

Curriculum vitae – Christian Johansson

Personal details

Address Matematiska vetenskaper
Chalmers Tekniska högskola och Göteborgs universitet
412 96 Göteborg
Sweden

Email chrjohv@chalmers.se

Homepage <http://www.math.chalmers.se/~chrjohv/>

Employment

06/2022 – present Senior lecturer (universitetslektor),
University of Gothenburg and Chalmers University of Technology, Sweden

09/2018 – 05/2022 Assistant lecturer (biträdande lektor), tenure track,
University of Gothenburg and Chalmers University of Technology, Sweden

09/2016 – 08/2018 Herchel Smith Postdoctoral Research Fellow,
DPMMS, University of Cambridge, UK

01/2015 – 07/2016 Member, School of Mathematics, Institute for Advanced Study,
Princeton, USA

08/2014 – 12/2014 Postdoctoral Research Fellow,
Mathematical Sciences Research Institute, Berkeley, USA

04/2013 – 07/2014 Senior Research Fellow, Mathematical Institute,
University of Oxford, UK

Fellowships and visiting positions

10/2016 – 08/2018 College Research Associate, Clare College, University of Cambridge, UK

10/2013 – 07/2014 Nicholas Kurti Junior Research Fellow, Brasenose College,
University of Oxford, UK

01/2012 – 03/2012 Scientific researcher, Thematic program on Galois representations
Fields Institute, Toronto, Canada

Education

09/2009 – 03/2013	PhD in Mathematics, Imperial College London, UK Advisors: Kevin Buzzard and Toby Gee Viva date: 6 June 2013.
10/2008 – 06/2009	Certificate of Advanced Study in Mathematics (Part III) Clare College, University of Cambridge, UK Distinction
10/2005 – 06/2008	BA Mathematics Clare College, University of Cambridge, UK First Class Honours all three years
08/2004 – 06/2005	Göteborgs universitet, Sweden Mathematics 63 hp Mathematical Logic 37.5 hp All courses passed with VG (“pass with distinction”)

Grants and awards

Strömer – Ferrnerska belöningen, Royal Academy of Sciences (2022)

Etableringsbidrag, Vetenskapsrådet, SEK 3,300,000 (2020-24)

Forskningsstipendium, Anna och Holger Crafoords fond, SEK 210,000 (2020)
With Wushi Goldring, Dan Petersen and Martin Raum.

Publications and Preprints (may be found on www.math.chalmers.se/~chrjohv)

1. Classicality for small slope overconvergent automorphic forms on some compact PEL Shimura varieties of type C. **Math. Annalen.**, vol. **357(1)**, pp **51-88** (2013).
2. A remark on a conjecture of Buzzard-Gee and the cohomology of Shimura varieties. **Math. Research Letters**, vol. **20(2)**, pp **279-288** (2013).
3. A trace formula approach to control theorems for overconvergent automorphic forms. **Manuscripta Mathematica**, vol. **151(1)**, pp **19-48** (2016).
4. A canonical dimension estimate for non-split semisimple p-adic Lie groups. With Konstantin Ardakov. **Representation Theory**, vol. **20**, pp **128-138** (2016).
5. On the Sato-Tate conjecture for non-generic abelian surfaces. With an appendix by Francesc Fite. **Transactions of the A.M.S.**, vol. **369(9)**, pp **6303-6325** (2017).
6. Overconvergent modular forms and perfectoid Shimura curves. With Przemyslaw Chojecki

- and David Hansen. **Documenta Mathematica**, vol. 22, pp 191-262 (2017).
7. Extended eigenvarieties for overconvergent cohomology. With James Newton. **Algebra and Number Theory**, vol 13(1), pp 93-158 (2019).
 8. Irreducible components of extended eigenvarieties and interpolating Langlands functoriality. With James Newton. **Math. Research Letters**, vol. 26(1), pp. 159-201 (2019).
 9. Parallel weight two points on Hilbert modular eigenvarieties and the parity conjecture. With James Newton. **Forum of Mathematics Sigma**, vol 7, e27, 36 pp (2019).
 10. On subquotients of the étale cohomology of Shimura varieties. With Jack Thorne. **In Shimura varieties, London Math. Society Lecture Notes Series 457 (2020), p 306-334.**
 11. Local Langlands correspondence in rigid families. With James Newton and Claus Sorensen. **Pacific Journal of Math.**, vol. 304(1), pp 65-102 (2020).
 12. Shimura varieties at level $\Gamma_1(p^\infty)$ and Galois representations. With Ana Caraiani, Daniel Gulotta, Chi-Yun Hsu, Lucia Mocz, Emanuel Reinecke and Sheng-Chi Shih. **Compositio Mathematica** 156(6), pp 1152-1230 (2020)
 13. A quotient of the Lubin-Tate tower II. With Judith Ludwig, and with an appendix by David Hansen. **Math. Annalen**, vol. 380, pp 43-89 (2020)
 14. Vanishing theorems for Shimura varieties at unipotent level. With Ana Caraiani and Daniel Gulotta. **To appear in Journal of the EMS.**
 15. Politiska karteller och Sverigedemokraternas framgång. With Anders Kärnä and Jaakko Meriläinen. **In Folkviljans förverkligare, Gothenburg University Press (2022), pp 117-133.**
 16. Perfectoid Shimura varieties and the Calegari-Emerton conjectures. With David Hansen. **To appear in Journal of the LMS.**
 17. Vox Populi, Vox Dei? Tacit collusion in politics. With Anders Kärnä and Jaakko Meriläinen. **To appear in Economics & Politics.**
 18. Endoscopy on $SL(2)$ -eigenvarieties. With Judith Ludwig. 54 pp. Submitted.

Main teaching experience

08/2022 – 10/2022	Lecturer, “TMV211 Inledande diskret matematik” and “TMV200 Diskret Matematik”, Chalmers Tekniska högskola
10/2021 – 12/2021	Lecturer, “TMV200 Diskret Matematik”, Chalmers Tekniska högskola
10/2020 – 12/2020	Lecturer, “TMV200 Diskret Matematik”, Chalmers Tekniska högskola

10/2019 – 12/2019	Lecturer, “TMV200 Diskret Matematik”, Chalmers Tekniska högskola
10/2018 – 12/2018	Lecturer, “LMA400 Matematisk Analys”, Chalmers Tekniska högskola
10/2017 – 12/2017	Lecturer, “Algebraic Number Theory”, 4 th year master's level course, University of Cambridge
10/2016 – 12/2016	Lecturer, “Local Fields”, 4 th year master's level course, University of Cambridge
01/2014 – 03/2014	Lecturer, “Adic spaces”, graduate course, University of Oxford

Organization

12/2018 – present	Organizer, Chalmers/GU Algebraic Geometry and Number Theory Seminar. With Anders Södergen.
06/2022	Organizer, Topology and Arithmetic around the Langlands program (conference), Stockholm University. With Wushi Goldring, Dan Petersen and Martin Raum.
09/2015 – 06/2016	Organizer, IAS/Princeton University Number Theory Seminar. With Ana Caraiani and Rafael von Känel.
01/2014 – 07/2014	Organizer, Oxford Number Theory Seminar. With Eugen Keil.
10/2013	Organizer, “Number Theory Day”, one-day internal conference, University of Oxford. With Eugen Keil.