Artem Chumachenko

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Born 28 July 1981

WORK EXPERIENCE

December 2022 – present

Assistant professor

University of Warsaw, EUROREG, Science studies laboratory

- research in the field of science of science, scientometrics, information theory and it's applications to analysis of complex information networks, information-theoretical approach for the thermodynamics of open systems

October 2011 – November 2022

Associate professor

National Taras Shevchenko University of Kyiv, Physics Faculty

- teaching exact sciences, fundamental research in the field of condensed matter (14 scientific publications), fundamental research in the field of information theory (2 scientific publications)
- teaching courses in quantum mechanics, mathematical analysis, electricity and magnetism, theory of complex variables, molecular physics ets.; teaching special courses on machine learning as part of students master's training

October 2020 – November 2022

Leading specialist of the IT department

National Research Foundation of Ukraine (NRFU), Kyiv

- Project management for the creation of an automated system (https: grants.nrfu.org.ua) for the registration, expert assessment and reporting for applications that are submitted to the NRFU competitions
- main duties – preparation of technical specifications for building business processes for an automated system, negotiations with developers, preparation of accompanying project documentation

2010 - 2020

Visiting researcher

École polytechnique fédérale de Lausanne, Switzerland. Project on "Complex Information Network Manipulation" (SCOPES Grant IZ74Z0-160497/1)

- statistical analysis of scientific knowledge recorded in publications on high energy physics. Developing real proximity measure between physics ontology concepts and documents. Adopting this measure for multi-networks of physical concepts and documents.

Physikalisch technische bundesanstalt, Braunschweig, Germany

- Theoretical research of microscopical theory of superfluidity of He4, quantum computing, many particle quantum systems.

SCIENTIFIC EXPERIENCE

2020 – 2021

Publications on Information science

- Chumachenko A, et al. Dynamical entropic analysis of scientific concepts. Journal of Information Science. November 2020. doi:10.1177/0165551520972034
- Chumachenko, A. V., et al. (2020). Dynamics of topic formation and quantitative analysis of hot trends in physical science. Scientometrics. https://doi.org/10.1007/s11192-020-03610-6

2010 – 2020 **Main publications on Condensed matter physics**

most cited publications on condensed patter physics

- Infrared behavior of the response of strongly interacting Bose systems, A Chumachenko, S Vilchynskyy, M Weyrauch, Journal of Physical Studies 11 (2), 200-209
- Stable Hopf solitons in rotating Bose-Einstein condensates, YM Bidasyuk, AV Chumachenko, OO Prikhodko, SI Vilchinskii, Physical Review A 92 (5), 053603
- The nature of superfluidity and Bose-Einstein condensation: From liquid 4He to dilute ultracold atomic gases, SI Vilchynskyy, AI Yakimenko, KO Isaieva, AV Chumachenko, Low Temperature Physics 39 (9), 724-740

SCIENTIFIC DEGREE

1998 – 2003 **Ph.D in Physics**

Faculty of Physics, National Taras Shevchenko University of Kyiv

- Long-wave asymptotics of the Green's functions and infrared divergencies in the microscopic theory of superfluidity of Bose liquid 4He.

EDUCATION

1998 – 2003 **Master's degree in Physics**

Faculty of Physics, National Taras Shevchenko University of Kyiv

SKILLS

Languages by CEFR   English – B2 (Duolingvo – 115, EF SET – 71-100)

Programing   solid Wolfram Mathematica
basic Python (Pandas, Keras, Tensorflow)
basic SQL (MySQL, Postgres, Greenplum)

Project management   Team Work

- The successful management of four NRFU calls for projects (+6000 participants) in the analytical system of the National Science Foundation of Ukraine

Analytical thinking, strong research experience