

LIST of PUBLICATIONS of **CARLA MANNI**

## 2025

- [140–2025] N. Lamsahel, **C. Manni**, A. Ratnani, S. Serra-Capizzano, H. Speleers: *Outlier-free isogeometric discretizations for Laplace eigenvalue problems: closed-form eigenvalue and eigenvector expressions*, Numerische Mathematik, to appear
- [139–2025] S. Eddargani, **C. Manni**, H. Speleers: *Quadrature rules for splines of high smoothness on uniformly refined triangles*, Mathematics of Computation, to appear
- [138–2025] C. Garoni, **C. Manni**, F. Pelosi, H. Speleers: *Spectral symbol of isogeometric matrices on trimmed geometries* Numerical linear Algebra with applications, 32 (2025) e2601  
<https://doi.org/10.1002/nla.2601>

## 2024

- [137–2024] S. Eddargani, T. Lyche, **C. Manni**, H. Speleers: *Quadrature rules for  $C^1$  quadratic spline finite elements on the Powell-Sabin 12-split*, Computer Methods in Applied Mechanics and Engineering, 430 (2024) 117196  
<https://doi.org/10.1016/j.cma.2024.117196>
- [136–2024] K. Raval, **C. Manni**, H. Speleers: *Adaptive isogeometric analysis based on locally refined Tchebycheffian B-splines*, Computer Methods in Applied Mechanics and Engineering, 430 (2024) 117186  
<https://doi.org/10.1016/j.cma.2024.117186>
- [135–2024] M. Marsala, **C. Manni**, H. Speleers: *Maximally smooth cubic spline quasi-interpolants on arbitrary triangulations*, Computer Aided Geometric Design, 112 (2024), 102348  
<https://doi.org/10.1016/j.cagd.2024.102348>
- [134–2024] T. Lyche, **C. Manni**, H. Speleers: *A Parsimonious Approach to  $C^2$  Cubic Splines on Arbitrary Triangulations: Reduced Macro-elements on the Cubic Wang-Shi Split*, in M. Lanini, C. Manni, H. Schenck eds.: Approximation Theory and Numerical Analysis Meet Algebra, Geometry, Topology, Springer INdAM Series 60, 265–287  
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- [133–2024] **C. Manni**, T. Sorokina: *Bernstein-Bézier form and its role in studying multivariate splines*, in M. Lanini, C. Manni, H. Schenck eds.: Approximation Theory and Numerical Analysis Meet Algebra, Geometry, Topology, Springer INdAM Series 60, 45–70  
<https://doi.org/10.1007/978-981-97-6508-9-2>
- [132–2024] T. Lyche, **C. Manni**, H. Speleers: *A local simplex spline basis for  $C^3$  quartic splines on arbitrary triangulations*, Applied Mathematics and Computation 462 (2024), 128330.  
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## 2023

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<https://doi.org/10.1016/j.cma.2023.116314>
- [130–2023] K. Raval, **C. Manni**, H. Speleers: *Tchebycheffian B-splines in isogeometric Galerkin methods*, Computer Methods in Applied Mechanics and Engineering, 403 (2023) 115648  
<https://doi.org/10.1016/j.cma.2022.115648>
- [129–2023] M. Mazza, M. Donatelli, **C. Manni**, H. Speleers: *On the matrices in B-spline collocation methods for Riesz fractional equations and their spectral properties*, Numerical Linear Algebra with Applications, 30 (2023) e2462  
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- [128–2023] M. Mazza, M. Donatelli, **C. Manni**, H. Speleers: *Spectral Analysis of Matrices in Isogeometric Galerkin methods for Riesz Fractional Equations* proceedings of “Fractional Differential Equations: Modeling, Discretization, and Numerical Solvers” Springer INdAM Series, (2023), 50, 53–73  
[https://doi.org/10.1007/978-981-19-7716-9\\_4](https://doi.org/10.1007/978-981-19-7716-9_4)

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- [126–2022] T. Lyche, **C. Manni**, H. Speleers: *Construction of  $C^2$  cubic splines on arbitrary triangulations*, Foundations of Computational Mathematics, 22, (2022) 1309–1350.  
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- [125–2022] E. Sande, **C. Manni**, H. Speleers: *Ritz-type projectors with boundary interpolation properties and explicit spline error estimates*, Numerische Mathematik, 151 (2022), 475–494.  
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