# Andrey Trebler

Curriculum Vitæ

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Personal Information

Date of birth 05/04/1986

Citizenship Norwegian, originally from Kazakhstan

Marital status Married, father of 3

## Key Qualifications

Experienced \*nix-oriented developer with passion for backend, system design, and design of APIs; interest in development of rich reactive web applications; and fun of using advanced features of Kubernetes for modern containerized deployment

### Work Experience

01/2019-... Senior Software Engineer / Tech Lead, eDrilling, Stavanger, Norway

Team lead and software architect responsible for transition to cloud and design of modern APIs. Development and deployment of highly available and scalable Kubernetes-native systems based on microservices architecture. Design and implementation of HTTP REST(ful), SSE and WebSocket APIs. Development of reactive web applications

- O Backend: TypeScript/node.js (ES2022), Go, Python, C++17/Qt
- O Frontend: TypeScript/Vue.js (2/3), TypeScript/React
- O DevOps: Docker, Kubernetes, Kustomize, Azure, AWS
- O Technologies: Redis, RMQ, MongoDB, WebSockets, OpenAPI, Traefik, Keycloak, Azure AD

10/2016-01/2019 Full Stack Developer, timeanddate.com, Stavanger, Norway

Development of numerical algorithms, APIs, and software for astronomical simulations

- O Backend development (in C99) of internal and external APIs providing astronomical data
- O Frontend development (in JavaScript using D3 and three.js frameworks) of browser-based applications for astronomical visualization. ECMAScript 5, CSS/SASS and HTML5

03/2016-10/2016 Software Engineer, Steinsvik, Førresfjorden, R&D Department

Development of software for fish farming industry

- O Development (frontend and backend) of cross-platform software for camera control and monitoring at fish farms in Qt/QML and C++11
- O Support of existing software implemented in NI LabVIEW

12/2013–02/2016 Simulator Systems Analyst, MHWirth, Stavanger, Simulators Department

Development of real-time simulators for oil and gas industry

- O Development of mathematical models for equipment simulation
- O Control system software implementation
- O HIL testing of control system software

10/2007-01/2008 Software Test Engineer, ABBYY, Moscow, Mobile software testing group

Gray-box testing of applications for Symbian and Windows Mobile mobile operating systems

Page 1 of 2 ver.: v1.0.6-0-qdda6ceb

#### Education

 $06/2010-06/2013 \ \ \mathbf{PhD} \ \ \mathbf{Program} \ \ \mathbf{in} \ \ \mathbf{Atmospheric} \ \ \mathbf{sciences}, \ \ \mathit{University} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Faculty} \ \ \mathit{of} \ \ \mathit{Oslo-UiO}, \ \ \mathit{Color-UiO}, \ \$ 

Mathematics and Natural Sciences, Department of Geosciences

Section for Meteorology and Oceanography

10/2008-05/2010 PhD Program in Mathematical Modelling, Numerical Methods and Program-

ming, Lomonosov Moscow State University, Faculty of Computational Mathematics

and Cybernetics

Department of Nonlinear Dynamical Systems and Control Processes

 $09/2003-06/2008 \ \mathbf{MSc\ in\ Applied\ Mathematics\ and\ Computer\ Science\ with\ speciality\ Mathematics\ and\ Computer\ Science\ with\ speciality\ Mathematics\ and\ Computer\ Science\ with\ speciality\ Mathematics\ and\ Science\ with\ speciality\ Mathematics\ speciality\ specia$ 

matician, System Programmer, Lomonosov Moscow State University, Faculty of Computational Mathematics and Cybernetics, GPA: 4.47 (out of 5.0)

Department of Nonlinear Dynamical Systems and Control Processes

## Programming skills

GNU/Linux, macOS, OpenBSD

Programming TypeScript/JavaScript (ES2022), node.js/Deno, Go, C++17, Python, C99,

Bash, HTML/CSS/SASS

Frameworks Qt, Vue.js, Angular, React, three.js, D3.js, express.js, Bulma/Bootstrap,

FastAPI, Echo

DevOps Docker, Kubernetes, AWS, Azure, DigitalOcean, GitHub Actions, Ansible,

Kustomize

Bug tracking systems Jira, Redmine, GitHub, TFS

Technologies Redis, MongoDB, RabbitMQ, WebSockets, AMQP, MQTT, SSE,

OpenAPI/Swagger, Traefik/NGINX/HAproxy, S3, OAuth 2.0, Keycloak, WebGL, JSON-RPC, esbuild, webpack, Vite, Poetry, pydantic, jq/yq

### Languages

Russian Native

English Advanced

Norwegian Intermediate

IELTS 7.5 (L: 7.5; R: 8.5; W: 7.5; S: 7.0)  $\sim$  C2

Norskprøve 2 (A2)

#### Hobbies

IT, science, reading, chess, astronomy, table tennis, squash, volleyball, badminton, cars

#### Select Publications

- [1] A. Trebler, A. Stohl, and P. Seibert, "Identification of Greenhouse Gas Emission Sources Using Analytical Inverse Method," in *Algorithmic Analysis of Unstable Problems: Abstracts of the International Conference Dedicated to the Memory of V. K. Ivanov*, Institute of Mathematics and Mechanics, Ural Branch of the Russian Academy of Sciences, Ekaterinburg, 2011, http://aanz.imm.uran.ru/aanz/AANZ-2011-final.pdf.
- [2] Andrey Trebler, On Cascades of Bifurcations Leading to Chaos in Several Nonlinear Dissipative Systems of ODEs, Communications in Nonlinear Science and Numerical Simulation, vol. 15, no. 10, pp. 2974–2986, 2010, doi: 10.1016/j.cnsns.2009.11.019.
- [3] Andrey Trebler, A Transition to Chaos in Rucklidge Model of Double Convection, in CIMCA '08: Proceedings of the 2008 International Conference on Computational Intelligence for Modelling Control & Automation, 2008, IEEE Computer Society, pp. 952–957, doi: 10.1109/CIMCA.2008.46.

ver.: v1.0.6-0-qdda6ceb Page 2 of 2