

Monica Almqvist
Division for Biomedical Engineering
Vattenhallen Science Center
LTH Profile Area: Engineering Health
Type of address: Visiting address.
Klas Anshelms väg 10
22363
Lund
Sweden



Type of address: Postal address.
Box 118
221 00
Lund
Sweden

Type of address: Visiting address.
John Ericssons väg 1
Lund
Sweden

Type of address: Postal address.
Box 118
221 00
Lund
Sweden

Email: monica.almqvist@bme.lth.se
Phone: +46462223346

Research

Member of the ultrasound group at the department of Biomedical Engineering. Main areas are transducer characterisation, acoustophores and acoustic fields of dolphins.

Employment

Senior lecturer

Division for Biomedical Engineering
Lund University
Lund, Sweden
2015 Sept 21 → present

Office director

Vattenhallen Science Center
Lund University
Lund, Sweden
2015 Sept 18 → present

Profile area member

LTH Profile Area: Engineering Health
Lund University
Sweden
2022 Jun 28 → present

Research outputs

Det råder inget motsatsförhållande mellan teknik och etik. De avhandlas bäst tillsammans
Runeson, P., Regnell, B., Almqvist, M. & Åström, K., 2019 Feb 5, Sydsvenskan.

Outreach initiatives operated by universities for increasing interest in science and technology

Gumaelius, L., Almqvist, M., Arnadottir, A., Axelsson, A., Conejero, J. A., Garcia-Sabater, J. P., Klitgaard, L., Kozma, C., Maheut, J., Marin-Garcia, J., Mickos, H., Nilsson, P. O., Norén, A., Pinho-Lopes, M., Prenzel, M., Ray, J., Roxà, T. & Voss, M., 2016 Nov 1, In: European Journal of Engineering Education. 41, 6, p. 589-622 34 p.

Bringing physics, synchrotron light and probing neutrons to the public: a collaborative outreach

Micklavzina, S., Almqvist, M. & Ristinmaa Sörensen, S., 2014, In: *Physics Education*. 49, 2, p. 221-230

Temperature and trapping characterization of an acoustic trap with miniaturized integrated transducers - towards in-trap temperature regulation

Johansson, L., Evander, M., Lilliehorn, T., Almqvist, M., Nilsson, J., Laurell, T. & Johansson, S., 2013, In: *Ultrasonics*. 53, 5, p. 1020-1032

Design and benchmark tests of a hydrophone array system for whale echolocation recordings

Starkhammar, J., Amundin, M., Nilsson, J., Jansson, T., Almqvist, M. & Persson, H. W., 2012, In: *Open Journal of Acoustics*. 2, 3, p. 121-130

Enclosure-Induced Interference Effects in a Miniaturized Sidescan Sonar

Jonsson, J., Lekholm, V., Kratz, H., Almqvist, M. & Thornell, G., 2012, In: *IEEE Journal of Oceanic Engineering*. 37, 2, p. 236-243

Separating overlapping click trains originating from multiple individuals in echolocation recordings.

Starkhammar, J., Nilsson, J., Amundin, M., Kuczaj, S. A., Almqvist, M. & Persson, H. W., 2011, In: *Journal of the Acoustical Society of America*. 129, 1, p. 458-466

Simulation, Manufacturing, and Evaluation of a Sonar for a Miniaturized Submersible Explorer

Jonsson, J., Edqvist, E., Kratz, H., Almqvist, M. & Thornell, G., 2010, In: *IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control*. 57, 2, p. 490-495

47-channel burst-mode recording hydrophone system enabling measurements of the dynamic echolocation behavior of free-swimming dolphins.

Starkhammar, J., Amundin, M., Nilsson, J., Jansson, T., Kuczaj, S. A., Almqvist, M. & Persson, H. W., 2009, In: *Journal of the Acoustical Society of America*. 126, 3, p. 959-962

An echolocation visualization and interface system for dolphin research

Amundin, M., Starkhammar, J., Evander, M., Almqvist, M., Lindström, K. & Persson, H. W., 2008, In: *Journal of the Acoustical Society of America*. 123, 2, p. 1188-1194

Kan man på programnivå vända negativa trender?

Almqvist, M. & Larsson, B., 2008, *5:e Pedagogiska inspirationskonferensen*. Lunds Tekniska Högskola

The dynamics of the bottlenose dolphin sonar beam.

Starkhammar, J., Kuczaj, S. A., Amundin, M., Nilsson, J., Almqvist, M. & Persson, H. W., 2008, In: *Journal of the Acoustical Society of America*. 124, 4, 2506.

Acoustic Touch Screen for Dolphins, First application of ELVIS - an Echo-Location Visualization and Interface System

Starkhammar, J., Amundin, M., Olsén, H., Almqvist, M., Lindström, K. & Persson, H. W., 2007 Jun, *4th International Conference on Bio-Acoustics 2007*. Curran Associates, Inc, p. 63-68 (Proceedings of the Institute of Acoustics ; vol. 29, no. part 3).

Design and evaluation of a new tool for echolocation measurements

Starkhammar, J., Amundin, M., Olsén, H., Dahl, S., Almqvist, M., Lindström, K. & Persson, H. W., 2007.

Noninvasive acoustic cell trapping in a microfluidic perfusion system for online bioassays

Evander, M., Johansson, L., Lilliehorn, T., Piskur, J., Lindvall, M., Johansson, S., Almqvist, M., Laurell, T. & Nilsson, J., 2007, In: *Analytical Chemistry*. 79, 7, p. 2984-2991

Study of ATP-release from acoustically levitated erythrocytes

Evander, M., Mileros, K., Högberg, C., Erlinge, D., Almqvist, M., Laurell, T. & Nilsson, J., 2007, In: Nano2Life Autumn Meeting. 1, p. 24-24

Study of ATP-release from acoustically levitated erythrocytes

Evander, M., Mileros, K., Högberg, C., Erlinge, D., Almqvist, M., Laurell, T. & Nilsson, J., 2007, *The proceedings of micro total analysis systems 2007*. Viovy, J.-L., Tabeling, P., Descroix, S. & Malaquin, L. (eds.). Chemical and Biological Microsystems Society, Vol. 2. p. 1372-1374 3 p.

Acoustic Trapping: System Design, Optimization and Applications

Evander, M., Johansson, L., Lilliehorn, T., Almqvist, M., Wallman, L., Johansson, S., Laurell, T. & Nilsson, J., 2006, *Proceedings of the sixth Micro Structure Workshop*. Vol. 1. p. 33-33 1 p.

Acoustic trapping of cells in a microfluidic format

Evander, M., Johansson, L., Lilliehorn, T., Lindvall, M., Piskur, J., Almqvist, M., Johansson, S., Laurell, T. & Nilsson, J., 2005, *Proceedings of μ TAS 2005 Conference*. Jensen, K. F., Han, J., Harrison, D. J. & Voldman, J. (eds.). Transducer Research Foundation, Vol. 1. p. 515-517 3 p.

Characterization of micromachined ultrasonic transducers using light diffraction tomography

Almqvist, M., Törndahl, M., Nilsson, M. & Lilliehorn, T., 2005, In: IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control. 52, 12, p. 2298-2302

Development of educational image databases and e-books for medical physics training

Tabakov, S., Roberts, V. C., Jonsson, B.-A., Ljungberg, M., Lewis, C. A., Wirestam, R., Strand, S.-E., Lamm, I.-L., Milano, F., Simmons, A., Deane, C., Goss, D., Aitken, V., Noel, A., Giraud, J.-Y., Sherriff, S., Smith, P., Clarke, G., Almqvist, M. & Jansson, T. & 1 others, EMIT Interational Consortia, E. P., 2005, In: Medical Engineering & Physics. 27, 7, p. 591-598

Dynamic arraying of microbeads for bioassays in microfluidic channels

Lilliehorn, T., Evander, M., Simu, U., Johansson, S., Almqvist, M., Nilsson, J. & Laurell, T., 2005, In: Sensors and Actuators B: Chemical. 106, 2, p. 851-858

European Medical Imaging Technology Training, EMIT – ett prisbelönt EU-utbildningsprojekt

Almqvist, M., Jansson, T., Jönsson, B.-A., Lamm, I.-L., Ljungberg, M., Strand, S.-E. & Wirestam, R., 2005, [*Host publication title missing*]. Lunds Tekniska Högskola

Temperature evaluation of soft and hard PZT transducers for ultrasonic

Johansson, L., Evander, M., Lilliehorn, T., Almqvist, M., Nilsson, J., Laurell, T. & Johansson, S., 2005, *Proceedings of μ TAS 2005 Conference*. Jensen, K. F., Han, J., Harrison, D. J. & Voldman, J. (eds.). Transducer Research Foundation, Vol. 2. p. 1428-1430 3 p.

Trapping of microparticles in the near field of an ultrasonic transducer

Lilliehorn, T., Simu, U., Evander, M., Almqvist, M., Stepinski, T., Laurell, T., Nilsson, J. & Johansson, S., 2005, In: Ultrasonics. 43, 5, p. 293-303

Versatile microchip utilising ultrasonic manipulation of microparticles

Nilsson, M., Lilliehorn, T., Johansson, L., Almqvist, M., Simu, U., Johansson, S., Laurell, T. & Nilsson, J., 2005, *Proceedings of the International Federation for Medical & Biomedical Engineering. 13th Nordic Baltic Conference on Biomedical Engineering and Medical Physics*. Int. Federation for Medical and Biological Eng, p. 123-124

Versatile microchip utilising ultrasonic standing waves

Evander, M., Lilliehorn, T., Johansson, L., Almqvist, M., Simu, U., Johansson, S., Laurell, T. & Nilsson, J., 2005, *IFMBE Proceedings 2005*. p. 123-124 2 p.

Array transducer for ultrasonic manipulation of particles

Lilliehorn, T., Johansson, L., Simu, U., Stepinski, T., Johansson, S., Evander, M., Almqvist, M., Laurell, T. & Nilsson, J., 2004, p. 69-72. 4 p.

Bioassays on ultrasonically trapped microbead clusters in microfluidic systems

Lilliehorn, T., Evander, M., Simu, U., Almqvist, M., Johansson, S., Laurell, T. & Nilsson, J., 2004, *Micro Total Analysis Systems 2004*. Laurell, T., Nilsson, J., Jensen, K., Harrison, J. & Kutter, J. (eds.). Royal Society of Chemistry, Vol. 2. p. 327-329 3 p.

Ultrasonic beadtrapping for bioassays

Nilsson, M., Almqvist, M., Nilsson, J., Laurell, T., Lilliehorn, T., Simu, U. & Johansson, S., 2004, p. 149-151. 3 p.

Ultrasound field characterisation in air using light diffraction tomography

Almqvist, M., Persson, H. W. & Lindström, K., 2004, *AMUM 2004: Advanced Metrology for Ultrasound in Medicine 2004*. IOP Publishing, Vol. 1. p. 150-154

Går kontinuerlig examination att kombinera med graderade betyg?

Almqvist, M. & Andersson, R., 2003, p. 52-53.

The Pedagogical Academy - a Way to Encourage and Reward Scholarly Teaching

Andersson, P., Olsson, T., Almqvist, M., Zetterqvist, L., Axelsson, A., Olsson, G. & Roxå, T., 2003, *Improving Student Learning: Theory and Practice-10 years on*. Rust, C. (ed.). The Oxford Centre for Staff and Learning Development, p. 307-314 8 p.

Ultrasonic trapping of microparticles

Evander, M., Lilliehorn, T., Simu, U., Almqvist, M., Stepinski, T., Laurell, T., Nilsson, J. & Johansson, S., 2003, p. 28-29.

Characterisation and comparison of a cMUT versus a piezoelectric transducer for air applications

Törndahl, M., Almqvist, M., Wallman, L., Persson, H. W. & Lindström, K., 2002, *2002 IEEE Ultrasonics Symposium. Proceedings (Cat. No.02CH37388)*. IEEE - Institute of Electrical and Electronics Engineers Inc., p. 1023-1026

Experimental verification of tomographic measurement methods in ultrasound

Almqvist, M., 1999, Department of Electrical Measurements, Lund University. 172 p.

Ultrasound Doppler Vector Tomography - Measurements of Directional Blood Flow

Jansson, T., Almqvist, M., Stråhlén, K., Eriksson, R., Sparr, G., Persson, H. W. & Lindström, K., 1997, In: *Ultrasound in Medicine and Biology*. 23, 1, p. 47-57

Ultrasound Doppler Measurements of Blood Flows using Tomographic Methods

Stråhlén, K., Sparr, G., Almqvist, M. & Persson, H. W., 1996, *Proceedings*. p. 68-71

Activities

LU Open Science Days 2024

Holst, J. (Presenter), Gren, J. (Presenter) & Almqvist, M. (Presenter)
2024 Nov 19

Nordic Science Center Association Conference

Arnadóttir, A. (Contributor), Almqvist, M. (Contributor), Petersson, M. (Contributor) & Gren, J. (Contributor)
2024 Sept 11 → 2024 Sept 13

LU Open Science Days 2024

Adamaki, A. (Chair), Dell'Unto, N. (Member of programme committee), Loubere, N. (Member of programme committee), Almqvist, M. (Member of programme committee), Hultqvist, S. (Member of programme committee), Nilsson, J. (Member of programme committee), Chertkovskaya, E. (Member of programme committee), Vihinen, M. (Member of programme committee), Lindh, K. (Organiser) & Olsson, A. (Organiser)
2024

LU Open Science Days

Dell'Unto, N. (Organiser), Loubere, N. (Organiser), Adamaki, A. (Organiser), Almqvist, M. (Organiser), Chertkovskaya, E. (Organiser), Vihinen, M. (Organiser), Runeson, P. (Organiser), Innes-Ker, Å. (Organiser), Mellgren, J. (Organiser), Olsson, A. (Organiser) & Lindh, K. (Organiser)
2023 Nov 20 → 2023 Nov 21

Hjärnshow

Almqvist, M. (Role not specified)
2015 → ...

Inspirationsföreläsning

Almqvist, M. (Role not specified)
2011 → 2023

Ljudshow

Almqvist, M. (Lecturer)
2010 → ...

Vad gör en ingenjör?

Almqvist, M. (Role not specified)
2006 → 2024

Prizes and Distinctions

Åforsks Kunskapspris

Almqvist, M. (Recipient), 2011

ETP (Excellent Teaching Practice), LTH

Almqvist, M. (Recipient), 2003

Hans_Uno Bengtsson-priset

Almqvist, M. (Recipient), 2010

Leonardo da Vinci awards

Almqvist, M. (Recipient), 2004

Lund universitets pedagogiska pris

Almqvist, M. (Recipient), 2009