# Jason Chan

Mechanical Engineer, Research Scientist
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## SUMMARY

Experienced in design, analysis, and verification of optical and mechanical systems in multiphase fluids research.

## EDUCATION

**University of Wisconsin - Madison** — Madison, WI
*PhD in Mechanical Engineering, GPA: 3.8/4.0* — *Expected graduation Dec. 2023*

**University of Wisconsin - Madison** — Madison, WI
*Master of Science, Mechanical Engineering* — *Graduated May 2020*

**University of Wisconsin - Madison** — Madison, WI
*Bachelor of Science, Mechanical Engineering* — *Graduated May 2018*

## RESEARCH

**Multiphase Flow Visualization and Analysis Laboratory (MFVAL)** — Fall 2018 - present
*Research Assistant* — *UW-Madison*

Sponsor: Dr. Evan Hurlburt at the Naval Nuclear Laboratory

- Designed, fabricated, instrumented, and operated a closed-loop flow facility for vertical annular flow heat transfer experiments with pressurized refrigerant.
- Quantified experimental uncertainties using vibration and optical analyses.
- Developed and validated new experimental techniques for non-intrusive thermometry and liquid-film thickness measurements using laser optics.
- Developed image processing programs using high-performance computing for the optical film-thickness measurement techniques.
- Designed LabVIEW programs to control the flow loops, enable high-speed data collection, and monitor system status.
- Developed process for documenting facility components and experimental procedures.
- Mentored 10 undergraduate research assistants throughout their research projects.
- Co-authored 4 publications in peer-reviewed scientific journals. Presented work at two international conferences. Wrote yearly progress reports for sponsor.

**Two Phase Solver** — 2023 - present
*Lead Software Developer* — *UW-Madison*

- Collaboration between scientists from UW-Madison, Westinghouse and the Naval Nuclear Lab.
- Developed flow boiling simulation software in MATLAB for a wide range of conditions, fluids, and geometry.
- Designed the program framework and optimized computational performance.
- Managed project and delegated tasks to team members.

**Advanced Materials for Energy and Electronics Group** — Spring 2016 - Spring 2018
*Undergraduate Research Assistant* — *UW-Madison*

- Designed and fabricated instruments for producing highly reproducible, large-scale arrays of carbon nanotubes on wafers.
- Developed optical setup for tracking ink/water interface during nanotube deposition.
- Developed MATLAB-based image processing program to characterize the alignment of carbon nanotubes deposited in a high-shear flow for next-generation transistors.
- Co-authored 2 publications in peer-reviewed scientific journals.

## SKILLS

| | |
|---|---|
| **Programming** | LabVIEW, MATLAB, Python, Fortran, Bash, Git, JavaScript, LaTeX |
| **Applications** | EES, ANSYS Fluent, Zemax, Adobe Illustrator |
| **Fabrication** | Vertical milling machines (CNC, manual), Lathe work (CNC, manual; metal), Woodworking, 3D Printing, Electronics soldering, MIG & TIG Welding, Laser cutting, Sheet metal work, Proof-of-concept prototypes |
| **Language** | Mandarin Chinese (native), English (fluent), Japanese (conversational) |

## TEACHING EXPERIENCES

**Teaching Assistant** UW-Madison

*Thermodynamics, Senior Design, Intro to Mechanical Engineering* *Fall 2018 - Fall 2022*

- Guided students through an iterative design process.
- Introduced freshmen to a wide array of engineering topics through a hands-on approach.

**Sailing Club Instructor** UW-Madison

*Techs, Club 420s, Lasers, Sloops* *Summer 2016*

- Communicated importance of water safety and developed strategies for resolving unexpected situations on the water.
- Introduced students to the basic techniques of inland sailing and sailboat racing.
- Encouraged students to develop appreciation for teamwork in a fast-paced environment.

## PUBLICATIONS

- J. Chan, R. W. Morse, E. T. Hurlburt, K. M. Dressler, G. F. Nellis, A. Berson (in progress). *Liquid-Film Flow Rate From Measurements of Disturbance Wave Characteristics for Applications in Thin Film Flow.* Experiments in Fluids.
- R. W. Morse, J. Chan, E. T. Hurlburt, J.M. Le Corre, A. Berson, G. F. Nellis, K. M. Dressler (under review). *A new paradigm for the role of disturbance waves and wall heat transfer in annular two-phase flow.* International Journal of Heat and Mass Transfer.
- R. W. Morse, J. Chan, K. M. Dressler, E. T. Hurlburt, G. F. Nellis, and A. Berson (under review). *Critical heat flux, liquid-film dryout, and disturbance waves under pulsed vapor conditions in two-phase annular flow.* Experimental Thermal and Fluid Science.
- R. W. Morse, T.A. Moreira, J. Chan, K. M. Dressler, G. Ribatski, E. T. Hurlburt, L.L. McCarroll, G. F. Nellis, and A. Berson (2021). *Critical Heat Flux and the Dryout of Liquid Film in Two-phase Annular Flow.* Int. J. Heat Mass and Mass Transfer.
- Jason Chan (2020). *Thermoreflectance for the Instantaneous Measurement of Temperature at a Wall-Vapor Interface.* Master's thesis. University of Wisconsin - Madison.
- B. F. Fehring, R. W. Morse, J. Chan, K. Dressler, E. T. Hurlburt, G. F. Nellis, and A. Berson (2020). *Instantaneous optical measurement of the temperature at the interface between a wall and a thin liquid film.* Journal of Heat Transfer.
- K. R. Jinkins, J. Chan, R. M. Jacobberger, A. Berson, and M. S. Arnold (2018). *Substrate-Wide Confined Shear Alignment of Carbon Nanotubes for Thin Film Transistors.* Advanced Electronic Materials.
- K. R. Jinkins, J. Chan, G. J. Brady, K. K. Gronski, P. Gopalan, H. T. Evensen, A. Berson, and M. S. Arnold (2017). *Nanotube Alignment Mechanism in Floating Evaporative Self-Assembly.* Langmuir.

## CONFERENCE PROCEEDINGS

- J. Chan, R. W. Morse, K. Dressler, G. F. Nellis, A. Berson. *Liquid-Film Flow Rate From Measurements of Disturbance Wave Characteristics for Applications in Two-Phase Annular Flow.* ASME Summer Heat Transfer Conference. Washington, DC. 2023
- J. Chan, B. Fehring, R. W. Morse, K. M. Dressler, G. F. Nellis, A. Berson. *Thermoreflectance Wall Temperature Measurement in Annular Two-Phase Flow.* APS Division of Fluid Dynamics. Atlanta, GA. 2018.

## SELECT INTERESTS

| | |
|---|---|
| **Outdoors** | Sailing, birding, cycling, running, swimming, camping |
| **Music** | Classical guitar |
| **Creative** | Wildlife photography, watercolor, cooking, stained glass, topological map-making |

## REFERENCES


**Prof. Gregory F. Nellis** - Solar Energy Lab at UW-Madison
Email: gfnellis@engr.wisc.edu

**Dr. Evan T. Hurlburt** - Naval Nuclear Laboratory
Email: evan.hurlburt@unnpp.gov

**Dr. Jean-Marie LeCorre** - Westinghouse
Email: lecorrjm@westinghouse.com

**Dr. Tiago A. Moreira** - Thermal Hydraulics Laboratory at UW-Madison
Email: tmoreira@wisc.edu

# Undergraduate-Unofficial Transcript

**Name: Chan,Jason**
**SIS ID: 0005210445**

**Campus ID: 9070373957**
Birthdate: 09/09/1995
Print Date: 08/23/2023
Institution Info: University of Wisconsin-Madison
Other Institutions Attended
Culver Academies Culver, IN USA

Degrees Awarded
Degree: Bachelor of Science-Mechanical Engineering
Confer Date: 05/13/2018
Degree GPA: 3.364
Major: Mechanical Engineering
Degree: Master of Science-Mechanical Engineering
Confer Date: 05/10/2020
Major: Mechanical Engineering

09-26-2014
--GER Quantitative Reasoning Part A satisfied.

Beginning of Undergraduate Record

**Fall 2014-2015**
Program: General Engineering
Major: Intended: Mechanical Engr

Test Credits Applied Toward General Engineering

| Course | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|
| MATH 221 | Calculus&Analytic Geometry 1 | 5.000 | 5.000 | T | 0.000 |
| MATH 222 | Calculus&Analytic Geometry 2 | 4.000 | 4.000 | T | 0.000 |
| PHYSICS 103 | General Physics | 4.000 | 4.000 | T | 0.000 |
| PHYSICS 104 | General Physics | 4.000 | 4.000 | T | 0.000 |
| STAT 301 | Intro-Statistical Methods | 3.000 | 3.000 | T | 0.000 |
| BIO SCI X01 | AP Biology | 3.000 | 3.000 | T | 0.000 |
| COMP SCI X12 | Electives | 3.000 | 3.000 | T | 0.000 |
| ENGLISH X02 | Electives | 3.000 | 3.000 | T | 0.000 |
| | Transfer Test Totals: | 29.000 | 29.000 | | 0.000 |

Session: Regular (09/02/2014 - 12/12/2014)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| CHEM 103 | PEC | General Chemistry I | 4.000 | 4.000 | C | 8.000 |
| E P D 155 | EC a | Basic Communication | 2.000 | 2.000 | B | 6.000 |
| MATH 234 | NIC | Calc--Functns of Variables | 4.000 | 4.000 | A | 16.000 |
| PSYCH 202 | SEC | Introduction to Psychology | 3.000 | 3.000 | BC | 7.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 2.885 | 13.000 | 13.000 | 13.000 | 37.500 |
| Adv Stg Term Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Term Summary: | 2.885 | 42.000 | 42.000 | 13.000 | 37.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 2.885 | 13.000 | 13.000 | 13.000 | 37.500 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 2.885 | 42.000 | 42.000 | 13.000 | 37.500 |

Academic Standing Effective 12/21/2014: Good Academic Standing

**Spring 2014-2015**
Program: General Engineering
Major: Intended: Mechanical Engr

Session: Regular (01/20/2015 - 05/08/2015)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| AFROAMER 231 | eSEC | Intro to Afro-Am History | 3.000 | 3.000 | B | 9.000 |
| CHEM 104 | PEC | General Chemistry II | 5.000 | 5.000 | BC | 12.500 |
| COMP SCI 302 | NIC r | Introduction to Programming | 3.000 | 3.000 | AB | 10.500 |
| E M A 201 | PIC | Statics | 3.000 | 3.000 | C | 6.000 |
| INTEREGR 160 | | Intro to Engineering Design | 3.000 | 3.000 | BC | 7.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 2.676 | 17.000 | 17.000 | 17.000 | 45.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 2.676 | 17.000 | 17.000 | 17.000 | 45.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 2.767 | 30.000 | 30.000 | 30.000 | 83.000 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 2.767 | 59.000 | 59.000 | 30.000 | 83.000 |

Academic Standing Effective 05/17/2015: Good Academic Standing

**Fall 2015-2016**
Program: General Engineering
Major: Intended: Mechanical Engr

Session: Regular (09/02/2015 - 12/15/2015)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| ART 448 | | Special Topics | 4.000 | 4.000 | A | 16.000 |
| | Course Topic: | Intro to Digital Photography | | | | |
| MATH 320 | NAC | Linear Alg & Diff Equations | 3.000 | 3.000 | AB | 10.500 |
| M E 231 | | Intro Engineering Graphics | 2.000 | 2.000 | B | 6.000 |
| M E 240 | | Dynamics | 3.000 | 3.000 | A | 12.000 |
| M S & E 350 | | Intro to Materials Science | 3.000 | 3.000 | B | 9.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.567 | 15.000 | 15.000 | 15.000 | 53.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.567 | 15.000 | 15.000 | 15.000 | 53.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.033 | 45.000 | 45.000 | 45.000 | 136.500 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.033 | 74.000 | 74.000 | 45.000 | 136.500 |

Term Honor: Dean's Honor List

Academic Standing Effective 12/24/2015: Good Academic Standing

# Undergraduate-Unofficial Transcript

**Name: Chan,Jason**
**SIS ID: 0005210445**

### Spring 2015-2016

Program: General Engineering
Major: Intended: Mechanical Engr

Program: Certificates - Undergraduate
Certificate: Computer Sciences Cert

Session: Regular (01/19/2016 - 05/06/2016)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| ART HIST 372 | HIC | Arts of Japan | 3.000 | 3.000 | B | 9.000 |
| COMP SCI 367 | NIC r | Intro to Data Structures | 3.000 | 3.000 | B | 9.000 |
| M E 306 | | Mechanics of Materials | 3.000 | 3.000 | AB | 10.500 |
| M E 307 | x | Mechanics of Materials Lab | 1.000 | 1.000 | AB | 3.500 |
| M E 361 | | Thermodynamics | 3.000 | 3.000 | AB | 10.500 |
| PHYSICS 202 | PIC | General Physics | 5.000 | 5.000 | A | 20.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.472 | 18.000 | 18.000 | 18.000 | 62.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.472 | 18.000 | 18.000 | 18.000 | 62.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.159 | 63.000 | 63.000 | 63.000 | 199.000 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.159 | 92.000 | 92.000 | 63.000 | 199.000 |

Term Honor: Dean's Honor List

Academic Standing Effective 05/15/2016: Good Academic Standing

### Summer 2016

Program: General Engineering
Major: Intended: Mechanical Engr

Program: Certificates - Undergraduate
Certificate: Computer Sciences Cert

Session: DDD (06/13/2016 - 07/10/2016)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| E ASIAN 123 | EC | Elementary Japanese | 3.000 | 3.000 | A | 12.000 |

Session: DHH (06/13/2016 - 08/07/2016)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| COMP SCI 540 | NAC | Intro-Artificl Intelligence | 3.000 | 3.000 | AB | 10.500 |
| M E 491 | | Mech Engr Projects I | 3.000 | 3.000 | A | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.833 | 9.000 | 9.000 | 9.000 | 34.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.833 | 9.000 | 9.000 | 9.000 | 34.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.243 | 72.000 | 72.000 | 72.000 | 233.500 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.243 | 101.000 | 101.000 | 72.000 | 233.500 |

### Fall 2016-2017

Program: Mechanical Engineering
Major: Mechanical Engineering BS

Program: Certificates - Undergraduate
Certificate: Computer Sciences Cert

Session: Regular (09/06/2016 - 12/15/2016)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| E C E 376 | | Electricl&Electronc Circuit | 3.000 | 3.000 | A | 12.000 |
| M E 313 | | Manufacturing Processes | 3.000 | 3.000 | B | 9.000 |
| M E 331 | | Geom Modeling-Engr Applcatn | 3.000 | 3.000 | AB | 10.500 |
| M E 363 | | Fluid Dynamics | 3.000 | 3.000 | AB | 10.500 |
| STAT 224 | NIC r | Intro Stats for Engineers | 3.000 | 3.000 | A | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.600 | 15.000 | 15.000 | 15.000 | 54.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.600 | 15.000 | 15.000 | 15.000 | 54.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.305 | 87.000 | 87.000 | 87.000 | 287.500 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.305 | 116.000 | 116.000 | 87.000 | 287.500 |

Term Honor: Dean's Honor List

Academic Standing Effective 12/24/2016: Good Academic Standing

### Spring 2016-2017

Program: Mechanical Engineering
Major: Mechanical Engineering BS

Program: Certificates - Undergraduate
Certificate: Computer Sciences Cert

Session: Regular (01/17/2017 - 05/04/2017)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| E C E 377 | | Elec&Elec-mech Power Conver | 3.000 | 3.000 | AB | 10.500 |
| M E 340 | | Intro to Dynamic Systems | 3.000 | 3.000 | A | 12.000 |
| M E 364 | | Elementary Heat Transfer | 3.000 | 3.000 | A | 12.000 |
| M E 368 | | Engr Measure & Instrumentation | 4.000 | 4.000 | B | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.577 | 13.000 | 13.000 | 13.000 | 46.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.577 | 13.000 | 13.000 | 13.000 | 46.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.340 | 100.000 | 100.000 | 100.000 | 334.000 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.340 | 129.000 | 129.000 | 100.000 | 334.000 |

Term Honor: Dean's Honor List

Academic Standing Effective 05/13/2017: Good Academic Standing

# Undergraduate-Unofficial Transcript

**Name: Chan,Jason**
**SIS ID: 0005210445**

### Summer 2017

Program: Mechanical Engineering
Major: Mechanical Engineering BS

Program: Certificates - Undergraduate
Certificate: Computer Sciences UCrt

Session: DHH (06/19/2017 - 08/13/2017)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| GEN BUS 310 | SIC | Acctg&Finance - Non-Bus Majors | 3.000 | 3.000 | AB | 10.500 |
| M E 342 | | Design of Machine Elements | 3.000 | 3.000 | A | 12.000 |
| M E 370 | | Energy Systems Laboratory | 3.000 | 3.000 | A | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.833 | 9.000 | 9.000 | 9.000 | 34.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.833 | 9.000 | 9.000 | 9.000 | 34.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.381 | 109.000 | 109.000 | 109.000 | 368.500 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.381 | 138.000 | 138.000 | 109.000 | 368.500 |

### Fall 2017-2018

Program: Mechanical Engineering
Major: Mechanical Engineering BS

Program: Certificates - Undergraduate
Certificate: Computer Sciences UCrt

Session: Regular (09/06/2017 - 12/13/2017)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| E C E 252 | ECx | Intro to Computer Engineering | 2.000 | 2.000 | AB | 7.000 |
| E P D 397 | b | Technical Communication | 3.000 | 3.000 | AB | 10.500 |
| M E 314 | I | Manufacturing Fundamentals | 3.000 | 3.000 | B | 9.000 |
| M E 351 | | Interdis Exper Dsgn Projects I | 3.000 | 3.000 | A | 12.000 |
| PSYCH 456 | SAC | Intro-Social Psychology | 4.000 | 4.000 | BC | 10.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.233 | 15.000 | 15.000 | 15.000 | 48.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.233 | 15.000 | 15.000 | 15.000 | 48.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.363 | 124.000 | 124.000 | 124.000 | 417.000 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.363 | 153.000 | 153.000 | 124.000 | 417.000 |

Academic Standing Effective 12/24/2017: Good Academic Standing

### Spring 2017-2018

Program: Mechanical Engineering
Major: Mechanical Engineering BS

Program: Certificates - Undergraduate
Certificate: Computer Sciences UCrt

Session: Regular (01/23/2018 - 05/04/2018)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| COMP SCI 559 | IC | Computer Graphics | 3.000 | 3.000 | BC | 7.500 |
| M E 352 | | Interdis Expr Dsgn Projects II | 3.000 | 3.000 | A | 12.000 |
| M E 564 | | Heat Transfer | 3.000 | 3.000 | A | 12.000 |
| M S & E 553 | | Nanomaterials & Nanotechnology | 3.000 | 3.000 | B | 9.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.375 | 12.000 | 12.000 | 12.000 | 40.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.375 | 12.000 | 12.000 | 12.000 | 40.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.364 | 136.000 | 136.000 | 136.000 | 457.500 |
| Adv Stg Cum Summary: | | 29.000 | 29.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.364 | 165.000 | 165.000 | 136.000 | 457.500 |

Academic Standing Effective 05/13/2018: Good Academic Standing

Undergraduate Career Totals

| | |
|---|---|
| Advanced Standing Credits: | 29.000 |
| Cum Credits: | 165.000 |
| Cum GPA Credits: | 136.000 |
| Cum Grade Points: | 457.500 |
| GPA: | 3.364 |

Non-Course Milestones

Program: Mechanical Engineering
Engineering Progression Requirement Milestone
Status: Completed
Date Completed: 12/22/2014

Memoranda

05-23-2016
Grade changed in M E 307 (1164) from B to AB
work completed: 2016-05-21

End of Undergraduate-Unofficial Transcript

# Graduate-Unofficial Transcript

**Name: Chan,Jason**
**SIS ID: 0005210445**

**Campus ID: 9070373957**
Birthdate: 09/09/1995
Print Date: 08/23/2023
Institution Info: University of Wisconsin-Madison
Other Institutions Attended
Culver Academies Culver, IN USA

Degrees Awarded
Degree: Bachelor of Science-Mechanical Engineering
Confer Date: 05/13/2018
Degree GPA: 3.364
Major: Mechanical Engineering
Degree: Master of Science-Mechanical Engineering
Confer Date: 05/10/2020
Major: Mechanical Engineering

Beginning of Graduate Record

**Summer 2018**
Program: Mechanical Engineering
Major: Mechanical Engineering MS

Session: DHH (06/18/2018 - 08/12/2018)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 790 | | Master's Research & Thesis | 2.000 | 2.000 | S | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 2.000 | 2.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 2.000 | 2.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 0.000 | 2.000 | 2.000 | 0.000 | 0.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 0.000 | 2.000 | 2.000 | 0.000 | 0.000 |

**Fall 2018-2019**
Program: Mechanical Engineering
Major: Mechanical Engineering MS

Program: Materials Science and Engr
Major: Materials Science and Engr MS

Session: Regular (09/05/2018 - 12/12/2018)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 561 | | Intermediate Thermodynamics | 3.000 | 3.000 | A | 12.000 |
| M E 790 | | Master's Research & Thesis | 5.000 | 5.000 | S | 0.000 |
| M E 903 | | Graduate Seminar | 0.000 | 0.000 | S | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 4.000 | 8.000 | 8.000 | 3.000 | 12.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 4.000 | 8.000 | 8.000 | 3.000 | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 4.000 | 10.000 | 10.000 | 3.000 | 12.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 4.000 | 10.000 | 10.000 | 3.000 | 12.000 |

**Spring 2018-2019**
Program: Mechanical Engineering
Major: Mechanical Engineering MS

Program: Materials Science and Engr
Major: Materials Science and Engr MS

Session: Regular (01/22/2019 - 05/03/2019)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 563 | | Intermediate Fluid Dynamics | 3.000 | 3.000 | B | 9.000 |
| M E 759 | x | HPC for Apps in Engr | 3.000 | 3.000 | A | 12.000 |
| M E 790 | | Master's Research & Thesis | 5.000 | 5.000 | S | 0.000 |
| M E 903 | | Graduate Seminar | 0.000 | 0.000 | S | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.500 | 11.000 | 11.000 | 6.000 | 21.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.500 | 11.000 | 11.000 | 6.000 | 21.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.667 | 21.000 | 21.000 | 9.000 | 33.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.667 | 21.000 | 21.000 | 9.000 | 33.000 |

**Summer 2019**
Program: Mechanical Engineering
Major: Mechanical Engineering MS

Program: Materials Science and Engr
Major: Materials Science and Engr MS

Session: DHH (06/17/2019 - 08/11/2019)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 790 | | Master's Research & Thesis | 3.000 | 3.000 | S | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 3.000 | 3.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 3.000 | 3.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.667 | 24.000 | 24.000 | 9.000 | 33.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.667 | 24.000 | 24.000 | 9.000 | 33.000 |

**Fall 2019-2020**
Program: Mechanical Engineering
Major: Mechanical Engineering MS

Program: Materials Science and Engr
Major: Materials Science and Engr MS

Session: Regular (09/04/2019 - 12/11/2019)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 540 | x | Exp Vib & Dynamic Sys Anal | 3.000 | 3.000 | A | 12.000 |
| M E 573 | | Computational Fluid Dynamics | 3.000 | 3.000 | A | 12.000 |
| M E 790 | | Master's Research & Thesis | 5.000 | 5.000 | S | 0.000 |

# Graduate-Unofficial Transcript

**Name: Chan,Jason**
**SIS ID: 0005210445**

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 4.000 | 11.000 | 11.000 | 6.000 | 24.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 4.000 | 11.000 | 11.000 | 6.000 | 24.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.800 | 35.000 | 35.000 | 15.000 | 57.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.800 | 35.000 | 35.000 | 15.000 | 57.000 |

**Spring 2019-2020**

Program: Mechanical Engineering
Major: Mechanical Engineering MS

Program: Materials Science and Engr
Major: Materials Science and Engr MS

Session: Regular (01/21/2020 - 05/01/2020)

| Course | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|
| M E 790 | Master's Research & Thesis | 9.000 | 9.000 | S | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 9.000 | 9.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 9.000 | 9.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.800 | 44.000 | 44.000 | 15.000 | 57.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.800 | 44.000 | 44.000 | 15.000 | 57.000 |

**Spring 2020-2021**

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: Regular (01/25/2021 - 04/30/2021)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| MATH 704 | | Methods of Applied Math-2 | 3.000 | 0.000 | DR | 0.000 |
| | Course Dropped: | 02/10/2021 | | | | |
| M E 764 | | Heat Transfer I-Conduction | 3.000 | 3.000 | A | 12.000 |
| M E 890 | | PhD Research and Thesis | 5.000 | 0.000 | P | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 4.000 | 8.000 | 3.000 | 3.000 | 12.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 4.000 | 8.000 | 3.000 | 3.000 | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.833 | 52.000 | 47.000 | 18.000 | 69.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.833 | 52.000 | 47.000 | 18.000 | 69.000 |

**Summer 2021**

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: DHH (06/14/2021 - 08/08/2021)

| Course | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|
| M E 890 | PhD Research and Thesis | 3.000 | 0.000 | P | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 3.000 | 0.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 3.000 | 0.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.833 | 55.000 | 47.000 | 18.000 | 69.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.833 | 55.000 | 47.000 | 18.000 | 69.000 |

**Fall 2021-2022**

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: Regular (09/08/2021 - 12/15/2021)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 601 | | Special Topics-Mech Engr | 3.000 | 3.000 | A | 12.000 |
| | Course Topic: | Fund of Precision Measurements | | | | |
| M E 890 | | PhD Research and Thesis | 5.000 | 0.000 | P | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 4.000 | 8.000 | 3.000 | 3.000 | 12.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 4.000 | 8.000 | 3.000 | 3.000 | 12.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.857 | 63.000 | 50.000 | 21.000 | 81.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.857 | 63.000 | 50.000 | 21.000 | 81.000 |

**Spring 2021-2022**

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: Regular (01/25/2022 - 05/06/2022)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| E M A 476 | PICx | Intro-Sci Comput for Engr Phys | 3.000 | 3.000 | AB | 10.500 |
| M E 777 | x | Vacuum Technology | 3.000 | 3.000 | AB | 10.500 |
| M E 890 | | PhD Research and Thesis | 3.000 | 0.000 | P | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.500 | 9.000 | 6.000 | 6.000 | 21.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.500 | 9.000 | 6.000 | 6.000 | 21.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.778 | 72.000 | 56.000 | 27.000 | 102.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.778 | 72.000 | 56.000 | 27.000 | 102.000 |

# Graduate-Unofficial Transcript

**Name: Chan,Jason**
**SIS ID: 0005210445**

### Summer 2022

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: DHH (06/20/2022 - 08/14/2022)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 890 | | PhD Research and Thesis | 2.000 | 0.000 | P | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 2.000 | 0.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 2.000 | 0.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.778 | 74.000 | 56.000 | 27.000 | 102.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.778 | 74.000 | 56.000 | 27.000 | 102.000 |

### Fall 2022-2023

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: Regular (09/07/2022 - 12/14/2022)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| E C E 888 | x | Topics in Math Data Science | 3.000 | 3.000 | A | 12.000 |
| M E 890 | | PhD Research and Thesis | 3.000 | 0.000 | P | 0.000 |
| PHYSICS 625 | PAC | Applied Optics | 4.000 | 4.000 | A | 16.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 4.000 | 10.000 | 7.000 | 7.000 | 28.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 4.000 | 10.000 | 7.000 | 7.000 | 28.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.824 | 84.000 | 63.000 | 34.000 | 130.000 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.824 | 84.000 | 63.000 | 34.000 | 130.000 |

### Spring 2022-2023

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: Regular (01/24/2023 - 05/05/2023)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 890 | | PhD Research and Thesis | 5.000 | 0.000 | P | 0.000 |
| M E 964 | | Spec Adv Topics-Mech Engr | 3.000 | 3.000 | AB | 10.500 |
| | Course Topic: | Radiation Heat Transfer | | | | |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 3.500 | 8.000 | 3.000 | 3.000 | 10.500 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 3.500 | 8.000 | 3.000 | 3.000 | 10.500 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.797 | 92.000 | 66.000 | 37.000 | 140.500 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.797 | 92.000 | 66.000 | 37.000 | 140.500 |

### Summer 2023

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: DHH (06/19/2023 - 08/13/2023)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 990 | | Dissertator Research&Thesis | 3.000 | 0.000 | P | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 3.000 | 0.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 3.000 | 0.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.797 | 95.000 | 66.000 | 37.000 | 140.500 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.797 | 95.000 | 66.000 | 37.000 | 140.500 |

### Fall 2023-2024

Program: Mechanical Engineering
Major: Mechanical Engineering PHD

Session: Regular (09/06/2023 - 12/13/2023)

| Course | | Description | Attempted | Earned | Grade | Points |
|---|---|---|---|---|---|---|
| M E 990 | | Dissertator Research&Thesis | 3.000 | 0.000 | | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Term Summary: | 0.000 | 3.000 | 0.000 | 0.000 | 0.000 |
| Adv Stg Term Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Term Summary: | 0.000 | 3.000 | 0.000 | 0.000 | 0.000 |

| | GPA | Attempted | Earned | GPA Units | Points |
|---|---|---|---|---|---|
| UW-Madison Cum Summary: | 3.797 | 98.000 | 66.000 | 37.000 | 140.500 |
| Adv Stg Cum Summary: | | 0.000 | 0.000 | 0.000 | 0.000 |
| Combined Cum Summary: | 3.797 | 98.000 | 66.000 | 37.000 | 140.500 |

Graduate Career Totals

| | |
|---|---|
| Advanced Standing Credits: | 0.000 |
| Cum Credits: | 66.000 |
| Cum GPA Credits: | 37.000 |
| Cum Grade Points: | 140.500 |
| GPA: | 3.797 |

Memoranda

04-05-2021
NOTE: A global public health emergency in Spring 2020, Summer 2020, Fall 2020 and Spring 2021 required marked changes to university operations that may have significantly affected student enrollment, learning, and grading.

End of Graduate-Unofficial Transcript