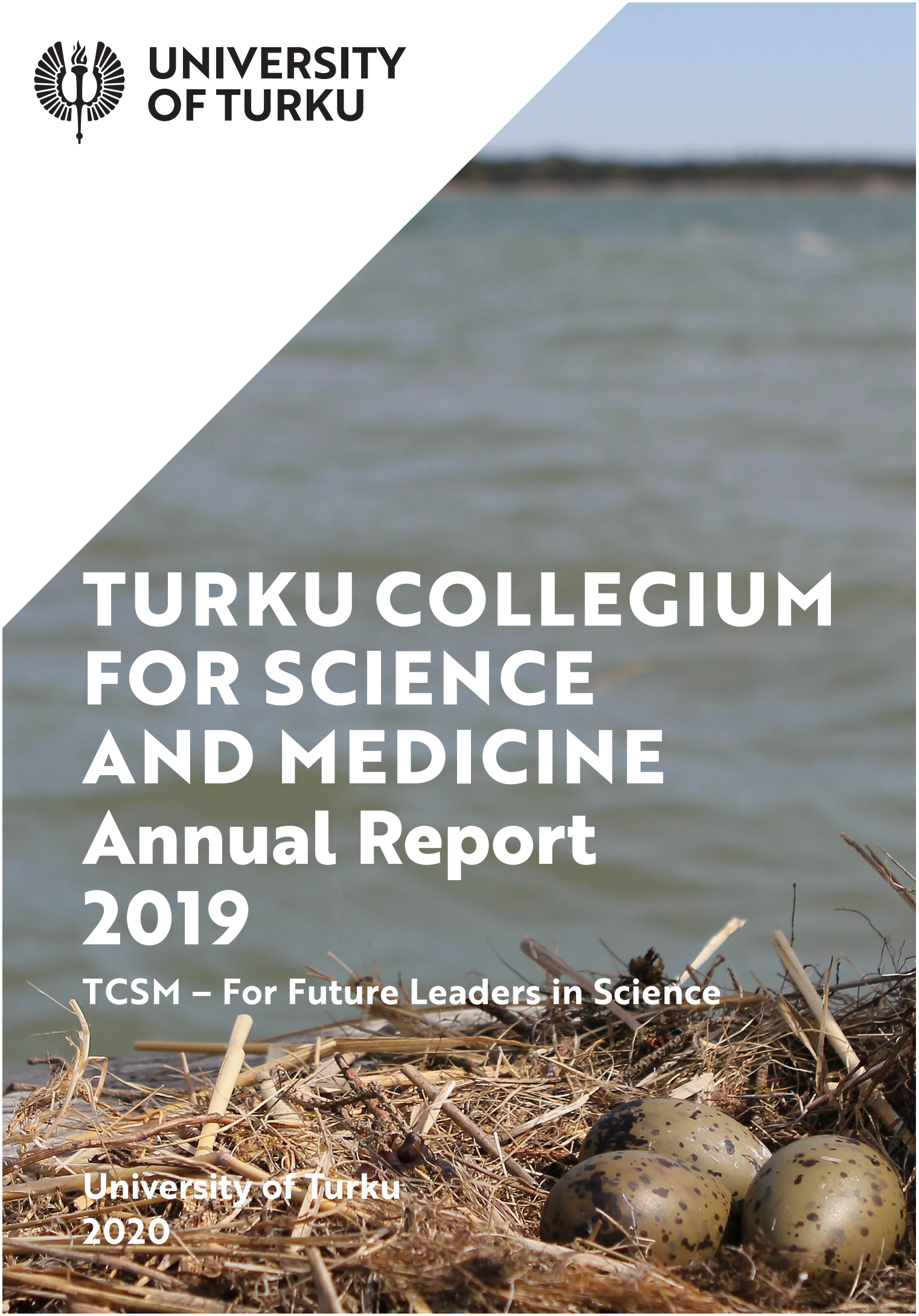
UNIVERSITY OF TURKU



TURKU COLLEGIUM FOR SCIENCE AND MEDICINE Annual Report 2019

TCSM – For Future Leaders in Science

University of Turku
2020

Contents

Cover image: "Common gull's nest" by Kaisa Hakkila

TCSM – Introduction

The Turku Collegium for Science and Medicine (TCSM) was launched with funding from the Consortium comprising the University of Turku and the Turku School of Economics in 2008. During its years of operation, TCSM has become an integral and permanent part of the University of Turku. The collegium is supported by the Faculty of Science and Engineering and the Faculty of Medicine. Research at TCSM includes studies in the fields of science (astronomy, biology, biochemistry, chemistry, engineering, geology, geography, information technology, mathematics, physics, statistics etc.) and medicine and health sciences (biomedicine, dentistry, nursing science, clinical medicine etc.). TCSM selects its researchers through an international competition. The aim of TCSM is to establish a multidisciplinary, interactive research platform for dynamic researchers in science and medicine.

TCSM researchers include Postdoctoral and Collegium Researchers. They are appointed for fixed-term positions at the University of Turku. The positions are funded for three years at a time, with a possibility for a two-year extension for Collegium Researchers. TCSM Collegium Researchers receive a €20 000 starting grant for three years and €10 000 for the possible two year extension. The starting grant is intended to cover travel costs or research related costs. Call Announcements for Postdoctoral Researcher positions are planned to be announced in early autumn 2020.

From 2008 onward, 30 Collegium Researchers and 16 Postdoctoral Researchers have been recruited in total. TCSM has recruited Collegium Researchers every other year during its operational years. In 2016, the new postdoctoral research programme of the University started and the first five postdoctoral researchers were recruited. In 2019, TCSM consisted of 23 Researchers, 9 Collegium Researchers and 15 Postdoctoral Researchers. During the year 2019, the Academy of Finland granted one TCSM researcher an Academy Research Fellow position, and four TCSM researchers received Tenure track positions or equivalent, or began work outside Academia. The Faculty of Science and Engineering hosted five Collegium Researchers and 11 Postdoctoral Researchers. The Faculty of Medicine hosted four Collegium Researchers and four Postdoctoral Researchers.

Starting from 2019, TCSM postdoctoral researcher positions will be filled annually. The goal of this regular selection process is to maintain a group of 10–15 postdoctoral researchers actively working at the University of Turku. TCSM organised two calls for applications in 2019: a call for TCSM Postdoctoral Researcher positions and a call for TCSM Collegium Researcher Positions. The calls for applications were open 4.11.2019–7.01.2020. The next call for applications for TCSM Postdoctoral Researcher Positions will be in November–December 2020.

Previous Calls for Applications and Call for Applications 2019

Collegium Researchers

A TCSM Collegium Researcher is an ambitious young researcher who wants to start independent research work, has gained a doctoral degree certificate a minimum of three years and a maximum of nine years before the submission deadline for applications, and has international research experience (significant postdoctoral research work abroad is essential).

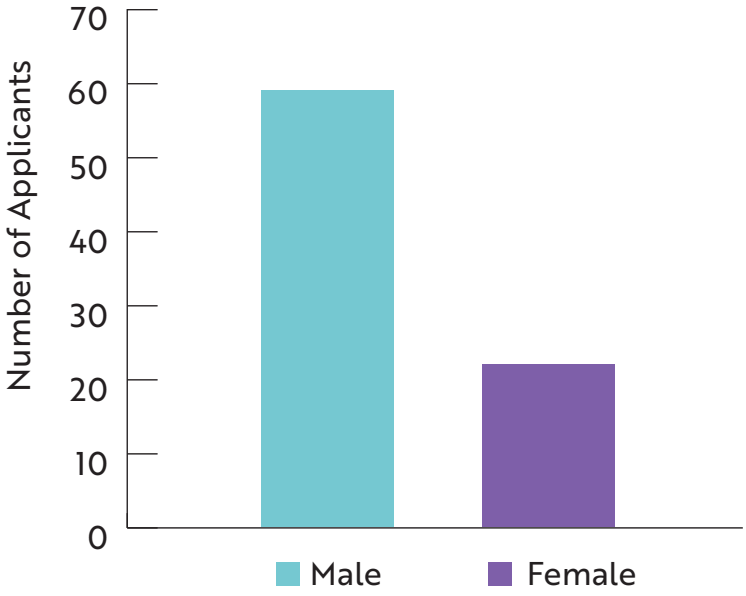
Previous calls for TCSM Collegium Researcher positions

Year	Applications	Positions	Percentage*
2008	87	6	6.8
2009	65	4	6.1
2011	66	7	10.6
2013	85	5	5.9
2015	166	6	3.6
2017	156	4	2.6
2019	81	5	6.2

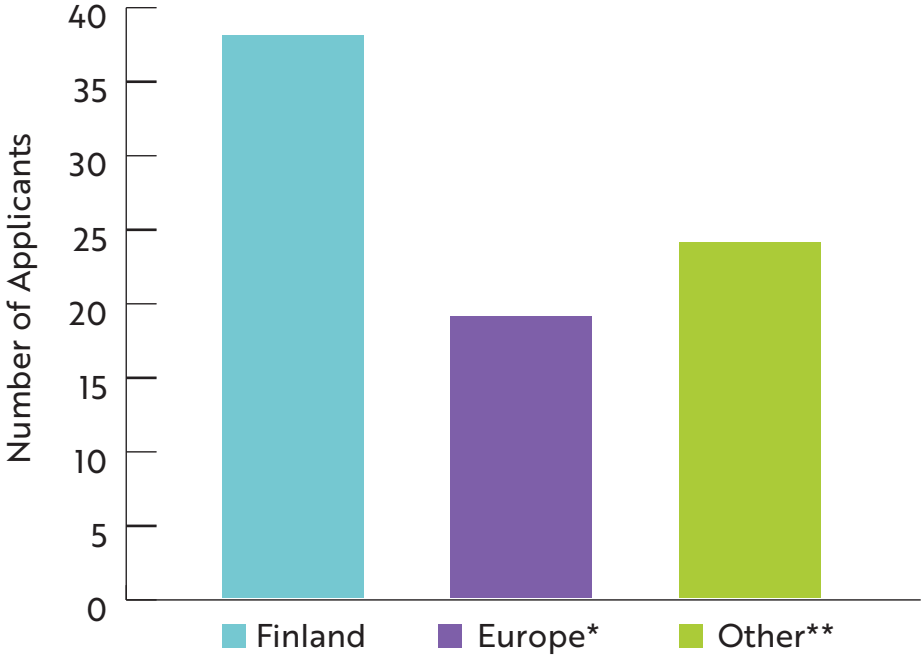
*success rate of each call

In the 2019 call for applications, organised in November-December, TCSM received 81 applications from Finland and 18 other countries. The total percentage of international applicants was approximately 53%. Of the applicants, 73 % were from the fields of biosciences, health and environment research. The selection process consisted of three stages. First, the TCSM board selected the most promising candidates for external evaluation. Based on these external evaluations, ten candidates were selected for interviews, based on which five candidates were selected to fill the positions on offer. The selections were made during the spring of 2020.

Gender distribution of applicants for TCSM Collegium Researcher positions in 2019



Finnish applicants vs. applicants from Europe and other continents



*other than Finland
**Africa, America, Asia, Australia

Postdoctoral Researchers

Candidates for TCSM Postdoctoral Researcher positions must hold a doctoral degree, which may not have been completed more than five years before the expiry of the application submission deadline. Particular attention is paid to the candidate's international research experience. The successful candidate should have a linkage with research activities at the University of Turku and should, as a rule, be able to join an existing research group or work under the supervision of a senior researcher at the University of Turku.

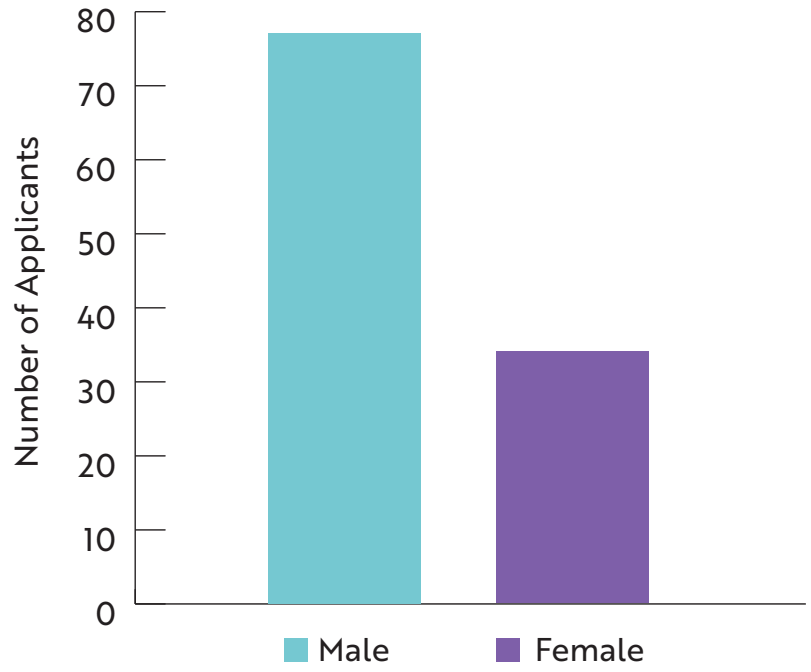
Previous calls for TCSM Postdoctoral Researcher positions

Year	Applications	Positions	Percentage*
2016	125	5	4
2017	175	5	2.9
2018	119	5	4.2
2019	111	5	4.5

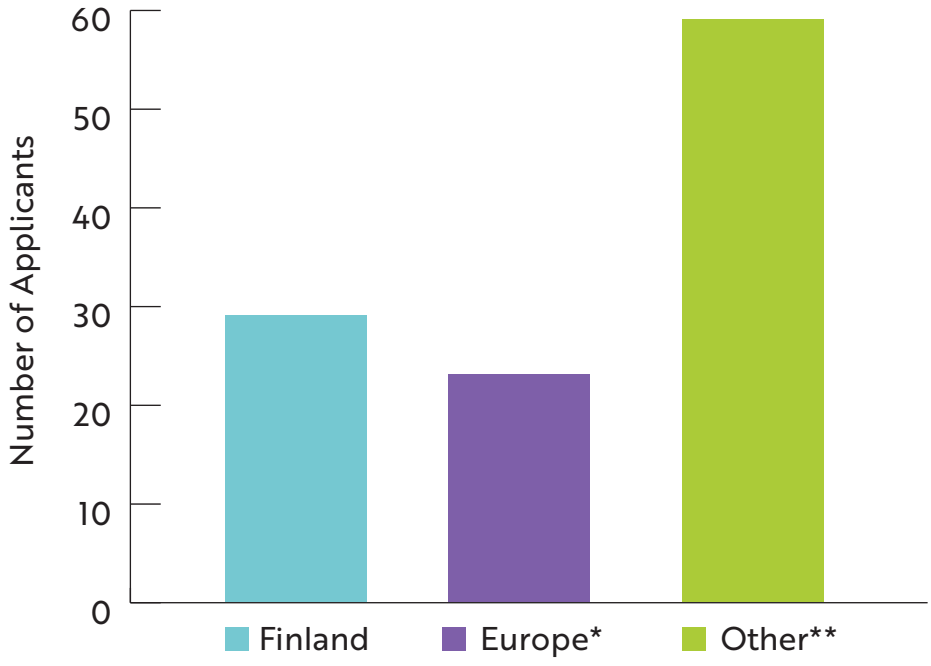
*success rate of each call

In 2019, the international call for applications for postdoctoral researcher positions was organised in November–December and was the fourth of its kind for TCSM. TCSM received 111 applications from 32 countries. Of the applicants, 74% reported a nationality other than Finnish. The selection process took place in the spring of 2020 and consisted of two stages. First, the TCSM board evaluated all applications and, based on the evaluation, selected 12 candidates for interviews.

Gender distribution of applicants for TCSM Postdoctoral Researcher positions in 2019



Finnish applicants vs. applicants from Europe and other continents



*other than Finland
**Africa, America, Asia, Australia

TCSM Postdoctoral Researchers

Faculty of Medicine

Anu Autio, Institute of Biomedicine
8/2018–9/2019

Yu Cao, MediCity Research Laboratory

Lihua Sun, Turku PET Centre

Jetro Tuulari, Department of Clinical Medicine

Faculty of Science and Engineering

Thomas Bullock, Department of Physics and Astronomy

Pedro Dinis, Department of Biochemistry

Jaroslav Icha, Department of Biochemistry
1-9/2019

Aino Kalske, Department of Biology

Nicolino Lo Gullo, Department of Physics and Astronomy

Lokesh Kesavan, Department of Chemistry

Lee Mikyoung, Department of Mathematics and Statistics
9/2017–2/2019

Jarkko Peltomäki, Department of Mathematics and Statistics

Sophie Reichert, Department of Biology

Matteo Rossi, Department of Physics and Astronomy

Antoine Stier, Department of Biology

TCSM Collegium Researchers

Faculty of Medicine

Ilkka Heinonen, Department of Clinical Medicine
7/2016–8/2019

Jianwei Li, Medicity Research Laboratory

Miho Nakamura, Institute of Biomedicine

Teemu Niiranen, Department of Clinical Medicine

Faculty of Science and Engineering

Katja Anttila, Department of Biology
3/2016–8/2019

Heli Hietala, Department of Physics and Astronomy
4/2018–6/2019

Erkki Kankare, Department of Physics and Astronomy

Pere Puigbo, Department of Biology

Jing Tang, Department of Mathematics and Statistics
5/2016–4/2019

TCSM Postdoctoral Researchers and TCSM Collegium Researchers in a joint photography session at Medisiina D, Faculty of Medicine in January 2019. Photograph by Hanna Oksanen, University Communication.

Publications by TCSM Researchers 2019

A1 Journal article – refereed

Cardiac SERCA activity in sockeye salmon populations: an adaptive response to migration conditions (2019) Canadian Journal of Fisheries and Aquatic Sciences. **Katja Anttila**, Anthony P. Farrell, David A. Patterson, Scott G. Hinch, Erika J. Eliason

Longterm effects of ocean acidification upon energetics and oxygen transport in the European sea bass (Dicentrarchus labrax, Linnaeus) (2019) Marine Biology. Amélie Crespel, **Katja Anttila**, Pernelle Lelièvre, Patrick Quazuguel, Nicolas Le Bayon, JoséLuis ZamboninoInfante, Denis Chabot, Guy Claireaux

Water-soluble fraction of crude oil affects variability and has transgenerational effects in Daphnia magna (2019) Aquatic Toxicology. Mikko Nikinmaa, Emilie Suominen, **Katja Anttila**

68Ga-DOTA chelate, a novel imaging agent for assessment of myocardial perfusion and infarction detection in a rodent model (2019) Journal of Nuclear Cardiology. **Anu Autio**, Sauli Uotila, Max Kiugel, Ville Kytö, Heidi Liljenbäck, Nobuyuki Kudomi, Vesa Oikonen, Olli Metsälä, Semi Helin, Juhani Knuuti, Antti Saraste, Anne Roivainen

68Ga-DOTA-E[c(RGDfK)]2 Positron Emission Tomography Imaging of SHARPIN-Regulated Integrin Activity in Mice (2019) Journal of Nuclear Medicine. Riikka Siitonen, Emilia Peuhu, **Anu Autio**, Heidi Liljenbäck, Elina Mattila, Olli Metsälä, Meeri Käkelä, Tiina Saanijoki, Ingrid Dijkgraaf, Sirpa Jalkanen, Johanna Ivaska, Anne Roivainen

Evolution-Guided Engineering of Non-Heme Iron Enzymes Involved in Nogalamycin Biosynthesis (2019) FEBS Journal. Benjamin Nji Wandi, Vilja Siitonen, **Pedro Dinis**, Vladimir Vukic, Tiina A. Salminen, Mikko Metsä-Ketelä

A New Method to Improve Running Economy and Maximal Aerobic Power in Athletes: Endurance Training With Periodic Carbon Monoxide Inhalation (2019) Frontiers in Physiology. Jun Wang, Yunhui Ji, Li Zhou, Yang Xiang, **Ilkka Heinonen**, Peng Zhang

Distinct effects of acute exercise and breaks in sitting on working memory and executive function in older adults: A three-arm, randomised cross-over trial to evaluate the effects of exercise with and without breaks in sitting on cognition (2019) British Journal of Sports Medicine. Michael J Wheeler, Daniel J Green, Kathryn A Ellis, Ester Cerin, **Ilkka Heinonen**, Louise H Naylor, Robyn Larsen, Patrik Wennberg, Carl-Johan Boraxbekk, Jaye Lewis, Nina Eikelis, Nicola T Lautenschlager, Bronwyn A Kingwell, Gavin Lambert, Neville Owen, David W Dunstan

Intramyocellular lipid accumulation after sprint interval and moderate-intensity continuous training in healthy and diabetic subjects (2019 Physiological Reports. Sjoros T, Saunavaar V, Loyttyniemi E, Koivumaki M, **Ilkka Heinonen**, Eskelinen JJ, Virtanen KA, Hannukainen JC, Kalliokoski KK

Morning exercise mitigates the impact of prolonged sitting on cerebral blood flow in older adults (2019) Journal of Applied Physiology. Wheeler MJ, Dunstan DW, Smith B, Smithl KJ, Scheer A, Lewis J, Naylor LH, **Ilkka Heinonen**, Ellis KA, Cerin E, Ainslie PN, Green DJ

Myocardial Blood Flow and Metabolic Rate of Oxygen Measurement in the Right and Left Ventricles at Rest and During Exercise Using O-15-Labeled Compounds and PET (2019) Frontiers in Physiology. Nobuyuki Kudomi, Kari K. Kalliokoski, Vesa J. Oikonen, Chunlei Han, Jukka Kemppainen, Hannu T. Sipilä, Juhani Knuuti, **Ilkka Heinonen**

Objectively Measured Sedentary Time Before and After Transition to Retirement: The Finnish Retirement and Aging Study (2019) Kristin Suorsa, Anna Pulakka, Tuija Leskinen, **Ilkka Heinonen**, Olli J Heinonen, Jaana Pentti, Jussi Vahtera, Sari Stenholm

Calibration of RADMON radiation monitor onboard Aalto-1 CubeSat (2019) Advances in Space Research. Oleynik P, Vainio R, Punkkinen A, Dudnik O, Gieseler J, Hedman H, **Heli Hietala**, Hæggström E, Niemelä P, Peltonen J, Praks J, Punkkinen R, Säntti T, Valtonen E

Direct observations of a surface eigenmode of the dayside magnetopause (2019) Nature Communications. Archer MO, **Heli Hietala**, Hartinger MD, Plaschke F, Angelopoulos V

FORESAIL-1 CubeSat Mission to Measure Radiation Belt Losses and Demonstrate Deorbiting (2019) Journal of Geophysical Research: Space Physics. M. Palmroth et. al. (**Heli Hietala**)

Jets in the magnetosheath: IMF control of where they occur (2019) Annales Geophysicae. Laura Vuorinen, **Heli Hietala**, Ferdinand Plaschke

Outer Van Allen Radiation Belt Response to Interacting Interplanetary Coronal Mass Ejections (2019) Journal of Geophysical Research: Space Physics. E. K. J. Kilpua, D. L. Turner, A. N. Jaynes, **Heli Hietala**, H. E. J. Koskinen, A. Osmane, M. Palmroth, T. I. Pulkkinen, R. Vainio, D. Baker, S. G. Claudepierre

Radiation monitor RADMON aboard Aalto-1 CubeSat: First results (2019) Advances in Space Research. Jan Gieseler, Philipp Oleynik, **Heli Hietala**, Rami Vainio, Hannu-Pekka Hedman, Juhani Peltonen, Arttu Punkkinen, Risto Punkkinen, Tero Säntti, Edward Hæggström, Jaan Praks, Petri Niemelä, Bagus Riwanto, Nemanja Jovanovic, M. Rizwan Mughal

THEMIS Observations of Particle Acceleration by a Magnetosheath Jet-Driven Bow Wave (2019) Geophysical Research Letters. Terry Z. Liu, **Heli Hietala**, Vassilis Angelopoulos, Yuri Omelchenko, Vadim Roytershteyn, Rami Vainio

The Response of Earth's Electron Radiation Belts to Geomagnetic Storms: Statistics From the Van Allen Probes Era Including Effects From Different Storm Drivers (2019) Journal of Geophysical Research: Space Physics. Turner D.L., Kilpua E.K.J., **Heli Hietala**, Claudepierre S.G., O'Brien T.P., Fennell J.F., Blake J.B., Jaynes A.N., Kanekal S., Baker D.N., Spence H.E., Ripoll J.-F., Reeves G.D.

GGA2 and RAB13 promote activity-dependent β1-integrin recycling (2019) Journal of Cell Science. Pranshu Sahgal, Jonna Alanko, **Jaroslav Icha**, Ilkka Paatero, Hellyeh Hamidi, Antti Arjonen, Mika Pietilä, Anne Rokka, Johanna Ivaska

A switch-on fluorophore using water molecules via hydrogen bonding and its application for bio-imaging of formaldehyde in living cells (2019) Analytical Methods. Yile Wang, Yifan Chen, Yan Huang, Qi Zhang, Yucang Zhang, **Jianwei Li**, Chunman Jia

Emergence of Compartments Formed from Unconventional Surfactants in Dynamic Combinatorial Libraries (2019) Langmuir. Boris Bartolec, Giulia Leonetti, **Jianwei Li**, Wietse Smit, Meniz Altay, Guillermo Monreal Santiago, Yichen Yan, Sijbren Otto

Insect Herbivory Selects for Volatile-Mediated Plant-Plant Communication (2019) Current Biology. **Aino Kalske**, Shiojiri K, Uesugi A, Sakata Y, Morrell K, Kessler A

A luminous stellar outburst during a long-lasting eruptive phase first, and then SN IIn 2018cnf (2019) Astronomy and Astrophysics. Pastorello A, Reguitti A, Morales-Garoffolo A, Cano Z, Prentice SJ, Hiramatsu D, Burke J, **Erkki Kankare**, Kotak R, Reynolds T, Smartt SJ, Bose S, Chen P, Congiu E, Dong S, Geier S, Gromadzki M, Hsiao EY, Kumar S, Ochner P, Pignata G, Tomasella L, Wang L, Arcavi I, Ashall C, Callis E, Postigo AD, Fraser M, Hosseinzadeh G, Howell DA, Inserra C, Kann DA, Mason E, Mazzali PA, McCully C, Rodriguez O, Phillips MM, Smith KW, Tartaglia L, Thone CC, Wevers T, Young DR, Pumo ML, Lowe TB, Magnier EA, Wainscoat RJ, Waters C, Wright DE
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Evidence for rapid disc formation and reprocessing in the X-ray bright tidal disruption event candidate AT 2018fyk (2019) Monthly Notices of the Royal Astronomical Society. Wevers T, Pasham DR, van Velzen S, Leloudas G, Schulze S, Miller-Jones JCA, Jonker PG, Gromadzki M, **Erkki Kankar**e, Hodgkin ST, Wyrzykowski L, Kostrzewa-Rutkowska Z, Moran S, Berton M, Maguire K, Onori F, Mattila S, Nicholl M

Luminous red novae: Stellar mergers or giant eruptions? (2019) Astronomy and Astrophysics. A. Pastorello, E. Mason, S. Taubenberger, M. Fraser, G. Cortini, L. Tomasella, M. T. Botticella, N. Elias-Rosa, R. Kotak, S. J. Smartt, S. Benetti, E. Cappellaro, M. Turatto, L. Tartaglia, S. G. Djorgovski, A. J. Drake, M. Berton, F. Briganti, J. Brimacombe, F. Bufano, Y.-Z. Cai, S. Chen, E. J. Christensen, F. Ciabattari, E. Congiu, A. Dimai, C. Inserra, **Erkki Kankare**, L. Magill, K. Maguire, F. Martinelli, A. Morales-Garoffolo, P. Ochner, G. Pignata, A. Reguitti, J. Sollerman, S. Spiro, G. Terreran, D. E. Wright

Observation of inverse Compton emission from a long β -ray burst (2019) Nature. MAGIC Collaboration, Acciari V. A. et. al. (**Erkki Kankare**)

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Signatures of circumstellar interaction in the Type IIL supernova ASASSN-15oz (2019) Monthly Notices of the Royal Astronomical Society. K. Azalee Bostroem, Stefano Valenti, Assaf Horesh, Viktoriya Morozova, N. Paul M. Kuin, Samuel Wyatt, Anders Jerkstrand, David J. Sand, Michael Lundquist, Mathew Smith, Mark Sullivan, Griffin Hosseinzadeh, Iair Arcavi, Emma Callis, Régis Cartier, Avishay Gal-Yam, Lluís Galbany, Claudia Gutiérrez, D. Andrew Howell, Cosimo Inserra, **Erkki Kankare**, Kristhell Marisol López, Curtis McCully, Giuliano Pignata, Anthony L. Piro, Ósmar Rodríguez, Stephen J. Smartt, Kenneth W. Smith, Ofer Yaron, David R. Young

SN 2017gmr: An Energetic Type II-P Supernova with Asymmetries (2019) Astrophysical Journal. Wheeler J. et. al. (**Erkki Kankare**)

SN2018kzr: A Rapidly Declining Transient from the Destruction of a White Dwarf (2019) Astrophysical Journal Letters. Owen R. McBrien, Stephen J. Smartt, Ting-Wan Chen, Cosimo Inserra, James H. Gillanders, Stuart A. Sim, Anders Jerkstrand, Armin Rest, Stefano Valenti, Rupak Roy, Mariusz Gromadzki, Stefan Taubenberger, Andreas Flörs, Mark E. Huber, Ken C. Chambers, Avishay Gal-Yam, David R. Young, Matt Nicholl, **Erkki Kankare**, Ken W. Smith, Kate Maguire, Ilya Mandel, Simon Prentice, Ósmar Rodríguez, Jonathan Pineda Garcia, Claudia P. Gutiérrez, Lluís Galbany, Cristina Barbarino, Peter S. J. Clark, Jesper Sollerman, Shrinivas R. Kulkarni, Kishalay De, David A. H. Buckley, and Arne Rau

The evolution of luminous red nova AT 2017jfs in NGC 4470 (2019) Astronomy and Astrophysics. A. Pastorello, T.-W. Chen, Y.-Z. Cai, A. Morales-Garoffolo, Z. Cano, E. Mason, E. A. Barsukova, S. Benetti, M. Berton, S. Bose, F. Bufano, E. Callis, G. Cannizzaro, R. Cartier, Ping Chen, Subo Dong, S. Dyrbye, N. Elias-Rosa, A. Flörs, M. Fraser, S. Geier, V. P. Goranskij, D. A. Kann, H. Kuncarayakti, F. Onori, A. Reguitti, T. Reynolds, I. R. Losada, A. Sagués Carracedo, T. Schweyer, S. J. Smartt, A. M. Tatarnikov, A. F. Valeev, C. Vogl, T. Wevers, A. de Ugarte Postigo, L. Izzo, C. Inserra, **Erkki Kankare**, K. Maguire, K. W. Smith, B. Stalder, L. Tartaglia, C. C. Thöne, G. Valerin, D. R. Young

Layered Double Hydroxide-Cellulose Hybrid Beads: A Novel Catalyst for Topochemical Grafting of Pulp Fibers (2019) ACS Omega. Liji Sobhanadhas, **Lokesh Kesavan**, Mika Lastusaari, Pedro Fardim

Reduced graphene oxide supported palladium nano-shapes for electro-oxidation of oxalic acid (2019) Journal of Electroanalytical Chemistry. **Lokesh Kesavan**, Ajit M. Kalekar, Pia Damlin, Carita Kvarnström

Topochemical engineering of composite hybrid fibers using layered double hydroxides and abietic acid (2019) Beilstein Journal of Nanotechnology. L. Sobhana, **Lokesh Kesavan**, J. Gustafsson, P. Fardim

A Scalable Numerical Approach to the Solution of the Dyson Equation for the Non-Equilibrium Single-Particle Green's Function (2019) physica status solidi (b). Natale Walter Talarico, Sabrina Maniscalco, **Nicolino Lo Gullo**

Reservoir engineering using quantum optimal control for qubit reset (2019) New Journal of Physics. D. Basilewitsch, F. Cosco, **Nicolino Lo Gullo**, M. Mottonen, T. Ala-Nissila, C.P. Koch, S. Maniscalco

Agreement Between Ambulatory and Home Blood Pressure Monitoring in Detecting Nighttime Hypertension and Nondipping Patterns in the General Population (2019) American Journal of Hypertension. Lindroos AS, Kantola I, Salomaa V, Juhanoja EP, Siven SS, Jousilahti P, Jula AM, **Teemu Niiranen**

Ambulatory versus home blood pressure monitoring: frequency and determinants of blood pressure difference and diagnostic disagreement (2019) Journal of Hypertension. Ntineri A, **Teemu Niiranen**, McManus RJ, Lindroos A, Jula A, Schwartz C, Kollias A, Andreadis EA, Stergiou GS

A Single Visualization Technique for Displaying Multiple Metabolite-Phenotype Associations (2019) Metabolites. Henglin M., **Niiranen T.**, Watrous J.D., Lagerborg K.A., Antonelli J., Claggett B.L., Demosthenes E.J., von Jeinsen B., Demler O., Vasan R.S., Larson M.G., Jain M., Cheng S.

Directed Non-targeted Mass Spectrometry and Chemical Networking for Discovery of Eicosanoids and Related Oxylipins (2019) Cell Chemical Biology. Watrous JD, **Teemu Niiranen**, Lagerborg KA, Henglin M, Xu YJ, Rong J, Sharma S, Vasan RS, Larson MG, Armando A, Mora S, Quehenberger O, Dennis EA, Cheng S, Jain M

Early Onset Hypertension Is Associated With Hypertensive End-Organ Damage Already by MidLife (2019) Hypertension. Suvila K, McCabe EL, Lehtonen A, Ebinger JE, Lima JAC, Cheng S, **Teemu Niiranen**

ECG left ventricular hypertrophy as a risk predictor of sudden cardiac death (2019) International Journal of Cardiology. Porthan K, Kentta T, **Teemu Niiranen**, Nieminen MS, Oikarinen L, Viitasalo M, Hernesniemi J, Jula AM, Salomaa V, Huikuri HV, Albert CM, Tikkanen JT

Genome-wide association study of white-coat effect in hypertensive patients (2019) Blood Pressure. Jenni M Rimpelä, **Teemu Niiranen**, Antti Jula, Ilkka H Pörsti, Antti Tikkakoski, Aki Havulinna, Terho Lehtimäki, Veikko Salomaa, Kimmo K Kontula, Timo P Hiltunen

Interrelations Between Arterial Stiffness, Target Organ Damage, and Cardiovascular Disease Outcomes (2019) Journal of the American Heart Association. Vasan RS, Short MI, **Teemu Niiranen**, Xanthakis V, DeCarli C, Cheng S, Seshadri S, Mitchell GF

Long-term and recent trends in hypertension awareness, treatment, and control in 12 high-income countries: an analysis of 123 nationally representative surveys (2019) Lancet. Zhou B. et al. (**Teemu Niiranen**)

Long-term Outcomes of Mechanical Vs Biologic Aortic Valve Prosthesis in Patients Older Than 70 Years (2019) Annals of Thoracic Surgery. Ville Kytö, Monna E Myllykangas, Jussi Sipilä, **Teemu Niiranen**, Päivi Rautava, Jarmo Gunn

NT-proBNP (N-Terminal Pro-B-Type Natriuretic Peptide) and the Risk of Stroke Results From the BiomarCaRE Consortium (2019) Stroke. Di Castelnuovo A, Veronesi G, Costanzo S, Zeller T, Schnabel RB, de Curtis A, Salomaa V, Borchini R, Ferrario M, Giampaoli S, Kee F, Soderberg S, **Teemu Niiranen**, Kuulasmaa K, de Gaetano G, Donati MB, Blankenberg S, Iacoviello L

Opposing Age-Related Trends in Absolute and Relative Risk of Adverse Health Outcomes Associated With Out-of-Office Blood Pressure (2019) Hypertension. Yan Li et. al. (**Teemu Niiranen**).

Population trends in aortic valve surgery in Finland between 2001 and 2016 (2019) Scandinavian Cardiovascular Journal. Monna E. Myllykangas, Jarmo M. Gunn, Arto Pietilä, Tuomas O. Kiviniemi, Ville Kytö, **Teemu Niiranen**, Veikko V. Salomaa, Jenni Aittokallio

Relative Contributions of Pulse Pressure and Arterial Stiffness to Cardiovascular Disease The Framingham Heart Study (2019) Hypertension. **Teemu Niiranen**, Kalesan B, Mitchell GF, Vasan RS

Sex-Specific Epidemiology of Heart Failure Risk and Mortality in Europe Results From the BiomarCaRE Consortium (2019) JACC: Heart Failure. Magnussen C., **Teemu Niiranen**, Ojeda F.M., Gianfagna F., Blankenberg S., Vartiainen E., Sans S., Pasterkamp G., Hughes M., Costanzo S., Donati M.B., Jousilahti P., Linneberg A., Palosaari T., de Gaetano G., Bobak M., den Ruijter H.M., Jørgensen T., Söderberg S., Kuulasmaa K., Zeller T., Iacoviello L., Salomaa V., Schnabel R.B.; BiomarCaRE Consortium

Temporal relations between atrial fibrillation and ischaemic stroke and their prognostic impact on mortality (2019) EP-Europace. Stephan Camen et. al. (**Teemu Niiranen**) on behalf of the BiomarCaRE consortium

The relation of work-related factors with ambulatory blood pressure and nocturnal blood pressure dipping among aging workers (2019) International Archives of Occupational and Environmental Health. Karelius S., Vahtera J., Pentti J., Lindroos A., Jousilahti P., Heinonen O., Stenholm S., **Teemu Niiranen**.

The validity of heart failure diagnoses in the Finnish Hospital Discharge Register (2019) Scandinavian Journal of Public Health. Matti A. Vuori, Jari A. Laukkanen, Arto Pietilä, Aki S. Havulinna, Mika Kähönen, Veikko Salomaa, **Teemu Niiranen**; for the FinnGen investigators

Automatic sequences based on Parry or Bertrand numeration systems (2019) Advances in Applied Mathematics. Massuir Adeline, **Jarkko Peltomäki**, Rigo Michel

On winning shifts of marked uniform substitutions (2019) RAIRO: Informatique Théorique et Applications / RAIRO: Theoretical Informatics and Applications. **Jarkko Peltomäki**, Salo Ville

Maternal age at birth shapes offspring life-history trajectory across generations in long-lived Asian elephants (2019) Journal of Animal Ecology. **Sophie Reichert**, Vérane Berger, John Jackson, Simon N. Chapman, Win Htut, Khyne U. Mar, Virpi Lummaa

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University of Turku Collegia TCSM & TIAS Blog

Researchers from TCSM and the Turku Institute for Advanced Studies (TIAS) established a University of Turku Collegia blog in early autumn 2019. In the blog, TCSM and TIAS researchers can discuss their work and share their personal opinions on science, careers, or any subject they may be interested in.

The blog can be found at **https://blogit.utu.fi/collegia/**

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