

# Curriculum Vitae – Roger Ruber

## Education and Degrees

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Associate Prof. (Docent) 2009	Dept. of Physics and Astronomy, Uppsala University, Sweden
PhD 1999	High energy physics, Uppsala University, Sweden
MSc 1991	Applied Physics, Eindhoven University of Technology, Netherlands

## Key Competencies

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Leadership	<b>Head FREIA Laboratory, Chair CLIC Collaboration Board:</b> Project and research group management for large and complex scientific projects. Strategy development. Communication and reporting.
Scientific & Technical	<b>Accelerator and instrumentation R&amp;D:</b> (S)RF cavities, SC magnets, RF systems, cryogenics, cryostats, accelerator beam lines. Particle detectors, controls, safety, training, testing and quality assurance.
Academic	<b>Teaching, student supervision and outreach.</b>

## Professional Experience

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### Senior Staff Engineer (2021 – present)

#### Jefferson Lab, USA

Development of advanced cleaning methods for superconducting cavities. Establishing national and international collaborations pushing SRF potential.

### Division Head, Research Physicist (2009 – 2021)

#### Uppsala University, Sweden

Instigator and manager of the FREIA Laboratory (Facility for Research Instrumentation and Accelerator Development). Project management of accelerator development for ESS, LHC, FEL; energy efficient RF; instrumentation for ESS and MAXlab; equipment development of cryogenics and cryostats, RF systems. Establish research strategy with university higher management. Construction 20 MEUR, annual operation 3.4 MEUR.

#### **Key achievements:**

Established a new research laboratory for accelerators and scientific instrumentation;  
Established university strategy for instrumentation development resulting in an annual grant for FREIA.

### Research Physicist and Technical Coordinator (2006 – 2016)

#### CERN, Switzerland, and Uppsala University, Sweden

Project management CTF3 Two-Beam Test Stand accelerator test facility.  
Design, construction, commissioning, and operation of accelerator test beam line and instrumentation.  
Leading research, operation and maintenance.

#### **Key achievements:**

Established and operated accelerator test beam facility; Demonstrated two-beam high-gradient acceleration.

### Project Associate (2001 – 2006)

#### CERN, Switzerland, and Uppsala University, Sweden

Project management ATLAS Central Solenoid and instrumentation for ATLAS toroid magnets.  
Construction and commissioning of superconducting magnets. Development of instrumentation, control, monitor and safety system. Analyzing safety risks for installation and operation. Safety officer and training.

#### **Key achievements:**

Realization ATLAS Central Solenoid. Realization instrumentation for the ATLAS Toroid magnets.

### Visiting Scientist (1999 – 2000)

#### KEK, Japan

Construction of a superconducting quadrupole magnet for the LHC. Study field quality distortions.  
Design of a constant gradient solenoid for the MEG experiment at PSI.

#### **Key achievements:**

Realization prototype superconducting LHC quadrupole magnet.

## Senior Research Engineer (1999 – 2001)

### The Svedberg Laboratory, Sweden

Operation and maintenance of the WASA superconducting solenoid, helium cryogenics and detector setup. Operation of central computing systems: implementation of fault-tolerant and remote installation services.

#### **Key achievements:**

Improved operation effectiveness and introduced fault-tolerant systems.

## Research Engineer (1997 – 1999) and Doctoral Student (1991 – 1999)

### Uppsala University, Sweden

PROMICE/WASA experiments at CELSIUS. Development, installation and commissioning of the WASA superconducting solenoid including cryogenics, controls and safety systems. Magnetic field measurements.

#### **Key achievements:**

Realization of the WASA superconducting solenoid.

## Visiting Scientist (1992 – 1993)

### KEK, Japan

Design WASA superconducting solenoid. Test of prototype coil, current leads and persistent current switch.

#### **Key achievements:**

Realization prototype superconducting solenoid and its cryostat.

## Research Organization Assignments

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2021 Head, FREIA Division, Uppsala University  
2011 – 2021 Deputy Head, FREIA Division, Uppsala University  
2016 – 2021 Chair, CLIC/CTF3 collaboration board  
2019 External Expert, Projects Peer Review Panel of the STFC  
2018 Member, China-ADS review committee  
2017 – 2022 Member, EU ARIES project steering committee  
2014 – 2021 Member, CLIC/CTF3 collaboration board  
2010 – 2017 Member, MICE project advisory board  
2009 – 2021 Member, ESS accelerator technical board (“extended working group”, 2009 – 2011)  
Member of several European research consortia such as ARIES, AMICE, ESSnuSB, CompactLight.  
Organisation of workshops on RF (2019, 2014, 2013, 2011), magnets (2019), proton linacs (2018), linear colliders (2011, 2010, 2008, 2007).  
Review for European Phys. J., IEEE Trans. Appl. Superc., IEEE Microw. Wireless Comp., Rev. Sci. Instr.

## Scientific Publications

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More than 190 publications and over 60 internal reports. INSPIRE **h<sub>HEP</sub> index 33**.  
See publication list or e.g. <http://inspirehep.net/search?p=exactauthor:R.J.M.Y.Ruber.1>

## Language Skills

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Dutch	mother tongue
English, Swedish	fluent
French, German	intermediate
Japanese	basic

## Teaching and Outreach

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Academic level teaching on accelerator systems. Technical and safety training.  
CERN guide and other outreach activities for ATLAS and CLIC/CTF3.  
Committee member PhD defense.

Supervision of PhD students Björn Lindström (2021), Anirban Bhattacharyya (2018), Jim Ögren (2017), Andrea Palaia (2013); Licentiate student Michael Holz (2019), Magnus Johnson (2008).

# List of Publications – Roger Ruber

For a public listing, see [https://inspirehep.net/literature?q=a\\_R.J.M.Y.Ruber.1](https://inspirehep.net/literature?q=a_R.J.M.Y.Ruber.1)

Number of citations from **INSPIRE**, **hHEP index** **33**.

## 1. Peer-reviewed Articles

1. T. Bagni, ... and **R. Ruber**, (21 authors)  
*Modeling results of the quench behavior of a Nb-Ti Canted-Cosine-Theta corrector magnet for LHC*,  
IEEE Trans. Appl. Superc. **34** (5) (2024) 1.  
DOI: [10.1109/TASC.2023.3346848](https://doi.org/10.1109/TASC.2023.3346848)
2. K. Pepitone, ... and **R. Ruber**, (16 authors).  
*Design and fabrication of a canted-cosine-theta double aperture orbit corrector for the LHC*,  
IEEE Trans. Appl. Superc. **33** (5) (2023) 1.  
DOI: [10.1109/TASC.2023.3241571](https://doi.org/10.1109/TASC.2023.3241571)
1. R. Tong, Z. Dai, J. Olsson, I. Huynen, **R. Ruber** and D. Dancila,  
*Taper Transmission Line Based Measurement—A Thru-Only De-Embedding Approach*  
IEEE Trans. Microw. Theory Tech. **70** (9) (2021) 4199.  
DOI: [10.1109/TMTT.2022.3187981](https://doi.org/10.1109/TMTT.2022.3187981)
2. K. Pepitone, G. Kirby, **R. Ruber**, et al., (13 authors)  
*Design of a Canted-Cosine-Theta Orbit Corrector for the High Luminosity LHC*,  
IEEE Trans. Appl. Superc. **32** (6) (2022) 4003104.  
DOI: [10.1109/TASC.2022.3154334](https://doi.org/10.1109/TASC.2022.3154334)
3. **R. Ruber** et al (25 authors),  
*Accelerator Development at the FREIA Laboratory*,  
J.Inst. **16** (2021) P07039  
DOI: [10.1088/1748-0221/16/07/P07039](https://doi.org/10.1088/1748-0221/16/07/P07039).
4. M. Jacewicz, J. Eriksson, **R. Ruber**, S. Calatroni, I. Profatlova, W. Wuensch,  
*Temperature-Dependent Field Emission and Breakdown Measurements Using a Pulsed High-Voltage Cryosystem*,  
Phys. Rev. Applied **14**, 061002 (2020).  
DOI: [10.1103/PhysRevApplied.14.061002](https://doi.org/10.1103/PhysRevApplied.14.061002)
5. L. Hoang Duc, M. Jobs, T. Lofnes, **R. Ruber**, J. Olsson, D. Dancila,  
*Feedback compensated 10 kW solid-state pulsed power amplifier at 352 MHz for particle accelerators*,  
Rev. of Scientific Instruments **Vol.90**, Issue 10 (2019) 104707.  
DOI: [10.1063/1.5110981](https://doi.org/10.1063/1.5110981)
6. H. Li, M. Jobs, R. Santiago Kern, V.A. Goryashko, L. Hermansson, A. Bhattacharyya, T. Lofnes, K. Gajewski, K. Fransson, R. Ruber,  
*Characterization of a  $\beta=0.5$  double spoke cavity with a fixed power coupler*,  
Nucl. Instr. Meth. **A927** (2019) 63.  
DOI: [10.1016/j.nima.2019.02.003](https://doi.org/10.1016/j.nima.2019.02.003)
7. M. Jobs, D. Dancila, J. Eriksson, **R. Ruber**,  
*A 8-1 Single Stage 10 kW Planar Cysel Power Combiner at 352 MHz*,  
IEEE Trans. Components, Packaging and Manufacturing Technology **8** (5) (2018) 851-857.  
DOI: [10.1109/TCPMT.2018.2811710](https://doi.org/10.1109/TCPMT.2018.2811710)
8. L. Hoang Duc, A. Nguyen Dinh The, D. Bach Gia, M. Jobs, **R. Ruber**, D. Dancila,  
*High-Power Low-Loss Air-Dielectric Stripline Cysel Divider/Combiner for Particle Accelerator Applications at 352 MHz*,  
The Journal of Engineering **2018** (5) (2018) 264-267.  
DOI: [10.1049/joe.2017.0793](https://doi.org/10.1049/joe.2017.0793)
9. L. Hoang Duc, A. Bhattacharyya, V. Goryashko, **R. Ruber**, A. Rydberg, J. Olsson and D. Dancila,  
*Time domain characterization of high power solid state amplifiers for the next generation linear accelerators*,  
Microwave and Optical Technology Letters **16** (1) (2018) 163-171.  
DOI: [10.1002/mop.30926](https://doi.org/10.1002/mop.30926)
10. V. Goryashko, M. Jobs, L.H. Duc, J. Eriksson, **R. Ruber**,  
*12-Way 100 kW Re-entrant Cavity-based Power Combiner with Doorknob Couplers*,  
IEEE Microwave and Wireless Components Letters **28** (2) (2018) 111-113.

DOI: [10.1109/LMWC.2017.2780619](https://doi.org/10.1109/LMWC.2017.2780619)

11. E. Wildner, ..., **R. Ruber**, ... et al (30 authors),  
*The Opportunity Offered by the ESSnuSB Project to Exploit the Larger Leptonic CP Violation Signal at the Second Oscillation Maximum and the Requirements of This Project on the ESS Accelerator Complex*,  
Advances in High Energy Physics, vol. 2016, Article ID 8640493, 16 pages (2016).  
DOI: [10.1155/2016/8640493](https://doi.org/10.1155/2016/8640493)
12. V. Goryashko, A. Bhattacharyya, H. Li, D. Dancila and **R. Ruber**,  
*A method for high-precision characterization of the Q-slope of superconducting RF cavities*,  
IEEE Trans. Microwave Theory and Techniques **64** (11) (2016) 3764.  
DOI: [10.1109/TMTT.2016.2605671](https://doi.org/10.1109/TMTT.2016.2605671)
13. M. Jacewicz, V. Ziemann, T. Ekelöf, A. Dubrovskiy and **R. Ruber**,  
*Spectrometers for RF breakdown studies for CLIC*,  
Nucl. Instr. Meth. **A828** (2016) 63.  
DOI: [10.1016/j.nima.2016.05.031](https://doi.org/10.1016/j.nima.2016.05.031)
14. A.K. Bhattacharyya, V. Ziemann, **R. Ruber** and V. Goryashko,  
*Minimization of Power Consumption during Charging of Superconducting Accelerating Cavities*,  
Nucl. Instr. Meth. **A801** (2015) 78.  
DOI: [10.1016/j.nima.2015.07.056](https://doi.org/10.1016/j.nima.2015.07.056)
15. J. Ögren, **R. Ruber**, V. Ziemann, W. Farabolini,  
*Measuring the full transverse beam matrix using a single octupole*,  
Phys. Rev. ST Accel. Beams **18**, 072801 (2015).  
DOI: [10.1103/PhysRevSTAB.18.072801](https://doi.org/10.1103/PhysRevSTAB.18.072801)
16. V.A. Goryashko, D. Dancila, A. Rydberg, R. Yogi and **R. Ruber**,  
*A megawatt class compact power combiner for solid-state amplifiers*,  
Journal of Electromagnetic Waves and Applications **28** (18) (2014) 2243.  
DOI: [10.1080/09205071.2014.962187](https://doi.org/10.1080/09205071.2014.962187)
17. E. Baussan, ..., **R. Ruber**, ... et al. (35 authors),  
*A Very Intense Neutrino Super Beam Experiment for Leptonic CP Violation Discovery based on the European Spallation Source Linac*,  
Nuclear Physics **B885** (2014) 127.  
DOI: [10.1016/j.nuclphysb.2014.05.016](https://doi.org/10.1016/j.nuclphysb.2014.05.016)  
arXiv:1309.7022 (2013).  
Number of citations: 100+
18. **R. Ruber** et al. (6 authors),  
*The CTF3 Two-beam Test Stand*,  
Nucl. Instr. Meth. **A729** (2013) 546.  
DOI: [10.1016/j.nima.2013.07.055](https://doi.org/10.1016/j.nima.2013.07.055)
19. A. Palaia, M. Jacewicz, **R. Ruber**, V. Ziemann, and W. Farabolini,  
*Effects of RF breakdown on the beam in the Compact Linear Collider prototype accelerator structure*,  
Phys. Rev. ST Accel. Beams **16**, 081004 (2013).  
DOI: [10.1103/PhysRevSTAB.16.081004](https://doi.org/10.1103/PhysRevSTAB.16.081004)
20. E. Adli, **R. Ruber**, V. Ziemann, R. Corsini, A. Dubrovskiy, and I. Syratchev,  
*X-band rf power production and deceleration in the two-beam test stand of the Compact Linear Collider test facility*  
Phys. Rev. ST Accel. Beams **14**, 081001 (2011).  
DOI: [10.1103/PhysRevSTAB.14.081001](https://doi.org/10.1103/PhysRevSTAB.14.081001)
21. P. Adlarson, ..., **R.J.M.Y. Ruber**, ... et al. (WASA-at-COSY Collaboration, 123 authors),  
*Abashian-Booth-Crowe Effect in Basic Double-Pionic Fusion: A New Resonance?*,  
Phys. Rev. Lett. 106 (2011) 242302.  
DOI: [10.1103/PhysRevLett.106.242302](https://doi.org/10.1103/PhysRevLett.106.242302)  
Number of citations: 200+
22. M. Lindroos, ..., **R. Ruber**, ... et al. (19 authors),  
*The European Spallation Source*,  
Nucl. Instr. Meth. **B269** (2011) 3258.  
DOI: [10.1016/j.nimb.2011.04.012](https://doi.org/10.1016/j.nimb.2011.04.012)

23. T. Skorodko, ..., **R.J.M.Y. Ruber**, ... et al. (40 authors),  
*Exclusive Measurement of the  $pp \rightarrow nn\pi^+\pi$  Reaction at 1.1 GeV*,  
Eur.Phys.J. **A47** (2011) 108.  
DOI: [10.1140/epja/i2011-11108-2](https://doi.org/10.1140/epja/i2011-11108-2)
24. T. Skorodko, ..., **R.J.M.Y. Ruber**, ... et al. (40 authors),  
 *$\Delta$  excitation in proton-proton induced  $\pi^0\pi^0$  production*,  
Phys. Lett. **B695** (2011) 115.  
DOI: [10.1016/j.physletb.2010.11.030](https://doi.org/10.1016/j.physletb.2010.11.030)
25. F. Kren, ..., **R.J.M.Y. Ruber**, ... et al. (40 authors),  
*Exclusive Measurement of the  $pp \rightarrow d\pi^+\pi$ : Double-Pionic Fusion without ABC Effect*,  
Phys.Lett. **B684** (2010) 110, Erratum: Phys. Lett. **B702** (2011) 312.  
DOI: [10.1016/j.physletb.2011.07.021](https://doi.org/10.1016/j.physletb.2011.07.021), [10.1016/j.physletb.2009.12.061](https://doi.org/10.1016/j.physletb.2009.12.061)
26. S. Keleta, ..., **R.J.M.Y. Ruber**, ... et al. (49 authors),  
*Exclusive measurement of two-pion production in the  $dd \rightarrow He^4\pi\pi$  reaction*,  
Nucl. Phys. **A825** (2009) 71.  
DOI: [10.1016/j.nuclphysa.2009.04.008](https://doi.org/10.1016/j.nuclphysa.2009.04.008)
27. M. Bashkanov, ..., **R.J.M.Y. Ruber**, ... et al. (CELSIUS/WASA Collaboration),  
*Double-Pionic Fusion of Nuclear Systems and the "ABC" Effect: Approaching a Puzzle by Exclusive and Kinematically Complete Measurements*,  
Phys. Rev. Lett. **102** (2009) 052301.  
DOI: [10.1103/PhysRevLett.102.052301](https://doi.org/10.1103/PhysRevLett.102.052301)  
Number of citations: 200+
28. T. Skorodko, ..., **R.J.M.Y. Ruber**, ... et al. (35 authors),  
*Two-pion production in proton-proton collisions - experimental total cross sections and their isospin decomposition*,  
Phys. Lett. **B679** (2009) 30.  
DOI: [10.1016/j.physletb.2009.07.012](https://doi.org/10.1016/j.physletb.2009.07.012)  
Number of citations: 50+
29. C. Adolph, ..., **R.J.M.Y. Ruber**, ... et al. (WASA-at-COSY Collaboration),  
*Measurement of the  $\eta \rightarrow 3\pi(0)$  Dalitz plot distribution with the WASA detector at COSY*,  
Phys. Lett. **B677** (2009) 24.  
DOI: [10.1016/j.physletb.2009.03.063](https://doi.org/10.1016/j.physletb.2009.03.063)  
Number of citations: 50+
30. K. Schonning, ..., **R.J.M.Y. Ruber**, ... et al (CELSIUS/WASA Collaboration, 49 authors),  
*Production of the omega meson in the  $pd \rightarrow He^3\Omega$  reaction at 1450 MeV and 1360 MeV*,  
Phys. Rev. **C79** (2009) 044002.  
DOI: [10.1103/PhysRevC.79.044002](https://doi.org/10.1103/PhysRevC.79.044002)
31. M. Johnson, **R. Ruber**, V. Ziemann and H. Braun,  
*Arrival time measurements of ions accompanying RF breakdown*,  
Nucl. Instr. Meth. **A595** (3) (2008) 568.  
DOI: [10.1016/j.nima.2008.08.001](https://doi.org/10.1016/j.nima.2008.08.001)
32. K. Schonning, ..., **R.J.M.Y. Ruber**, ... et al (CELSIUS/WASA Collaboration, 49 authors),  
*Polarisation of the omega meson in the  $pd \rightarrow He^3\Omega$  reaction at 1360 and 1450 MeV*,  
Phys. Lett. **B668** (2008) 258.  
DOI: [10.1016/j.physletb.2008.08.044](https://doi.org/10.1016/j.physletb.2008.08.044)
33. Chr. Bargholtz, ..., **R.J.M.Y. Ruber**, ... et al. (CELSIUS/WASA Collaboration),  
*The WASA Detector Facility at CELSIUS*,  
Nucl. Instr. Meth. **A594** (2008) 339.  
DOI: [10.1016/j.nima.2008.06.011](https://doi.org/10.1016/j.nima.2008.06.011)  
Number of citations: 100+
34. G. Aad, ..., **R. Ruber**, ... et al. (ATLAS Collaboration),  
*The ATLAS Experiment at the CERN Large Hadron Collider*,  
2008 JINST **3** S08003.  
DOI: [10.1088/1748-0221/3/08/S08003](https://doi.org/10.1088/1748-0221/3/08/S08003)  
Number of citations: 10,000+
35. D.E. Baynham, ..., **R. Ruber**, ... et al. (18 authors),  
*ATLAS End Cap Toroid Final Integration, Test and Installation*,

IEEE Trans. Appl. Superc. **18** (2) (2008) 391.  
DOI: [10.1109/TASC.2008.920668](https://doi.org/10.1109/TASC.2008.920668)

36. A. Yamamoto, Y. Makida, **R. Ruber** et al. (19 authors),  
*The ATLAS Central Solenoid*,  
Nucl. Instr. Meth. **A584** (1) (2008) 53.  
DOI: [10.1016/j.nima.2007.09.047](https://doi.org/10.1016/j.nima.2007.09.047)  
Number of citations: 50+
37. M. Berlowski, ..., **R. Ruber**, ... et al. (CELSIUS/WASA Collaboration, 50 authors),  
Measurement of eta meson decays into lepton-antilepton pairs,  
Phys. Rev. **D77** (2008) 032004.  
DOI: [10.1103/PhysRevD.77.032004](https://doi.org/10.1103/PhysRevD.77.032004)  
Number of citations: 50+
38. **R. Ruber** et al. (15 authors),  
*Ultimate Performance of the ATLAS Superconducting Solenoid*,  
IEEE Trans. Appl. Superc. **17** (2) (2007) 1201.  
DOI: [10.1109/TASC.2007.899022](https://doi.org/10.1109/TASC.2007.899022)
39. D.E. Baynham, ..., **R. Ruber**, ... et al. (10 authors),  
*ATLAS End-Cap Toroid Integration and Test*,  
IEEE Trans. Appl. Superc. **17** (2) (2007) 1197.  
DOI: [10.1109/TASC.2007.897734](https://doi.org/10.1109/TASC.2007.897734)
40. M. Bashkanov, ..., **R.J.M.Y. Ruber**, ... et al. (45 authors),  
*Measurement of the slope parameter for the  $\eta \rightarrow 3\pi^0$  decay in the  $pp \rightarrow pp\eta$  reaction*,  
Phys. Rev. **C76** (2007) 048201.  
DOI: [10.1103/PhysRevC.76.048201](https://doi.org/10.1103/PhysRevC.76.048201)
41. C. Pauly, ..., **R. Ruber**, ... et al. (CELSIUS/WASA Collaboration, 44 authors),  
*The  $pp \rightarrow pp\pi\pi$  reaction channels in the threshold region*,  
Phys. Lett. **B649** (2007) 122.  
DOI: [10.1016/j.physletb.2007.04.004](https://doi.org/10.1016/j.physletb.2007.04.004)
42. Chr. Bargholtz, ..., **R. Ruber**, ... et al. (CELSIUS/WASA Collaboration, 50 authors),  
*Measurement of the  $\eta \rightarrow \pi^+\pi^-\pi^+\pi^-$  decay branching ratio*,  
Phys. Lett. **B644** (2007) 299.  
DOI: [10.1016/j.physletb.2006.12.008](https://doi.org/10.1016/j.physletb.2006.12.008)
43. **R.J.M.Y. Ruber** et al. (7 authors),  
*Quench Characteristics of the ATLAS Central Solenoid*,  
IEEE Trans. Appl. Superc. **16** (2) (2006) 533.  
DOI: [10.1109/TASC.2006.873349](https://doi.org/10.1109/TASC.2006.873349)
44. M. Bashkanov, ..., **R.J.M.Y. Ruber**, ... et al. (CELSIUS/WASA Collaboration, 45 authors),  
*Exclusive measurements of the  $pd \rightarrow He^3\pi\pi$ : The ABC effect revisited*,  
Phys. Lett. **B637** (2006) 223.  
DOI: [10.1016/j.physletb.2006.03.082](https://doi.org/10.1016/j.physletb.2006.03.082)  
Number of citations: 50+
45. **R.J.M.Y. Ruber** et al. (17 authors),  
*ATLAS Superconducting Solenoid On-surface Test*,  
IEEE Trans. Appl. Superc. **15** (2) (2005) 1283.  
DOI: [10.1109/TASC.2005.849571](https://doi.org/10.1109/TASC.2005.849571)
46. **R.J.M.Y. Ruber** et al. (23 authors),  
*On-surface Integration and Test of the ATLAS Central Solenoid and its Proximity Cryogenics*,  
IEEE Trans. Appl. Superc. **14** (2004) 500.  
DOI: [10.1109/TASC.2004.829708](https://doi.org/10.1109/TASC.2004.829708)
47. W. Ootani, ... **R. Ruber**, ... et al. (9 authors),  
*Development of a Thin-wall Superconducting Magnet for the Positron Spectrometer in the MEG Experiment*,  
IEEE Trans. Appl. Superc. **14** (2004) 568.  
DOI: [10.1109/TASC.2004.829721](https://doi.org/10.1109/TASC.2004.829721)

48. R. Bilger, ... **R.J.M.Y. Ruber**, ... et al. (32 authors),  
*Measurement of the  $pd \rightarrow pd\eta$  Cross-Section in Complete Kinematics*,  
 Phys. Rev. **C69** (2004) 014003.  
 DOI: [10.1103/PhysRevC.69.014003](https://doi.org/10.1103/PhysRevC.69.014003)
49. H.H.Adam, ..., **R. Ruber**,... et al., (138 authors)  
 Proposal for the wide angle shower apparatus (WASA) at COSY-Julich: WASA at COSY  
 arXiv (2004) e-Print: [nucl-ex/0411038](https://arxiv.org/abs/nuclex/0411038)  
 Number of citations: 200+
50. J. Pätzold, ... **R.J.M.Y. Ruber**, ... et al. (31 authors),  
*Study of the  $pp \rightarrow pp\pi^+\pi^-$  Reaction in the Low-energy Tail of the Roper Resonance*,  
 Phys. Rev. **C67** (2003) 052202.  
 DOI: [10.1103/PhysRevC.67.052202](https://doi.org/10.1103/PhysRevC.67.052202)  
 Number of citations: 50+
51. **R.J.M.Y. Ruber** et al. (16 authors),  
*An ultra-thin-walled solenoid for the CELSIUS/WASA experiments*,  
 Nucl. Instr. Meth. **A503** (2003) 431-444.  
 DOI: [10.1016/S0168-9002\(03\)00995-1](https://doi.org/10.1016/S0168-9002(03)00995-1)
52. W. Brodowski, ... **R.J.M.Y. Ruber**, ...et al.,  
*Search for narrow  $NN\pi$  resonances in exclusive  $pp \rightarrow pp\pi^+\pi^-$  measurements*,  
 Phys.Lett. **B550** (2002) 147.
53. J. Johanson, ... **R.J.M.Y. Ruber**, ... et al.,  
*Two pion production in proton-proton collision close to threshold*,  
 Nucl. Phys. **A712** (2002) 75.  
 Number of citations: 50+
54. W. Brodowski, ... **R.J.M.Y. Ruber**, ... et al.,  
*Exclusive Measurement of the  $pp \rightarrow pp\pi^+\pi^-$  Reaction near Threshold*,  
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