



# SCI NEWS

DECEMBER 2020

## God jul och gott nytt år!

SCI Management group





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## Mats Wallin is the new Director of AlbaNova

Mats Wallin, professor of theoretical physics, Department of Physics, will become the new Director of AlbaNova in January 2021.

“I was not expecting this and look forward to the new challenges and opportunities”, says Mats Wallin.

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## Two KTH researchers receive ERC Consolidator Grants



Of the 327 researchers who received grants – 14 of whom come from Sweden – two recipients are SCI faculty: Ilaria Testa (Applied Physics) and Jens Bardarson (Physics).

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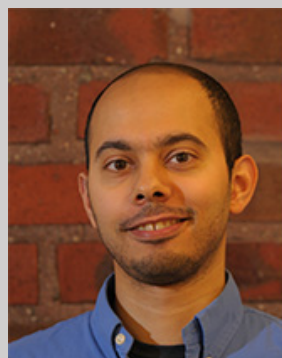
## Superconductors can revolutionize how we use electricity

For the first time, American researchers have succeeded in creating a so-called superconductor that works at room temperature. There is a direct connection to the American discovery and Oscar Tjernberg's research group at Applied Physics.

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## Mansour and Alfredsson share their experience with developing teaching

This month's teacher is Rami Mansour, who together with Bo Alfredsson, Director of Undergraduate studies, Department of Engineering mechanics, will share their experience with developing teaching.



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## Electric powered aircraft to KTH

KTH has recently received an electric powered aircraft from Saab in Linköping. The MERA Windex has now been transferred to KTH and will be operated and further developed.

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## Tens of thousands of examinations during the pandemic puts the administration to the test

Annually about 90,000 examinations are conducted at KTH, with a third taking place at SCI. Because of the pandemic, examinations are now conducted digitally, which presents new administrative and organisational challenges.

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## We congratulate

**Mihai Mihaescu**, Department of Engineering Mechanics - promoted to professor of fluid mechanics

## Recent doctoral graduates

**Wenyuan Fan**

Physics

*Mechanistic Modeling of Annular Flows at Near-Dryout Conditions*

**Julian Mauersberger**

Mathematics

*Riemann-Hilbert methods in general relativity and random matrix theory*

**Katharina Zeuner**

Physics

*Optics and Photonics, Semiconductor Quantum Optics at Telecom Wavelengths*

**Calvin Brett**

Engineering mechanics

*Neutron and X-ray Surface Scattering Reveals the Morphology of Soft Matter Thin Films*

**Samu Potka**

Mathematics

*Dynamics and limits in algebraic combinatorics*

**Annie M. Westerlund**

Biological Physics

*Deciphering conformational ensembles and communication pathways in biomolecules*

**David Ek**

Applied and Computational Mathematics, Optimization Theory and Systems Theory

*Approaches to accelerate methods for solving systems of equations arising in nonlinear optimization*



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## Recent doctoral graduates

### **Guillaume Chauvat**

Engineering Mechanics

*Receptivity, Stability and Sensitivity analysis of two- and three-dimensional flows*

### **Evgeny E. Akkuratov**

Biological Physics

*The Biophysics of Na<sup>+</sup>,K<sup>+</sup>-ATPase in neuronal health and disease*

### **Yuyang Li**

Biomedical and X-Ray Physics

*Synthesis and Characterization of Nanoprobes for X-Ray Fluorescence Computed Tomography (XFCT) Bio-imaging*

## Recent licentiate exam

### **Sriharsha Bhat**

Vehicle and Maritime Engineering

*Hydrobatatics: Efficient and Agile Underwater Robots*

### **Kristian Rönnberg**

Engineering Mechanics Electrical Engineering

*Heat-transfer simulations applied to electrical machines*