jayson Lynch (both with Demaine as advisor). Six PhD students obtained their degrees in 2013. At AU, Kasper G. Larsen (with Arge as advisor), Casper Kejberg-Rasmussen (with Brodal as advisor) and Vaida Ceikute (with Jensen as advisor), at Frankfurt, Andreas Beckmann and Andrei Negoescu (with Meyer as advisor), and at MIT, Eric Price (with Indyk as advisor). Larsen and Kejberg-Rasmussen went to industry, namely to CLC Bio and Danish Commodities, respectively. Ceikute went to Vilnius University and Beckmann to Jülich Supercomputing Center. Negoescu is staying at Frankfurt for a Post Doc, and Price is doing Post Docs at Berkeley and IBM Almaden research center before starting as an Assistant Professor at University of Texas, Austin. During 2013 AU PhD students Jakob Truelsen and Morten Revsbæk each spent approximately a semester at Duke University.

As discussed in previous annual reports, we believe the center's Post Doc and PhD student recruitment efforts have been relatively successful. For example, almost all Post Docs and half of the current AU PhD students are recruited internationally. The center's focus on research education includes exchange of Post Doc and PhD students, a 6 months stay abroad for AU PhD students, and organization of summer schools and workshops. After somewhat low activity in 2012 and 2013, center Post Docs have also recently again started organizing specialized PhD classes. Finally, the center continues to emphasize 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, movie nights, as well as a number of other social events.

**EXTERNAL RELATIONS**

**SECTION A**

List **includes** relevant collaboration for AU as well as MIT, MPI and FRA researchers in 2013

<b>Collaborator Name (person and/or institution), Country</b>	<b>Collaboration subject</b>	<b>Output of collaboration</b>	<b>Collaboration with: (Please check the appropriate box)</b>			
			<b>Danish universities, research groups and institutions</b>	<b>Foreign universities, research groups and institutions</b>	<b>Danish companies</b>	<b>Foreign companies</b>
Stephen Alstrup and Esben Bistrup Halvorsen (Copenhagen), Denmark	Nearest common ancestor problems	Publication	X			
J. Ian Munro (Waterloo), Canada and Sharma V. Thankachan (Louisiana state), USA	String problem lower bounds	Publication		X		
Christos Tsirgiannis (Cambridge University), UK	Algorithms for social network analysis	Publication and Software		X		
Peder Klith Bøcher and Jens-Christian Svenning (Biosciences, AU), Tommy Dalgaard (Agroecology, AU), Denmark	Terrain analysis and biodiversity	Publications	X			
Norbert Zeh (Dalhousie), Canada	I/O-efficient algorithms	Publications		X		
Ke Yi (HKUST), Hong Kong	Geometric problems	Publications		X		
Martin Olsen (AU Herning), Denmark	Alliances in graphs	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		X	
Andrew Danner (Swarthmore College), USA	TPIE	TPIE software package		X		
Scalable Algorithmics (SCALGO), Denmark	I/O-efficient terrain algorithms and software	Terrain processing algorithms and software			X	
Eiva A/S, Denmark	Sonar data cleaning and processing	Software			X	
Mike Goodrich (UC Irvine), USA	I/O-efficient algorithms	Publication		X		

Pankaj K. Agarwal (Duke University), USA	Terrain algorithms	Publications		X		
Rasmus Pagh (ITU), Denmark	Hashing	Publication	X			
Huy L. Nguyen (Princeton), USA	Hashing	Publication		X		
Mark de Berg and Stijn Koopal (TU Eindhoven), The Netherlands	Terrain algorithms	Publications and software		X		
Thomas Mølhave (Duke), USA	I/O-efficient terrain algorithms and software	Publications and software		X		
Mikkel Thorup (Copenhagen), Denmark	I/O-efficient RAM algorithms	Publication	X			
Andy Brodnik (University of Primorska & University of Ljubljana), Slovenia	Data structures, terrain processing	Publication		X		
Rajeev Raman, (University of Leicester), UK	Succinct data structures	Publication		X		
Rolf Fagerberg (University of Southern Denmark), Christian Nørgaard Storm Pedersen, Thomas Mailund, and Andreas Sand (Aarhus University), Denmark	Evolutionary tree algorithms	Publications		X		
Peter Sanders (Karlsruhe), Germany and Nodari Sitchinava (Hawaii), USA	GPU algorithms	Publications		X		
S. Srinivasa Rao (Seoul National University), South Korea	Succinct data structures	Publication		X		
Riko Jacob (ETH), Switzerland	Convex hull	Publication		X		
Kai-Min Chung (Academia Sinica), Taiwan and Michael Elkin (Ben-Gurion University), Israel	Distributed Algorithms	Publication		X		

Qin Zhang (Indiana), USA	Communication complexity, streaming algorithms and hashing	Publications		X		
Milan Vojnovic and Bozidar Radunovic (Microsoft Cambridge), England	Communication complexity of graph problems	Publication		X		
Djamal Bellazzugui (Helsinki University), Finland	Integer Sorting	Publication		X		
Yufei Tao (CUHK), Konstantinos Tsakalidis (HKUST), Hong Kong, Kostas Tsichlas (Thessaloniki), Greece, Jeonghun Yoon (KAIST), South Korea	I/O-efficient planar range skyline	Publication		X		
Cheng Sheng and Yufei Tao (Chinese University), Hong Kong	Range searching	Publication		X		
Konstantinos Tsakalidis (HKUST), Hong Kong	Geometric algorithms	Publication		X		
Manindra Agrawal (IIT), India	Query Complexity, Randomized algorithms			X		
Nodari Sitchinava (Hawaii), USA	I/O-efficient algorithms	Publication		X		
Timothy Chan (Waterloo), Canada	Geometric algorithms and data structures	Publications		X		
Supraja Jayakumar and Jeff M. Phillips (Utah), USA	Uncertain data	Publication		X		
Man Lung Yiu (Polytechnic University), Hong Kong	Spatial querying	Publications and software		X		
Gao Cong, Xin Cao and Lisi Chen (Nanyang Technological), Singapore and Dingming Wu (Baptist University), Hong Kong	Spatial querying and retrieval	Publications and software		X		

Xiaohui Li and Kian-Lee Tan (National), Singapore	Trajectory data management	Publications and software		X		
Xiaofang Zhou, Ke Deng, Kai Zheng (Queensland, Australia)	Trajectory data management	Publication and software		X		
Kristian Torp, Hua Lu, Ove Christensen (Aalborg), Denmark	GPS data management, positioning	Publications and software	X			
Gustavo Alonso (ETH), Switzerland and Dieter Pfoser and Timos Sellis (NTUA), Greece	Geo-content	Project		X		
German Algorithm Engineering Cluster, Germany	Algorithm engineering	Workshops		X		
Group of Peter Sanders (Karlsruhe), Germany	Libraries for parallel/external computation and energy-efficient sorting	Publications and software		X		
GSI Helmholtz Centre for Heavy Ion Research, Germany	Foundations of memory-efficient information processing for FAIR computing	Project		X		
Group of Knut Reinert (FU Berlin), Germany	I/O-efficient traversal of large alignment graphs	Project		X		
Deepak Ajwani (Bell Labs), Ireland	I/O-efficient algorithms	Publications		X		
Sofiane Abbar and Sihem Amer-Yahia (QCRI), Qatar	Diverse nearest neighbor	Publication		X		
David Woodruff (IBM Almaden), USA	Sparse Recovery	Publication				X
Kasturi Varadarajan (Iowa), USA	Diverse near neighbor problem	Publication		X		
Alex Andoni (Microsoft research), USA	Shift Finding in Sub-linear Time	Publication				X
Sariel Har-Peled (UIUC), USA	Spanners	Publication		X		

Pavel Panchevka and David Wilson (MIT), and Edward Z. Yang (Stanford), USA	Blame Trees	Publication		X		
Oswin Aichholzer (TU Graz) Austria, Sandor Fekete (TU Braunschweig), Germany, Michael Hoffmann (ETH Zurich), Switzerland, Greg Aloupis (McGill), Anna Lubiw (Waterloo), Canada, and Jack Snoeyink (UNC), Andrew Winslow (Tufts), USA	Covering Folded Shapes	Publication		X		
John Iacono and Ozgur Ozkan (NYU), USA, and Stefan Langerman (Bruxelles), Belgium	Combining Binary Search Trees	Publication		X		
Jean Cardinal, Samuel Fiorini and Gwenael Joret (Bruxelles), Belgium, and Ilan Newman (Haifa) and Oren Weimann (Weizmann), Israel	Minimum Spanning Tree Game	Publication		X		
Martin L. Demaine and Sarah Eisenstat (MIT), Thomas D. Morgan (Harvard), USA, and Ryuhei Uehara (JAIST), Japan	Variations on Instant Insanity	Book chapter		X		

<p>Samuel M. Felton, Michael T. Tolley, ByungHyun Shin and Robert Wood (Harvard), and Cagdas D. Onal, Daniela Rus Yoav Sternan, Neri Oxman, Cynthia Sung, Martin L. Demaine, Eli Davis and Jennifer Ramseyer (MIT), Steve Butler (Iowa State), Ronald Graham (UC San Diego), Joseph O'Rourke (Smith College), USA, Anna Lubiw (Waterloo), Canada, Tomohiro Tachi (Tokyo), Jin-ichi Itoh (Kumamoto), Chie Nara (Tokai), Japan</p>	<p>Folding</p>	<p>Publications</p>				
<p>Matthew J. Patitz (Texas), Trent A. Rogers (Arkansas), Robert T. Schweller (Texas), Scott M. Summers (Wisconsin) and Damien Woods (Caltech), Sarah Cannon (Tufts), Martin L. Demaine and Sarah Eisenstat (MIT), Andrew Winslow (Tufts), USA</p>	<p>Assembly</p>	<p>Publications</p>				

Noga Alon (Tel Aviv), Israel, and MohammadTaghi Hajiaghayi (Maryland) and Tom Leighton (MIT), USA	Network Creation Games	Publication		X		
Greg Aloupis (McGill), Stefanie Wuhrer (Carleton), Canada, and Nadia M. Benbernou (MIT), Mirela Damian (Villanova), Robin Flatland (Siena), John Iacono (NYU), USA	Robot reconfiguration	Publication		X		
Mohammad Ghodsi, Amin S. Sayedi-Roshkhar (Sharif), Iran, and MohammadTaghi Hajiaghayi (Maryland), USA	Scheduling to Minimize Gaps and Power Consumption	Publication		X		

**CONFERENCES****SECTION B**

List **includes** 2013 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.**

<b>Title of event</b>
Workshop on Massive Data Algorithmics (MASSIVE)
Summer School on Data Structures
International Workshop on Next-Generation Location-Based Services
Big Data Workshop at Goethe University
FOCS Tutorial on Bidimensional Structures: Algorithms and Combinatorics
Bellairs Winter Workshop on Computational Geometry

**b) Number of Invited Talks**

<b>Title of event</b>	<b>Venue</b>	<b>Name(s) of participant(s)</b>
Scaling Problems in Statistics Symposium	Gottingen University, Germany	Sandel
Microsoft Summer School on Algorithms for Massive Data	Moscow State University, Russia	Arge
Conference on Space Efficient Data Structures, Streams and Algorithms	Waterloo, ON, Canada	Brodal, Demaine, Mehlhorn
Workshop on Kernelization (WorKER 2013)	University of Warsaw, Poland	Pettie
German database meeting	Boeblingen, Germany	Jensen
International Workshop on Ranking in Databases	Riva del Garda, Italy	Jensen
Fourteenth International Conference on Mobile Data Management	Milan, Italy	Jensen
MOVE Final Conference	Vienna, Austria	Jensen
Dagstuhl Seminar on Algorithm Engineering	Dagstuhl, Germany	Meyer
Algorithms and Data Structures Symposium	London, Canada	Mehlhorn
Symposium on Theoretical Aspects of Computer Science	Kiel, Germany	Mehlhorn
Plenary lecture	Simons Foundation, USA	Demaine
Plenary lecture	Lafayette College, USA	Demaine
Plenary lecture	University of Electro-Communications, Tokyo, Japan	Demaine
Japan Conference on Discrete and Computational Geometry and Graphs	Tokyo, Japan	Demaine
Plenary lecture	Komaba Museum, University of Tokyo, Japan	Demaine
Canadian Mathematical Society Summer Meeting	Halifax, Canada	Demaine
Plenary lecture	Transylvania University, USA	Demaine
Plenary lecture	University of Kentucky, USA	Demaine
Friends of Mathematics Lectures	Kansas State University, USA	Demaine
Arnold Ross Lecture	AMS, New York, NY, USA	Demaine
International Conference on Sampling Theory and Applications	Bremen, Germany	Indyk
Global Conference on Signal and Information Processing	Austin, Texas, USA	Indyk
Winedale Workshop	Austin, Texas, USA	Indyk
Colloquium	ETH, Zurich, Switzerland	Indyk
Colloquium	Warwick University, UK	Indyk
Colloquium	Johns Hopkins University, USA	Indyk
CCI Center Meeting	Princeton University, USA	Indyk

Seminar	University of Pennsylvania, USA	Indyk
Conference on Principles of Database Systems	New York, NY, USA	Indyk
Symposium on Low-Dimensional Models and Optimization in Signal Processing	Austin, Texas	Indyk

**EDUCATIONAL ACTIVITIES****SECTION C**

List only **includes** 2013 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.

<b>Title of activity</b>	<b>ECTS</b>	<b>Length of course (number of hours)</b>
BSc course: Algorithms and Data Structures 1, Spring 2013	5	28
BSc course: Algorithms and Data Structures 2, Spring 2013	5	28
BSc course: Computer Science in Perspective (topic Algorithms and Complexity, and Internet Algorithms, 2 out of 7 weeks). Fall 2013	5	6
BSc course: Multivariate analysis of biological data. Fall 2013	5	35
MSc course: Algorithm Engineering. Spring 2013	5	21
MSc course: Advanced Data Structures. Fall 2013	10	42
Msc course: I/O-efficient algorithms. Fall 2013	10	36
MSc course: Data Management for Moving Objects. Spring 2013	5	20
PhD course: R for Macroecology and Global Change Studies. Summer 2013	4	45
NCPC and NWERC Programming Contest Coaching		

<b>Number of Master Graduates</b>	<b>Number of Bachelor Graduates</b>
10	0

**EXTERNAL FUNDING****SECTION D**

List **only includes** information for AU employees; it includes all active/new funding in 2013.

	<b>Funding body</b>	<b>Purpose</b>	<b>Grant holder</b>	<b>Activity period</b>	<b>Granted amount in DKK</b>	<b>Partial amount allocated to the reported year</b>
<b>Public Danish funds</b>	Danish Minister of Research	EliteForsk Travel scholarship	AU (Larsen)	2011-2013	300.000	0
	State Library	PhD Fellowship	AU (Brodal and Nielsen)	2011-2015	~1.000.000	~250.000
	Danish National Advanced Technology Foundation	Realistic large-area flood risk screening	AU (Arge), COWI A/S and SCALGO ApS	2013-2016	~2.800.000	~275.000
	Danish National Advanced Technology Foundation	Industrial Post Doc	AU (Arge and Grønlund) and Insero Software A/S	2013-2016	~1.800.000	~225.000
<b>Private Danish funds</b>	Villum Kann Rasmussen foundation	Annual Award for Technical and Scientific Research 2011	AU (Jensen)	2011-2021	2.000.000	0
	COWI A/S and SCALGO APS	Realistic large-area flood risk screening (co-funding)	AU (Arge)	2013-2016	~1.450.000	~175.000
	Insero Sofware A/S	Industrial Post Doc (co-funding)	AU (Arge and Grønlund)	2013-2016	~850.000	~200.000
	Aarhus University Research Foundation (AUFF)	Guest Researcher Grant, Seth Pettie (University of Michigan Ann Arbor)	AU (Brodal and Arge)	2013-2014	250.000	~100.000

<b>International funds</b>	Google	European Doctoral Fellowship	Dept. of Computer Science, AU (Arge and Larsen)	2010-2013	~1.000.000	0
	Slovenian Research Agency	Processing of Massive Geometric Data	University of Aribor, University of Primorska, AU (Arge and Brodal) and others	2010-2013	~2.000.000	
	European Commission	Reduction—Reducing Environmental Footprint based on Multi-Modal Fleet management Systems for Eco-Routing and Driver Behavior Adaptation	AU (Jensen)	2011–2014	~3.400.000	~925.000
	European Commission	GEOCROWD — Creating a Geospatial KnowledgeWorld	AU (Jensen)	2010–2014	~4.250.000	~1.125.000

**AWARDS****SECTION E**

List **includes** relevant 2013 information for AU as well as MIT, MPI and FRA researchers.

Awards	Recipient	Granted amount in DKK, if relevant
ISAAC 2013 best paper award	Arge	
Appointed Associate Editor of ACM Transactions on Spatial Algorithms and System	Arge	
Elected member of Academia Europaea	Jensen	
MIT Steven and Renee Finn Innovation Fellow	Demaine	~400.000
Guggenheim Fellow	Demaine	~135.000
European Association for Theoretical Computer Science Presburger Award	Demaine	~6.500
ACM Paris Kanellakis Theory and Practice Award	Indyk	~20.000
Simons Foundation Investigator	Indyk	~2.700.000
Honorary doctor, Aarhus University	Agarwal (MADALOG advisory board)	

List **only includes** 2013 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
The Academic Minute	Interview	Topography and forests	Sandel
takepart.com	Interview	Topography and forests	Sandel
Version2	News	Datanalyse og fly til tiden	Jørgensen, Arge
hoejteknologifonden.dk	News	Lynhurtig dataanalyse af flyafgange skal reducere lufthavnes udgifter	Jørgensen, Arge
Version2.dk	News	Højteknologifonden kaster millioner i dataanalyse mod forsinkede fly	Jørgensen
cs au videos	Video presentation	Dataintensive systems presentation	Jensen
Twitter (Morten Østergaard)	Feature	MADALGO tager data fra 26 mia. observationer - nu kan konsekvenser af skybrud forudsese	MADALGO
DR2 Dagen	Interview	Skybrudssæson - nyt kort skal hjælpe på vej	Arge
au.dk	Feature	Data is King!	Arge
cs.au.dk	Feature	Future researchers meet at MADALGO	Arge, Brodal
cs.au.dk	Feature	Sådan ser forsknings- og innovationssucces ud	Arge
ComON	Interview	Dansk it-topforsker scorer international hæder	Arge
Computerworld	Interview	Dansk it-topforsker scorer international hæder	Arge
EPN.dk	Interview	Sådan kan nye algoritmer booste din hardware	Arge
Altinget.dk	News	AU Science and Technology udnævner ny æresdoktor	MADALGO

**b) Press**

Specific media (newspapers, journals, magazines, other)	Type of communication (interview, commentary, debate, feature, etc.)	Subject	Contributor from the Center
Prosabladet	Interview	Algoritmer på hjernen	Nielsen
Midtjyllands Avis	News	Silkeborgenser bag dynamiske datastrukturer	Kejlberg-Rasmussen
Jyllands-Posten	Feature	Inderne jagter de danske hjerner	Arge
Horsens Folkeblad	News	Horsens-firma skal sikre fly til tiden	MADALGO
Børsen	Interview	Professor i den øverste elite	Arge
Jyllands-Posten	Feature	Inderne vil ha' Arges hjerne	Arge
Prosabladet	News	Fuld hus til algoritmisk sommerskole	Brodal, Arge
Jyllands-Posten	Interview	Supernørden	Arge

Mandag Morgen Navigation	Interview	Brug din data eller dø	Arge
Aarhus Stiftidende	News	Kan søgemaskiner blive mere optimale?	Larsen
Jyllands-Posten	News	Æresdoktor	MADALGO
Børsen	News	Æresdoktor	MADALGO
Prosabladet	Feature	En algoritme skal være enkel og effektiv	MADALGO
Mandag Morgen	News	Big data kræver politisk mod	Arge
Nysgerrighed betaler sig, Danmarks Grundforskningsfond	Feature	Kampen mod konsekvensen af klimaforandringer	Arge

c) Other

<b>Specific type of communication (presentation/lecturing at open university, high school, etc.)</b>	<b>Subject</b>	<b>Contributor from the Center</b>
Group exercises	Introduction to Algorithms for Primary and High School students	Brodal
Group exercises	Introduction to Algorithms at IT Camp 2013 (woman in CS initiative)	Brodal
Lecture, U-days	Algorithms	Brodal

**PATENTS AND APPLICATIONS****SECTION G**

List **only includes** 2013 information for AU employees.

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

**PUBLICATIONS****SECTION H**

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

<b>TOTAL NUMBER OF PUBLICATIONS IN THE REPORTED YEAR</b>	<b>Peer reviewed</b>	<b>Not peer reviewed</b>
<b>Number of journal articles</b>	39	0
<b>Number of conference proceedings</b>	53	3
<b>Number of monographs</b>	0	0
<b>Number of book chapters</b>	0	0
<b>Others</b>	0	18

**The 10 most prestigious 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 prestigious 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 Algorithms
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
STOC	1	0	0	0	3	4	1
FOCS	1	7	3	2	3	1	0
SODA	0	6	5	6	6	11	11
SoCG	0	5	3	3	2	3	2
ICALP	1	0	7	1	3	2	5
ESA	3	1	0	3	1	5	3
SPAA	3	1	0	3	1	1	0
APPROX/RANDOM	0	1	0	1	3	0	0
SWAT/WADS	1	3	6	1	3	1	2
ALENEX	0	0	1	0	1	0	1

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 617 unique authors - 93 associated with the center and 524 not.  
Only 140 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. Malinge, 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 $\mathbb{R}^d$	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. Baudouiu, M. Hajaghayi, 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	2009	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. Dalggaard 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 Languages (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. Tsirgiannis	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. Tsirgiannis	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-Elowitz	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 Algorithms (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. Tsirgiannis, 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. Tsirgiannis	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 Conference 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. Jensen and 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	<a href="#">Alliances and Bisection Width for Planar Graphs</a>	Proc. International Workshop on Algorithms and Computation (WALCOM)	(PR)(OA)
C261	2013	K.G. Larsen and F. van Walderveen	<a href="#">Near-Optimal Range Reporting Structures for Categorical Data</a>	Proc. Symposium on Discrete Algorithms (SODA)	(PR)(OA)
C262	2013	K. Bringmann and K.G. Larsen	<a href="#">Succinct Sampling from Discrete Distributions</a>	Proc. ACM Symposium on Theory of Computing (STOC)	(PR)(CO)(OA)
C263	2013	Chr. Tsirogiannis and Con. Tsirogiannis	<a href="#">Uncovering the Missing Routes : An Algorithmic Study on the Illicit Antiquities Trade Network</a>	Proc. Conference on Computer Applications and Quantitative Methods in Archaeology (CAA)	(PR)(CO)(OA)
C264	2013	C. Tsirogiannis and B. Sandel	<a href="#">Computing the Skewness of the Phylogenetic Mean Pairwise Distance in Linear Time</a>	Proc. Workshop on Algorithms in Bioinformatics (WABI)	(PR)(CO)(OA)
C265	2013	L. Arge, G.S. Brodal, J. Truelsen and C. Tsirogiannis	<a href="#">An Optimal and Practical Cache-Oblivious Algorithm for Computing Multiresolution Rasters</a>	Proc. European Symposium on Algorithms (ESA)	(PR)(CO)(OA)

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

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

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

C313	2013	G.S. Brodal	<a href="#">A Survey on Priority Queues</a>	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	<a href="#">The Query Complexity of Finding a Hidden Permutation</a>	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	<a href="#">Variations on Instant Insanity</a>	Proc. Conference on Space Efficient Data Structures, Streams and Algorithms	(CO)(OA)

### Journals

J1	2007	G. S. Brodal, R. Fagerberg and G. Moruz	On the Adaptiveness of Quicksort	ACM Journal of Experimental Algorithms, 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. Schwer, 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. Imaohori, 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 Algorithms 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. Abramczyk, 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 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	<a href="#"><u>Topographically controlled soil moisture drives plant diversity patterns within grasslands</u></a>	Biodiversity and Conservation 22(10)	(PR)(CO)(OA)
J88	2013	J.E. Moeslund, L. Arge, P.K. Bøcher, T. Dalgaard and J.-C. Svenning	<a href="#"><u>Topography as a driver of local terrestrial vascular plant diversity patterns</u></a>	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	<a href="#"><u>Topographically controlled soil moisture is the primary driver of local vegetation patterns across a lowland region</u></a>	Ecosphere 4(7)	(PR)(CO)(OA)

J90	2013	C. Alexander, J.E. Moeslund, P.K. Bøcher, L. Arge and J.-C. Svenning	<a href="#">Airborne laser scanner (LiDAR) proxies for understory light conditions</a>	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	<a href="#">Mammal predator and prey species richness are strongly linked at macroscales</a>	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	<a href="#">Historical climate-change influences modularity of pollination networks</a>	Ecography 36(12)	(PR)(CO)(OA)
J93	2013	J.-C. Svenning and B. Sandel	<a href="#">Disequilibrium vegetation dynamics under future climate change</a>	American Journal of Botany	(PR)(OA)
J94	2013	A.B. Smith, B. Sandel, N.J.B. Kraft and S. Carey	<a href="#">Characterizing scale-dependent community assembly using the functional-diversity-area relationship</a>	Ecology 94(11)	(PR)(CO)(OA)
J95	2013	B. Sandel and J.-C. Svenning	<a href="#">Human impacts drive a global topographic signature in tree cover</a>	Nature Communications 4	(PR)(OA)
J96	2013	M. Olsen and M. Revsbæk	<a href="#">Alliance Partitions and Bisection Width for Planar Graphs</a>	Journal of Graph Algorithms and Applications 17(6)	(PR)(OA)
J97	2013	P.K. Agarwal, L. Arge, S. Govindarajan, J. Yang and K. Yi	<a href="#">Efficient external memory structures for range-aggregate queries</a>	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 href="#">A practical O(n log n) time algorithm for computing the triplet distance on binary trees</a>	BMC Bioinformatics 14	(PR)(CO)(OA)
J99	2013	G.S. Brodal, M. Greve, V. Pandey and S.S. Rao	<a href="#">Integer Representations towards Efficient Counting in the Bit Probe Model</a>	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	<a href="#">Algorithms for Computing the Triplet and Quartet Distances for Binary and General Trees</a>	MDPI Biology - Special Issue on Developments in Bioinformatic Algorithms 2(4)	(PR)(CO)(OA)
J101	2013	K. Yi and Q. Zhang	<a href="#">Optimal Tracking of Distributed Heavy Hitters and Quantiles</a>	Algorithmica 65(1)	(PR)(CO)(OA)
J102	2013	P.K. Agarwal, G. Cormode, Z. Huang, J.M. Phillips, Z. Wei and K. Yi.	<a href="#">Mergeable Summaries</a>	ACM Transactions on Database Systems 38(4)	(PR)(CO)(OA)
J103	2013	R. Pagh, Z. Wei, K. Yi and Q. Zhang	<a href="#">Cache-Oblivious Hashing</a>	Algorithmica	(PR)(CO)(OA)
J104	2013	U. Meyer and V. Weichert	<a href="#">Algorithm Engineering für moderne Hardware</a>	Informatik-Spektrum	(PR)(OA)
J105	2013	X. Li, V. Ceikute, C.S. Jensen and K.-L. Tan	<a href="#">Effective Online Group Discovery in Trajectory Databases</a>	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	<a href="#">Finding Shortest Paths on Terrains by Killing Two Birds with One Stone</a>	Proceedings of the VLDB Endowment 7(1)	(PR)(CO)(OA)
J107	2013	K. S. Bøgh, A. Skovsgaard and C.S. Jensen	<a href="#">GroupFinder: A New Approach to Top-K Point-of-Interest Group Retrieval</a>	Proceedings of the VLDB Endowment 6(12)	(PR)(CO)(OA)
J108	2013	B. Yang, C. Guo and C.S. Jensen	<a href="#">Travel Cost Inference from Sparse, Spatio-Temporally Correlated Time Series Using Markov Models</a>	Proceedings of the VLDB Endowment 6(9)	(PR)(CO)(OA)
J109	2013	D. Wu, M.L. Yiu and C.S. Jensen	<a href="#">Moving Spatial Keyword Queries: Formulation, Methods, and Analysis</a>	ACM Transactions on Database Systems 38(1)	(PR)(CO)(OA)
J110	2013	L. Chen, G. Cong, C.S. Jensen and D. Wu	<a href="#">Spatial Keyword Query Processing: An Experimental Evaluation</a>	Proceedings of the VLDB Endowment 6(3)	(PR)(CO)(OA)
J111	2013	K. Tzoumas, A. Deshpande and C.S. Jensen	<a href="#">Efficiently Adapting Graphical Models for Cardinality Estimation</a>	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	<a href="#">Coverage with k-Transmitters in the Presence of Obstacles</a>	Journal of Combinatorial Optimization 25(2)	(PR)(CO)(OA)
J113	2013	S. Butler, E.D. Demaine, R. Graham and T. Tachi	<a href="#">Constructing Points through Folding and Intersection</a>	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	<a href="#">Bounded-Degree Polyhedronization of Point Sets</a>	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	<a href="#">The Stackelberg Minimum Spanning Tree Game on Planar and Bounded-Treewidth Graphs</a>	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	<a href="#">Non-crossing matchings of points with geometric objects</a>	Computational Geometry: Theory and Applications 46(1)	(PR)(CO)(OA)
J117	2013	N. Alon, E.D. Demaine, M. Hajiaghayi and T. Leighton	<a href="#">Basic Network Creation Games</a>	SIAM Journal on Discrete Mathematics 27(2)	(PR)(CO)(OA)
J118	2013	E.D. Demaine, S. Eisenstat, M. Ishaque and A. Winslow	<a href="#">One-Dimensional Staged Self-Assembly</a>	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	<a href="#">Refold Rigidity of Convex Polyhedra</a>	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	<a href="#">Efficient Reconfiguration of Lattice-Based Modular Robots</a>	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	<a href="#">Finding a Hamiltonian Path in a Cube with Specified Turns is Hard</a>	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	<a href="#">Scheduling to Minimize Gaps and Power Consumption</a>	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-Elowitz	<a href="#">Folding Equilateral Plane Graphs</a>	International Journal of Computational Geometry and Applications 23(2)	(PR)(CO)(OA)
J124	2013	M. Bateni, M. Hajiaghayi and M. Zadimoghaddam	<a href="#">Submodular secretary problem and extensions</a>	ACM Transactions on Algorithms 9(4)	(PR)(CO)(OA)
J125	2013	A. Elmasry, A. Farzan and J. Iacono	<a href="#">On the hierarchy of distribution-sensitive properties for data structures</a>	Acta Informatica 50(4)	(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. Truelson	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 Median 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	<a href="#">Models and Techniques for Proving Data Structure Lower Bounds</a>	AU	PhD Thesis (OA)
T45	2013	C. Kejilberg-Rasmussen	<a href="#">Dynamic Data Structures: The Interplay of Invariants and Algorithm</a>	AU	PhD Thesis (OA)
T46	2013	J. Fogh	<a href="#">Engineering a Fast Fourier Transform</a>	AU	MS Thesis (OA)
T47	2013	M. Holt and J. Johansen	<a href="#">Computing Triplet and Quartet Distances</a>	AU	MS Thesis (OA)
T48	2013	J. Schou	Range Minimum Data Structures	AU	MS Thesis
T49	2013	A. Negoescu	<a href="#">Design of Competitive Paging Algorithms with Good Behaviour in Practice</a>	FRA	PhD Thesis (OA)
T50	2013	D. Pick	Effiziente Algorithmen auf Eingeblttenen 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	<a href="#">Inferring Groups of Objects, Preferred Routes, and Facility Locations from Trajectories</a>	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 Geotagged Tweets	AU	MS Thesis
T61	2013	C.W. Schmidt	Indicering af spatio-tekstuelle data – et empirisk studie	AU	MS 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. Svennning, 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. Svennning	Response - Global endemism needs spatial integration	Science 335	(CO)

Personel		Hiring period in 2012 **)	Finansing (fraction of year) *)			Forign employee	For PhD and Post Doc: Previous education	For PhD: Finished degree
Name	Position		Foundation	AU	Other finan-sing ***)			
<b>Centerleder</b>								
Lars Arge (AU)	Professor	all period	0,1	0,9				
<b>Faculty</b>								
Gerth S. Brodal (AU)	Associate Professor	all period		1				
Christian S. Jensen (AU)	Professor	all period		1				
Peyman Afshani (AU)	Assistant Professor	all period		1		x		
Piotr Indyk (MIT)	Professor	all period	0,1		0,1	x		
Erik Demaine (MIT)	Professor	all period	0,1		0,1	x		
Kurt Mehlhorn (MPI)	Professor	all period			0,1	x		
Ulrich Meyer (FRA)	Professor	all period			0,2	x		
Brody Sandel (AU)	Assistant Professor	all period	0,4		0,6	x	PhD	
Cicimol Alexander (AU)	Post Doc	-31.05			0,4	x	PhD	
Wei Yu (AU)	Post Doc	-31.07			0,6	x	PhD	
Constantinos Tsiragiannis (AU)	Post Doc	-31.08	0,7			x	PhD	
Hossein Jowhari (AU)	Post Doc	-31.03	0,3			x	PhD	
Zhewei Wei (AU)	Post Doc	all period	1			x	PhD	
Darius Sidlauskas (AU)	Post Doc	all period	1			x	PhD	
Allan G. Jørgensen (AU)	Post Doc	01.01-	0,5		0,5		PhD	
Zenfeng Huang (AU)	Post Doc	01.09-	0,3			x	PhD	
Gabriel Moruz (FRA)	Post Doc	-30.11			0,9	x	PhD	
<b>Guests</b>								
Seth Pettie	Associate Professor	01.08-			0,3	x		
Hsin-Hao Su	PhD student	01.07-			0,4	x	MS	
Stijn Koopal	MS student	-15.03			0,2	x		
<b>Technical staff</b>								
Mathias Rav	Programmer	all period	1					
Sven Svendsen	Programmer	01.11-	1					
<b>Administrative staff</b>								
Else Magård	Center manager	-31.08	0,3	0,3				
Trine Holmgaard	Center manager	01.10-	0,1	0,1				
Ellen Lindstrøm	Accountant	all period		0,5				
Marie Bach Søgaard	Student assistant	all period		1				
<b>Ph.d.-studerende</b>								
Morten Revsbæk (AU)	PhD student	all period		1			MS	
Jacob Truelsen (AU)	PhD student	all period		1			BS + 1 year	
Kasper G. Larsen (AU)	PhD student	-28.02		0,2			BS	x
Casper Keilberg-Rasmussen (AU)	PhD student	-30.09		0,8			BS	x
Vaida Ceikute (AU)	PhD student	-31.08		0,7		x	MS	x
Jesper Asbjørn Sindahl Nielsen (AU)	PhD student	all period			1		BS + 1/2 year	
Anders Skovsgaard (AU)	PhD student	all period		1			MS	
Jungwoo Yang (AU)	PhD student	all period	1			x	MS	
Bryan Wilkinson (AU)	PhD student	all period		1		x	MS	
Sarfraz Raza (AU)	PhD student	01.03-	0,5	0,2	0,2	x	MS	
Andreas Beckmann (MPI/FRA)	PhD student	-28.02			0,2	x	MS	x
Andrei Negoescu (MPI/FRA)	PhD student	-31.12			1	x	MS	x
Volker Weichert (MPI/FRA)	PhD student	all period			1	x	MS	
David Veith (MPI/FRA)	PhD student	all period	1			x	MS	
Eric Price (MIT)	PhD student	-30.09			0,8	x	BS	x
Morteza Zadimoghaddam (MIT)	PhD student	all period			1	x	BS	
Ludwig Schmidt (MIT)	PhD student	all period			1	x	BS	
Haitham Hassanieh (MIT)	PhD student	all period	0,7		0,3	x	BS	
Ali Vakilian (MIT)	PhD student	01.08-			0,4	x	BS	
Jayson Lynch (MIT)	PhD student	01.01-			1	x	BS	

\*) Approximation. Max one decimal.

\*\*) More than three weeks.

\*\*\*) Including no financing.