

Tomas Lundquist

Munkhagsgatan 48
58726 Linköping, Sweden

Phone: +46768493779

Email: tomas.lundquist@liu.se

URL: <http://users.mai.liu.se/tomlu35/>

Born: November 22, 1986—Västervik, Sweden

Nationality: Swedish

Education

- 2005 STUDENTEXAMEN, Natur, Björkö Fria Gymnasium, Linköping.
- 2011 BSc in Mathematics, Linköping University.
- 2011 MSc in Mathematics, Linköping University.

Current position

- 2011- *Doctoral student*, Department of Mathematics, Computational Mathematics, Linköping University.

Previous employment

- 2005-2006 Warehouse attendant, Hjälpmedelscentrum i Östergötland AB, Linköping.

Research interests

Numerical solution of time-dependent partial differential equations; High order methods; Energy stable interface coupling and interpolation; Implicit time integration techniques; Multigrid techniques.

Publications & talks

THESIS

T. Lundquist “[High order summation-by-parts methods in time and space](#)“, Linköping University Electronic Press (2016)

JOURNAL ARTICLES

J. Nordström and T. Lundquist, “[Summation-by-parts in time](#)”, *Journal of Computational physics* 251: 487-499 (2013) [Preprint](#)

T. Lundquist and J. Nordström, “[The SBP-SAT technique for initial value problems](#)”, *Journal of Computational physics* 270: 86-104 (2014) [Preprint](#)

T. Lundquist and J. Nordström, “[Efficient fully discrete summation-by-parts schemes for unsteady flow problems](#)”, *BIT Numerical Mathematics* pp1-16 (2015) [Preprint](#)

J. Nordström and T. Lundquist, “[Summation-by-parts in time: the second derivative](#)”, *SIAM Journal on Scientific Computing* (2016) [Preprint](#)

REPORTS AND PREPRINTS

T. Lundquist and J. Nordström, “[On the suboptimal accuracy of summation-by-parts schemes with non-conforming block interfaces](#)” (2016) [Preprint](#)

T. Lundquist and J. Nordström, “[An energy stable summation-by-parts formulation for general multi-block and hybrid meshes](#)” (2016) [Preprint](#)

CONFERENCE ARTICLES

T. Lundquist and J. Nordström, “[The SBP-SAT technique for time discretization](#)”, AIAA 2013-2834 (2013) [Preprint](#)

T. Lundquist and J. Nordström, “[Efficient fully discrete summation-by-parts schemes for unsteady flow problems: an initial investigation](#)”, ICOSAHOM 2014 (2015) [Preprint](#)

P. Eliasson, T. Lundquist and J. Nordström, “[A global time integration approach for realistic unsteady flow computations](#)”, AIAA 2016-2021 (2016) [Preprint](#)

CONFERENCE TALKS

2013 21st AIAA Computational Fluid Dynamics Conference, *The SBP-SAT technique for time discretizations*, June 2013, San Diego, USA.

2014 International Conference on Spectral and High Order Methods (ICOSAHOM), *Efficient fully discrete summation-by-parts schemes for unsteady flow problems*, June 2014, Salt Lake City, USA.

2015 International Congress on Industrial and Applied Mathematics (ICIAM), *Local grid refinement in space and time using summation-by-parts schemes*, August 2015, Beijing, China.

REVIEWER FOR THE JOURNAL

BIT Numerical Mathematics.
Journal of Computational Physics.

Teaching experience

2011-2015

Teaching assistant for undergraduate courses in computational mathematics, optimization and matlab programming at Department of Mathematics, Linköping University. Approximately 20% of full-time employment.

Programming experience

Working knowledge in: Matlab, Fortran 90, C/C++

Basic knowledge in: Lisp/Scheme, MPI, openMP.

Languages

Swedish (mother tongue).

English (fluent in speaking and writing).