DANIEL FINK CURRICULUM VITAE

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Education	MIT, SMArchS (2015-2017)
	USyd, MArch (2007-2008)
	USyd, BDesArch (2004-2006)
Practice	Independent Consultant
	Senior Associate, AR-MA
	Advisor, Black Oak Group
Reserarch	Research Affiliate, MIT

Daniel Fink is an expert in delivering the state-of-the-art to architecture, planning, and property development. With over fifteen years experience in both practice and academia, his focus is in building digital and physical workflows, platforms, and tools that integrate computational design, real estate finance and geospatial science, with project and product delivery.

Daniel is currently an Independent Consultant to commerical, academic, and government clients, and is a Senior Associate at AR-MA, an advanced design computing and fabrication consultancy. He was previously a Lead Researcher at MIT's Real Estate Innovation Lab, and was an Urban Design Project Lead at Grimshaw Architects. He has directed numerous design, software, & research teams, published academic papers in leading journals, had work featured at multiple exhibitions, and been an invited lecturer at major universities around the world. Daniel holds a Master of Science in Architecture from MIT, and a Master of Architecture and Bachelor in Design from the University of Sydney.

PROFESSIONAL

Independent Consultancy   **2024 - current**
Director

Daniel provides consulting for developing and adopting technology in property development, architectural design & construction, and urban planning.

Clients include:

- HomesNSW
- Building4.0 Commonwealth Co-operative Research Centre

Black Oak Group   **2023 - current**
Advisor

Black Oak Group delivers strategic and creative solutions to clients from developers to startups to global firms like Google and Airbnb.

Daniel is responsible for directing technology development in a new business venture that originates & entitles residential townhome subdivisions in California.

AR-MA   **2018 - current**
Senior Associate

AR-MA is a computational design & architectural engineering practice, where Daniel is responsible for business operations, project leadership & delivery, and team management.

Key achievements include:

- Initiating and managing AR-MA's Boston office and growing to five personnel within two years.
- Instrumental in securing and leading a $5M, four-year consulting engagement with Lendlease Digital to develop a technology platform for delivering manufactured buildings. Led the development and integration of financial modeling with design and construction workflows. The platform was spun off as Podium.io, raising $20M from Autodesk.

MIT Real Estate Innovation Lab   **2016 - 2022**
Research Lead

The MIT Real Estate Innovation Lab was a research and development laboratory for the built environment that measures the financial and economic performance of innovation in real estate, design and planning.

Daniel was responsible for directing and managing research projects and collaborations with academic and industry bodies.

Key Achievements:

- Three publications in journals with impact factor 7+
- Delivered the *Wide Data Experiment*: an integrated geometric-geospatial-temporal data cube for NYC real estate, linking 3,000+ variables across 200 datasets from 20 vendors, underpinning numerous Lab publications.
- Delivered City of Boston's *Housing Development Interactive Educational Toolkit*: a webapp for user-directed learning about property development outcomes and urban planning rules

Grimshaw Architects   **2009 - 2015**
Project Lead

Grimshaw is a globally renowned architecture firm known for its innovative, sustainable, and technology-driven design.

Daniel was a Project Lead for Urban Transformation Projects in the Sydney and Melbourne offices.

Key Achievements:

- Project Lead, Central-to-Eveleigh Redevelopment. Client: NSW Government (Urbangrowth NSW)
- Project Lead, Maribyrnong Defense Site Redevelopment. Client: Victoria Government (Places Victoria)
- Project Architect, Spencer Lane Apartments, Redfern

BVN Architecture   **2008 - 2009**
Graduate Architect

Role encompassed wide facet of architectural practice, from contract documentation of a major racecourse refurbishment to sketch design of competition entries.

INTERNSHIPS & RESIDENCIES

Aditazz   **2016**

Aditazz uses computational design, modeling, and automation to optimize the planning and design of complex buildings like hospitals and data centers.

Smart Geometry Processing Group   **2015**
UCL Department of Computer Science

Under the direction of Prof. Niloy Mitra, the SGP Group focuses on developing algorithms and tools for analyzing, modeling, and manipulating complex 3D geometry in computer graphics, computational design, and digital fabrication.

ACADEMIC

MIT   **2015 - 2017**
Master of Science in Architecture Studies (SMArchS)

- Thesis: *Linking Design to Finance; Enabling a Co-Operative Developer Platform through Automated Design and Valuation*

University of Sydney   **2007 - 2009**
Master of Architecture (with Honours)

- (Inclusive of 2007-2008 enrolment at Bezalel Academy of Art & Design, Jerusalem)
- Thesis: *Unfolding; The Beginnings of a Field-Guide to Mapping*
- Achievements:
    - 2009: Sir John Sulman Prize (best overall record in Architectural Design)
    - 2009: Dean's Honour Roll

University of Sydney   **2004 - 2007**
Bachelor of Design in Architecture

- Achievements:
    - 2007: NSW RAIA Undergraduate Student Prize
    - 2007: Architectural Science Prize
    - 2004, 2006: Dean's Honour Roll

SCHOLARSHIPS & FELLOWSHIPS

American Australian Association   **2015-2017**
Westfield Fellowship
AUD$40,000 in funding for advanced research and study in the United States

MIT   **2015-2017**
Half-Tuition Fellowship

NSW Architects Registration Board   **2014**
Byera Hadley Travelling Scholarship
AUD$15,000 for self-directed research, international travel to centres of excellence in computational urban design, and an internship with leading researcher-practitioners in London.

University of Sydney   **2004-2007**
Scholarship with Distinction

PUBLICATIONS

PEER-REVIEWED

Turan, I., Chegut, A., Fink, D., & Reinhart, C. (2021). **Development of view potential metrics and the financial impact of views on office rents**. Landscape and Urban Planning, 215, 104193

Turan, I., Chegut, A., Fink, D., & Reinhart, C. (2019). **The value of daylight in office spaces**. Building and Environment, 168, 106503

Peng, C., Yang, Y., Bao, F., Fink, D., Yan, D., Wonka, P., & Mitra, N. J. (2016). **Computational network design from functional specifications**. ACM Transactions on Graphics, 35(4), 1–12

NON-PEER-REVIEWED

Fink, D (2018). **Complex Urbanities: Digital Techniques in Urban Design.** Byera Hadley Travelling Scholarship Journal Series

EXHIBITIONS

Balancing Act: Urbanism & Emerging   **2019**
Technologies
Boston Society of Architects, Seattle AIA

- *Computing Co-operative Development*
- *Housing Development Toolkit*

UTS Open Agenda Research Architecture   **2011**
Customs House, Sydney

- *Greater Western Sydney Special Economic Zone*

RE:MARCH UTS Broadway Competition   **2009**
UTS

- *Design for UTS Faculty of Engineering & IT*

TEACHING

MIT   **2016**
11.303 Real Estate Development Studio (TA)
Approximately 35 students. Interdisciplinary team-based design
studio for complex urban development project that integrates
finance and marketing.

University of Sydney   **2014, 2010**
MARC4001 Urban Architecture Research Studio (TA)
DAAE3001 Sustainable Architectural Practice (TA)
BDES2020 Architecture Studio (TA)

University of Technology Sydney   **2014**
11221 Architectural Design: Strategy Studio (TA)

University of Melbourne   **2012**
ABPL90123 Digital Design Applications (TA)

RMIT   **2012**
ARCH1329 Architecture Communications 3 (TA)

UNSW   **2009-2010**
INTA 2102 Design Studio 2 (TA)
INTA 2101 Design Studio 1 (TA)

TECHNICAL SKILLS

Languages, Platforms, & Frameworks
Python (incl. Pandas/Geopandas, Shapely, Scipy, Dagster)
C# & .NET (incl. Rhinocommon, NetTopologySuite)
SQL (PostgreSQL & PostGIS)
Typescript & CSS

Software
QGIS
JetBrains Suite
Adobe Suite
Microsoft Office Suite
Figma
McNeel Rhinoceros3D & Grasshopper3D
Bentley Microstation