

# VORTRÄGE

15:45 Kaffeejause

**Mittwoch, 15. Jänner 2020 16:15 bis 19:00**, Sky Lounge, 12. OG, OMP 1

**Antrittsvorlesung: Philipp Petersen (U Vienna): "Deep neural networks in numerical analysis"**

Org: R. Donninger, Ch. Krattenthaler

**Abstract:**

*We will discuss some recent applications of deep learning and deep neural networks in classical fields of applied mathematics. We will concentrate mostly on their capability to serve as trial functions in the numerical solution of PDEs. In this context, we will present a couple of aspects of deep neural networks that suggest that these approaches are potentially far superior to classical methods. On the other hand, we will identify several properties of neural networks that seem to prohibit their application in problems where one is interested in provably convergent algorithms. Finally, I will present a list of most pressing issues in these approaches as a call to arms for all numerical analysts in the room.*

**Im Anschluss: kleines Buffet**

**Montag, 13. Jänner 2020 12:30 bis 13:15**, Augasse 2-6, UZA 1 - Building 2 1090 Wien

**Research SE: Asaf Karagila (University of East Anglia, Norwich, UK): "How to have more things by forgetting how to count them"**

Org: KGRC

**Dienstag, 14. Jänner 2020 13:15 bis 14:45**, SR 8, 2. OG, OMP 1

**Representation Theory and Automorphic Forms: Harald Grobner (University of Vienna): "Automorphic L-functions: Intertwining operators & meromorphic continuation"**

Org: H. Grobner, A. Minguez-Espallargas, A. Mellit

**Dienstag, 14. Jänner 2020 15:00 bis 17:00**, SR 7, 2. OG., OMP 1

**Geometry and Analysis on Groups Seminar: Giles Gardam (Münster): "One-relator groups and the Haagerup property"**

Org: G. Arzhantseva, Ch. Cashen

[https://mathematik.univie.ac.at/forschung/seminare/geometry-and-analysis-on-groups-seminar/?no\\_cache=1](https://mathematik.univie.ac.at/forschung/seminare/geometry-and-analysis-on-groups-seminar/?no_cache=1)

**Dienstag, 14. Jänner 2020 15:00 bis 16:30**, SR 11, 2. OG, OMP 1

**SE Seminars Optimization: Matus Benko (Universität Wien): "On inner calmness\*, generalized calculus, and derivatives of the normal-cone map"**

Org: R. I. Bot, A. Neumaier, H. Schichl

**Dienstag, 14. Jänner 2020 15:15 bis 16:45**, TU Wien, Dissertantenraum, Freihaus, Turm A, 8. OG., Wiedner Hauptstr. 8-10, 1040 Wien

**AG Diskrete Mathematik: Hsien-Kuei Hwang (Academia Sinica): "Asymptotics and statistics of Fishburn matrices and their generalizations"**

Org: M. Drmota

**Mittwoch, 15. Jänner 2020 10:00 bis 11:00**, KGRC lecture room (seminar room D5.48, Augasse 2-6, UZA 1 Building 2, 1090 Wien

**Öffentliche Defensio: Jürgen Manuel Inselmann (Universität Wien): "Generalized notions of recurrence: Bases and the existence of invariant probability measures"**

Org: Ch. Krattenthaler

[https://mathematik.univie.ac.at/fileadmin/user\\_upload/f\\_mathematik/Vortraege/2018\\_19/Inselmann.pdf](https://mathematik.univie.ac.at/fileadmin/user_upload/f_mathematik/Vortraege/2018_19/Inselmann.pdf)

**Mittwoch, 15. Jänner 2020 11:30 bis 13:00**, SR 11

**SE Harmonic Analysis: Karlheinz Gröchenig (University of Vienna): "Sign and phase-retrieval in a shift-invariant space generated by a Gaussian"**

Org: M. Ehler, K. Gröchenig

**Mittwoch, 15. Jänner 2020 14:00 bis 14:45**, TU Wien, Wiedner Hauptstr. 8, FH 8 Nöbauer HS 2. OG., 1040 Wien

**PDE Afternoon: Vladimir Kazeev (University of Vienna): "Low-rank tensor representation for the structured solution of PDEs "**

Org: SFB 65, DK

<https://www.univie.ac.at/sfb65/#!/public/events/details/?type=1&id=454>

**Mittwoch, 15. Jänner 2020 15:00 bis 15:45**, Sky Lounge, 12. OG, OMP 1

**PhD Colloquium: Axel Böhm (Universität Wien): "How Machines learn"**

Org: Vienna Doctoral School of Mathematics

[https://mathematik.univie.ac.at/fileadmin/user\\_upload/f\\_mathematik/Vortraege/2018\\_19/poster-2020-01-15.pdf](https://mathematik.univie.ac.at/fileadmin/user_upload/f_mathematik/Vortraege/2018_19/poster-2020-01-15.pdf)

<https://www.vsmath.at/academics/phd-colloquia/>

**Mittwoch, 15. Jänner 2020 15:00 bis 15:30**, TU Wien, Wiedner Hauptstr. 8, FH 8 Nöbauer HS 2. OG., 1040 Wien

**PDE Afternoon: Maximilian Bernkopf (TU Wien): "TBA"**

Org: SFB 65, DK

<https://www.univie.ac.at/sfb65/#!/public/events/details/?type=1&id=455>

**Mittwoch, 15. Jänner 2020 15:30 bis 16:00**, TU Wien, Wiedner Hauptstr. 8, FH 8 Nöbauer HS 2. OG., 1040 Wien

**PDE Afternoon: Carl-Martin Pfeiler (TU Wien): "TBA"**

Org: SFB 65, DK

<https://www.univie.ac.at/sfb65/#!/public/events/details/?type=1&id=456>

**Donnerstag, 16. Jänner 2020 11:00 bis 11:45**, SR 11, 2.OG, OMP 1

**Öffentliche Defensio: David Nicholas Nenning (Universität Wien): "ODE-closedness of function spaces and almost analytic extensions of ultradifferentiable functions"**

Org: Fakultät für Mathematik, Dekan Christian Krattenthaler

[https://mathematik.univie.ac.at/fileadmin/user\\_upload/f\\_mathematik/Vortraege/2018\\_19/Nennin-g-2.pdf](https://mathematik.univie.ac.at/fileadmin/user_upload/f_mathematik/Vortraege/2018_19/Nennin-g-2.pdf)

**Donnerstag, 16. Jänner 2020 11:30 bis 12:30**, SR 12, 2. OG, OMP 1

**Geometry and Analysis on Groups Seminar: Matei Manolache: "Student talk"**

Org: G. Arzhantseva, Ch. Cashen

[https://mathematik.univie.ac.at/forschung/seminare/geometry-and-analysis-on-groups-seminar/?no\\_cache=1](https://mathematik.univie.ac.at/forschung/seminare/geometry-and-analysis-on-groups-seminar/?no_cache=1)

**Donnerstag, 16. Jänner 2020 14:00 bis 14:45**, Fakultät für Physik, Raum 218, 2. Stock, Währinger Str. 17, 1090 Wien

**Literaturseminar: Walter Simon (Vienna): "Marginally trapped surfaces"**

Org: P. Chrusciel, D. Fajman

[https://mathematik.univie.ac.at/fileadmin/user\\_upload/f\\_mathematik/Vortraege/2018\\_19/Semin-areinladung\\_GRAVI\\_Simon\\_16Jaenner2020-1.pdf](https://mathematik.univie.ac.at/fileadmin/user_upload/f_mathematik/Vortraege/2018_19/Semin-areinladung_GRAVI_Simon_16Jaenner2020-1.pdf)

**Donnerstag, 16. Jänner 2020 16:00 bis 18:00**, KGRC lecture room (seminar room D5.48, Augasse 2-6, UZA 1 Building 2, 1090 Wien

**KGRC SE: Corey Bacal Switzer (City University of New York, Graduate Center, USA): "Generalized Cardinal Characteristics for Sets of Functions"**

Org: KGRC

[https://mathematik.univie.ac.at/www.logic.univie.ac.at/2020/Talk\\_01-16\\_a.html](https://mathematik.univie.ac.at/www.logic.univie.ac.at/2020/Talk_01-16_a.html)

**Donnerstag, 16. Jänner 2020 16:30 bis 18:00**, HS 11, 2. OG, OMP 1

**Vienna Seminar in Mathematical Finance and Probability: Thorsten Rheinländer (TU Wien): "On pathwise stochastic integration"**

<https://fam.tuwien.ac.at/events/vs-mfp/>

**Freitag, 17. Jänner 2020 10:00 bis 10:45**, BZ 9, 9. OG, OMP1 09.142

**AG Ergodentheorie & Dynamische Systeme: Grisela Zeka (Universitaet Wien): "Cellular automata and hydrodynamics"**

Org: H. Bruin, R. Zweimüller