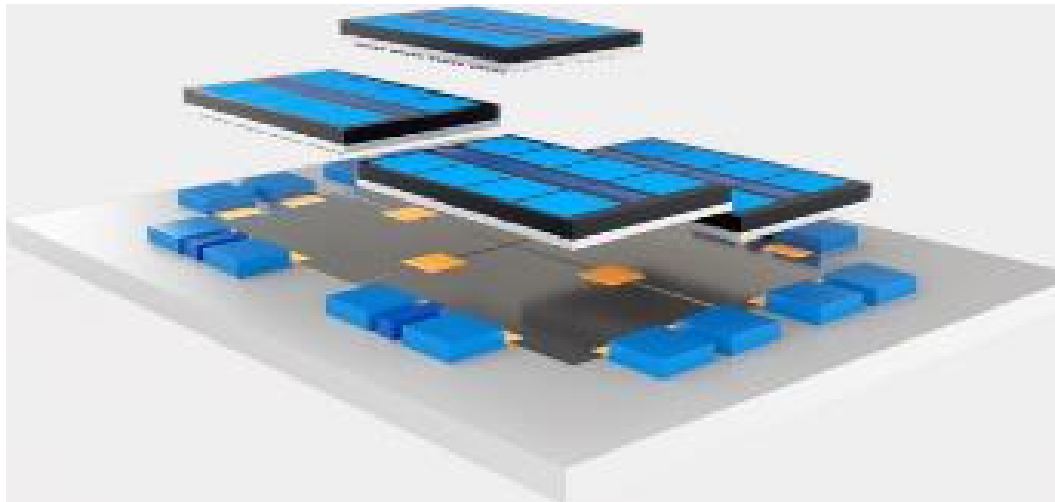




Semiconductor
Research
Corporation

Because the future can't wait, we bring the best
minds together to achieve the unimaginable

Packaging (PKG) Research Program Annual Review



July 12-14, 2022

Dallas, TX @ Texas Instruments

John Oakley, Science Director

Tameka Bell, Research Program Coordinator

<https://www.src.org/calendar/e007520/>
<https://www.src.org/program/grc/pkg/>

SRC Select Disclosure



Thank you!

On Behalf of the SRC,

Thank You!

To all the industry members for their sponsorship and mentorship

To all the Principal Investigators & their Students for the great research effort

To Tameka Bell at SRC for the logistical support

To all of you for being in-person with us!



Review Reminders



Everyone will be participating in-person

Presenters should remember to speak clearly and keep within the allotted time.



Timing: 30 min (25 min talk + 5 min Q/A)

Presentations and Q&A will be live. Please be mindful, so watch the time!!!



Informal Presentations

Please indicate if you want the audience to interrupt with questions. Q/A will occur at the end



Industry people: Evaluation form (electronic) to be collected

Submit Compelling Research Reasons (CRR) as appropriate.



Reminder: Invoicing and Deliverables



Regular invoicing

Invoice on regular basis: monthly is preferred

Excess money (calendar year) is considered profit and taxable!

Spending must occur within contract period

Invoicing expected to be at or above 95% invoiced at end of each contract period

Final invoice within 60 days after project ends



Submit deliverables on time: even 1 day is too late!

System will flag delinquencies

Late deliverables will stop invoices being paid and can jeopardize future funding

Contact SRC if there are issues with getting deliverables on time



Pre-publication drafts must be deposited at SRC > 60 days before published

Best practice: deposit draft to SRC website when submitting to journal/conference (also thesis)

Update the draft on the SRC website with final paper after acceptance (select submit a new version)

Acknowledgement of SRC funding must be added to all publications



Resources that Help Academics Evaluate, Adopt, and Amplify Emerging Member Solutions

Member Resources

- SRC has collected information members provide for the academic community, including education, design, and prototyping
- SRC researchers and students are encouraged to take advantage of these resources in their research and education activities
- Link to the resources: <https://www.src.org/program/grc/guide/researcher/guidelines/>

Member Resources

SRC has collected information members provide for the academic community, including education, design, and prototyping. SRC researchers and students are encouraged to take advantage of these resources in their research and education activities

Intel

- Intel Open Data Center Diagnostic Project
- Intel Academic Compute Resource Environment (ACE)
- Intel Academic Program for oneAPI

Analog Devices

- Active Learning Program
- ADALM-SR1 Hardware
- ADALM-SR1 Switching Regulator Active Learning Module

ARM

ARM Academic Access ARM Education

- ARM University Program Education Kits
- ARM Education Online Courses
- ARM Education Textbooks and Reference Books

Texas Instruments

Specific tutorial and curriculum for universities include:

- Texas Instruments University Program
- TI Robotics System Learning Kit
- TI Power Management Lab Kit
- TI Experimental Power Electronics Reference and Curriculum
- TI Precision Labs

IBM

- IBM tutorial and curriculum for universities
- IBM Skills Academy
- IBM + Coursera
- IBM PhD Fellowship Program
- IBM Quantum Computing - student opportunities
- IBM AI Hardware

NXP

- Rapid IoT Prototyping Kit

Siemens

- EDA Academic Products

Qualcomm

- University Relations Program



A Siemens Business



SRC Select Disclosure

INFORMATION
About SRC
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Contracts & IP
Management Charts
Corporate Annual Reports

FOR MEMBERS
My Company @ SRC
Liaisons

SRC VALUE
Awards Programs
Patents
Recruiter Guide
SRC Timeline

ACADEMIA
Researcher Resources
Funding Opportunities
Career Opportunities
Participating Universities
Education Alliance





New “Failure to Success” Workshops

<https://www.src.org/calendar/failure-to-success/>

New Workshop Series:
From Failure to Success
September 23rd

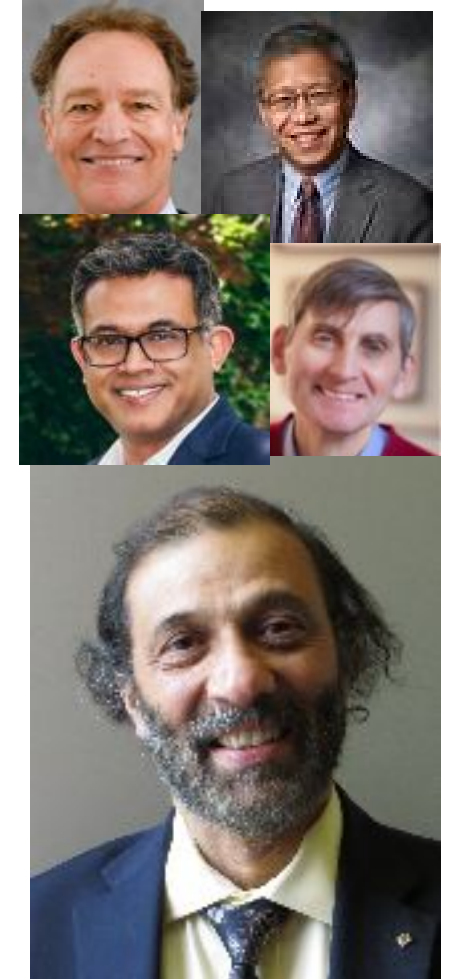


- New workshop series to highlight challenges faced by our researchers and how they overcame them or set a new direction
 - Not all research will be successful, but we should continuously learn
 - Open to all SRC: industry, other academia, and SRC Research Scholars
- Most recent Failure to Success (5/18): “Lemons are for Lemonade?” by Professor Subu Iyer, UCLA (<https://www.src.org/calendar/e007658/>), over 160 people attended.

I like very much the concept you have laid out, and I think I have a very nice example to share with the SRC community.



- More workshops are coming. Please stay tuned!





Reminder: Send News Items to SRC

<https://www.src.org/newsroom/newsletter/>

- Send noteworthy events and announcements that you and your team are involved in to SRC
- Send this information on a monthly basis. We use what we can in our SRC newsletter and monthly emails to the Advisory Board and liaisons
 - Best Paper Awards (who, award, title of piece, where, when and photos of students/faculty)
 - Papers, posters presentations, and/or conference talks
 - Professional Recognition Awards: IEEE, teaching awards, etc.
 - Professional activities such as workshops, tutorials, and invited talks
- All submissions must have a web link (URL) to the award, paper, etc.
 - If you have your own website that contains information pertaining to your research, share the link with SRC as well



More Than
17,000
subscribers!!



New SRC Student Platform on LinkedIn (Beta)

<https://www.src.org/student-center/handbook/linkedin/>

Join
the
Beta
Now!

- SRC Student Programs is rebranding to “**SRC Research Scholars**” Program
- What is the **SRC Research Scholars Program**?
 - SRC provides undergrads, graduate students, and postdoctoral researchers with a unique education consisting of traditional course work, cutting-edge research, and direct interaction with the semiconductor industry
 - These Research Scholars work on industry-relevant research with SRC-funded faculty who are recognized experts in their fields
 - Through our extensive community of academics and industry personnel, we nurture the evaluation of the talent pipeline for our industry and beyond
 - Our alumni have become industry leaders and renowned faculty researchers, creating a virtuous cycle where mojo begets mojo

Get LinkedIn with SRC

SRC uses a special LinkedIn Affiliate page for the SRC Research Scholars Program. Undergrad, graduate students, and postdoctoral researchers participating on SRC research add their SRC Research Scholars experience to their LinkedIn profile. This allows Scholars a way to professionally showcase their talent and experience. It also simplifies how recruiters, engineers, and even other Scholars can find SRC Research Scholars, using either the LinkedIn Search* or LinkedIn Recruiter*.

SRC Research Scholars Program*



By being part of our community, Research Scholars will have a unique opportunity to get to know professionals with careers in the semiconductor industry or government, top researchers in their fields, and other students with similar interests.

SRC Select Disclosure

SRC encourages all undergrads, graduate students, and postdoctoral researchers to join this Beta program!!!



Reminder: Student Hiring/Internship information back to SRC

- Relevantly trained students are one of the most valuable outcomes of the funded research
 - Hiring information is an important data point to highlight the value of SRC funded research to our member companies
- Include any SRC students (whether directly funded or participated in some way on the research) that graduated, were hired, or had an internship
 - **If you have a student that is working on the project but funded through other sources have them create a student account with SRC;** this allows SRC to promote them to our industry members
 - And let SRC know how they are being funded; as leveraged funding is a benefit for the members.
- Many students graduate and start the next chapter of their life but leave without updating their student record on the SRC website
 - As your students do internships or accept hiring offers, **Pls are expected to have their students update their accounts at SRC**





Intellectual Property Statement

<https://www.src.org/about/contracts-ip/#ip>

The information provided by researchers during this annual review

- Is the property of the university and of the researchers presenting this information
- May include research results sponsored by and provided to the funding members
- May include intellectual property rights belonging to the university and SRC, to which sponsors may have license rights

By attending or viewing this review, you are agreeing

- Not to use this information for purposes unrelated to the review unless and until approved by SRC
- To keep this information in confidence until the university and SRC have evaluated and secured any applicable intellectual property rights

After any intellectual property rights have been secured, the SRC encourages the University and researchers to publish and freely disseminate this information and results of the sponsored research program.

- Worldwide patent rights are waived if publication or public dissemination occurs prior to filing a corresponding U.S. provisional or utility patent application





General Data Protection Regulation

<https://www.src.org/app/account/guide/privacy-policy/>

- Applies to SRC
- Personal data regulations
- Involves privacy notices, consent, and security
- SRC Privacy Policy



Tuesday, July 12

8:00 - 8:30 am	Registration / Poster Setup	
8:30 - 8:45 am	Introduction	John Oakley / SRC
8:45 - 9:00 am	TI Introduction	Representative
9:00 - 9:30 am	2878.009 : Predictive Multiphysics Models for Solder Reliability	Ganesh Subbarayan, Marisol Koslowski & Andrew Pham / Purdue
9:30 - 10:00 am	2948.001 : Polarization Curves and Multiphysics Corrosion Life Prediction for Au-Flash Palladium-Coated Copper, PCC, Cu, Al, and Ag-Wirebonding in 50-300V High Voltage Devices for Automotive and Harsh Environment Applications	Pradeep Lall / Auburn
10:00 - 10:30 am	3077.001 : Predictive-Models and Characterization-Data for Package-Interfaces under Sustained High-Temperature High-Humidity Operation in Automotive Underhood Environments	
10:30 - 10:45 am	Break	
10:45 - 11:15 am	2878.008 : Correlated Moisture Diffusion, Ion-Transport, and Bond-wire Corrosion in Filled Polymers	Ganesh Subbarayan & Muhammad A. Alam / Purdue
11:15 - 11:45 am	2878.011 : Fine Pitch Cu-Sn based Interconnection Below Temperatures of 180C	Ganesh Subbarayan, Ezer Castillo, Ronit Das & Nikolay Dimitrov / Binghamton - SUNY
11:45 - 12:15 pm	2878.012 : Reliable Low Temperature Solder Approach	Ganesh Subbarayan & Peter Borgesen / Binghamton - SUNY
12:15 - 1:15 pm	Lunch / Poster Session	
1:15 - 1:45 pm	Industry Talk	
1:45 - 2:15 pm	2878.014 : Multi-Integrating Receivers (MIR) for >200Gbps, <0.5pJ/b Electrical Links using PAM8 on Connectors over 100mm Channel	Ganesh Subbarayan & Shreyas Sen / Purdue
2:15 - 2:45 pm	2878.017 : In Situ Studies on Thermal Compression Bonding of Nanotwinned Cu with Passivation Layers	Ganesh Subbarayan & Xinghang Zhang & Carol A. Handwerker / Purdue
2:45 - 3:15 pm	2878.021 : Microalloying for Stable Low Temperature Solder Microstructures and Reliable Heterogeneous Integration	Ganesh Subbarayan, Carol A. Handwerker & Hannah Fowler / Purdue
3:15 - 3:30 pm	Break	
3:30 - 4:00 pm	2878.015 : Design, Fabrication, and Testing of Metal Porous Media for Thermal Capacitor and Immersion Cooling Applications	Ganesh Subbarayan / Purdue & Bahgat Sammakia, Srikanth Rangarajan, Ayushman Singh & Kandance Tredo / Binghamton - SUNY
4:00 - 4:30 pm	2878.019 : High Thermal Interface Conductance Metrology	Ganesh Subbarayan, Amy Marconnet, Justin Weibel & Aalok Gaitonde / Purdue
4:30 - 5:00 pm	2878.020 : Intra-Die Cooling of Monolithic 3D Stacks using Oscillating Heat Pipe Spreaders	Ganesh Subbarayan & Liang Pan & Justin A. Weibel / Purdue
5:00 - 5:30 pm	2878.013 : Investigating the Mechanics of Chip/Encapsulant Interfaces Utilizing Mechanophores	Ganesh Subbarayan, Chelsea Davis & Jared Gohl / Purdue
5:30 - 5:45 pm	Break	
5:45 - 6:15 pm	TAB Caucus	
6:30 pm	Dinner	



Agenda for Annual Review – Day 2

Wednesday, July 13

8:00 - 8:30 am	Registration / Poster Setup	
8:30 - 8:45 am	Introduction	John Oakley / SRC
8:45 - 9:15 am	2976.001 : Predictive Methodology to Assess Reliability Life Capability of Solder Interconnects	Ganesh Subbarayan / Purdue
9:15 - 9:45 am	2878.010 : Conformal Polymeric Thin Films Manufactured Using Electrospray Printing	Ganesh Subbarayan / Purdue & Paul Chiarot & Bryce Kingsley / Binghamton - SUNY
9:45 - 10:15 am	2878.018 : Printed Conformal Metal Films for Electromagnetic Interference (EMI) Protection	Ganesh Subbarayan & Paul Chiarot, Bahgat Sammakia & Emma Pawliczak / Binghamton - SUNY
10:15 - 10:30 am	Break	
10:30 - 11:00 am	2947.001 : Few Layer Hexagonal Boron Nitride for Heat Spreading in Portable Microsystems	Satish Kumar / Georgia Tech
11:00 - 11:30 am	3072.001 : PMIP: Power-Magnetics-in-Package Technology for Ultra-Compact Vertical 48V-1V CPU Voltage Regulators	Minjie Chen / Princeton
11:30 - 12:00 pm	3080.001 : Low-temperature Cu-Cu Hybrid Bonding for Die-to-Wafer Application	Chih Chen & Wen-Wei Wu / NYCU
12:00 - 1:00 pm	Lunch / Poster Session	
1:00 - 1:30 pm	2952.001 : Magnetic Actuation Metrology for Interfacial Adhesion Measurement	Suresh Sitaraman / Georgia Tech
1:30 - 2:00 pm	2953.001 : Electrodeposited CoNiFeX Magnetic Films with Low Magnetic Losses for Power Applications	Stanko R. Brankovic & Dhaivat Solanki / Univ. of Houston
2:00 - 2:30 pm	3044.001 : 3D Temperature Mapping of Stacked Dies	David G. Cahill / UIUC
2:30 - 2:45 pm	Break	
2:45 - 3:15 pm	3079.001 : Characterization of Interfacial Adhesion under Cyclic Loading	Rui Huang / UT/Austin
3:15 - 3:45 pm	3070.001 : 2.5D Integrated GaN Voltage Regulator (VR) with Embedded Magnetics	Fang Luo / Stony Brook
3:45 - 4:15 pm	3081.001 : 2.5D Polymer-based Interposer Technology for the Heterogeneous Integration of 6G Wireless Communication Systems	Yu-Ting Cheng / NYCU
4:15 - 4:45 pm	3076.001 : A Novel RDL Interposer Fabrication by Low Temperature Hybrid Bonding Method	Kuan-Neng Chen / NYCU
4:45 - 5:00 pm	Break	
5:00 - 5:30 pm	TAB Caucus	
6:00 pm	Dinner	



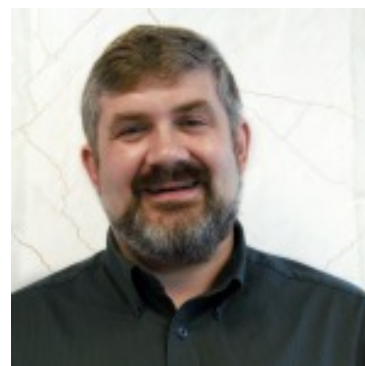
Agenda for Annual Review – Day 3

Thursday, July 14

8:00 - 8:30 am	Registration / Poster Setup	
8:30 - 8:45 am	Introduction	John Oakley / SRC
8:45 - 9:15 am	3071.001 : Innovation of Warpage Prediction for Transfer Molding and Compression Molding Processes	Bongtae Han / UM/College Park
9:15 - 9:45 am	2949.001 : Metallurgical Exploration of UBM/Solder Microstructure for Suppression of Early Electromigration Failures	Choong-Un Kim / UT/Arlington
9:45 - 10:15 am	3075.001 : Advanced Characterization Techniques for Investigating Failure Mechanism of Silicon and Package Interconnects	
10:15 - 10:30 am	Break	
10:30 - 11:00 am	2950.001 : Heterogeneous Sensor System in Package (SSiP) Integration Using Wafer-Level Molding	Matthew Johnston / Oregon State Univ.
11:00 - 11:30 am	3073.001 : Integrated Chiplet-Encapsulation for 3D Heterogeneous Integration	Muhannad S. Bakir / Georgia Tech
11:30 - 12:00 pm	3074.001 : High Performance Copper-Epoxy Interfaces for High Frequency Inter-die and Off-package Signal Transmission	John Flake / LSU
12:00 - 1:00 pm	Lunch / Poster Session	
1:00 - 1:30 pm	Industry Talk	
1:30 - 2:00 pm	3078.001 : Tunable Low-cost Passivation Coating for Facilitating Copper Wafer-level Bonding	Oliver Chyan / Univ. of North Texas
2:00 - 2:30 pm	2810.080 : Efficient and High-Density Fully In-Package GaN-Based High-Ratio DC-DC Converters	Kenneth K. O, Cheng Huang, Muhammad Rizwan Khan, Si Yuan Sim & Dawei Wang / Iowa St Univ.
2:30 - 2:45 pm	Break	
2:45 - 3:15 pm	TAB Caucus	



Thank You!



John Oakley

Science Director

John.Oakley@src.org



SRC Liaison Program

Maximizing the Value of Participation

Move Yourself, Your Company and the Next Generation Forward

Develop the Workforce

- Provide relevant guidance for industry challenges
- Prepare students to enter industry or pursue future academics

Contribute to Research

- Encourage technology exchange between university and industry
- Bridge the conventional gap between academia and industry

Academia Contributes to Industry

- Provide an out of the box approach to current problems which enhance industry research and development enables a differentiated product for the marketplace
- Provide an outside perspective adding diversity to the thought process of how best to attack a challenge

Access New Technology

- Gain valuable insights into problems and solutions that will ultimately impact industry competitiveness
- Provide an effective way to deliver actionable research results directly into their companies

Identify the Best

- Identify the most compelling research from current and recent research

Expectation to have regular PI-Liaisons calls at least one every 4-8 weeks





Effective collaboration begins with communication

SRC Program Manager

- Runs Advisory Board and aligns research
- Educates PI about requirements and responsibilities
- Encourages Liaison participation
- Finds opportunities for further engagement

University PI

- Pursues ambitious, ground-breaking research
- Schedules regular calls, every 4-8 weeks
- Arranges meet-ups at conferences
- Presents research at annual reviews

Student

- Leads meetings
- Presents findings
- Aims to present at TECHCON
- Is knowledgeable about SRC members

Liaison

- Provides industry perspective to PI
- Transfers technology into company
- Advocates for SRC research
- Coordinates with Advisory Board

**Academics solving
meaningful problems**

**Increase of tech
transfer**

Clear investment ROI



SRC Scholars for Hire/Internship within 1 yr

PKG

https://www.src.org/student-center/student-directory/?grc-thrust_areas=509

Last Name	First Name	Advisor	Task / Theme	Expected Grad. Date	Internship Avail. Date	Hire Avail. Date	Thesis / Interest	Task Title	Degree
Ginga	Nick	Suresh Sitaraman (Georgia Tech)	2952.001	2021-12-31		2020-04-01	Electronic Packaging, Finite element analysis, thin film fracture, micro nano scale fabrication	Magnetic Actuation Metrology for Interfacial Adhesion Measurement	Post Doc
Sim	Si Yuan	Cheng Huang (Iowa St Univ.)	2810.080	2022-05-09	2022-05-09	2022-05-09		Efficient and High-Density Fully In-Package GaN-Based High-Ratio DC-DC Converters	BS
Fathe	Harris Tariq	Amy Marconnet (Purdue)	2878.019	2022-05-13		2022-05-23		High Thermal Interface Conductance Metrology	BS
Deneke	Naomi	Chelsea Davis (Purdue)	2878.013	2022-05-14				Investigating the Mechanics of Chip/Encapsulant Interfaces Utilizing Mechanophores	PhD
Prasad	Sudarshan	Ganesh Subbarayan (Purdue)	2976.001	2022-05-15		2022-05-15		Predictive Methodology to Assess Reliability Life Capability of Solder Interconnects	PhD
Hurley	Thomas	Paul Chiarot (Binghamton - SUNY)	2878.010	2022-05-18	2021-05-16			Conformal Polymeric Thin Films Manufactured Using Electrospray Printing	MS
Liao	Huanyu	Ganesh Subbarayan (Purdue)	2976.001	2022-05-18	2021-05-01	2022-05-18	Geometric Issues in Modeling Intersection, Merging and Separation of Explicit Three-Dimensional Parametric Geometries using Algebraic Level Sets	Predictive Methodology to Assess Reliability Life Capability of Solder Interconnects	PhD
Sivasubramony	Rajesh Sharma	Peter Borgesen (Binghamton - SUNY)	2878.012	2022-05-30		2022-02-01		Reliable Low Temperature Solder Approach	PhD
Thekkut	Sanoop	Peter Borgesen (Binghamton - SUNY)	2878.011	2022-05-31	2022-06-01	2022-06-01	Towards A More Reliable Microjoint (PhD) Damage Accumulation Behavior in Tin-Lead solder Joints During Isothermal Cycling (Masters)	Fine Pitch Cu-Sn based Interconnection Below Temperatures of 180C	PhD
Chen	Rui	Suresh Sitaraman (Georgia Tech)	2952.001	2022-06-30		2022-07-01		Magnetic Actuation Metrology for Interfacial Adhesion Measurement	Post Doc

If your company is looking for great candidates, please consider SRC Scholars first!



SRC Scholars for Hire/Internship within 1 yr

PKG

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Last Name	First Name	Advisor	Task / Theme	Expected Grad. Date	Internship Avail. Date	Hire Avail. Date	Thesis / Interest	Task Title	Degree
Yao	Bojing	Liang Pan (Purdue)	2878.020	2022-07-01		2022-08-01	Surfing scanning probe nanolithography at meters per second+Z26 Plasmonic assisted hot electron emission	Intra-Die Cooling of Monolithic 3D Stacks using Oscillating Heat Pipe Spreaders	PhD
Vaca	Diego	Satish Kumar (Georgia Tech)	2947.001	2022-07-31	2022-05-31	2023-01-02	Investigation of thermal performance of thin films for emerging electronic applications.	Few Layer Hexagonal Boron Nitride for Heat Spreading in Portable Microsystems	PhD
Solanki	Dhaivat	Stanko R. Brankovic (Univ. of Houston)	2953.001	2022-08-01	2021-08-16	2021-08-16		Electrodeposited CoNiFeX Magnetic Films with Low Magnetic Losses for Power Applications	PhD
Salunke	Ashish Shivaji	Oliver Chyan (Univ. of North Texas)	3078.001	2022-08-01				Tunable Low-cost Passivation Coating for Facilitating Copper Wafer-level Bonding	PhD
Kingsley	Bryce	Paul Chiarot (Binghamton - SUNY)	2878.010	2022-08-31			My research focuses on utilizing electro spray deposition to print thin polymer films. The film thickness and morphology can be changed by modulating the processing parameters. Polymer films as thin as 50 nm have been printed with this spray process.	Conformal Polymeric Thin Films Manufactured Using Electro spray Printing	PhD
Castillo	Ezer	Nikolay Dimitrov (Binghamton - SUNY)	2878.011	2022-08-31				Fine Pitch Cu-Sn based Interconnection Below Temperatures of 180C	PhD
Ni	Geng	Choong-Un Kim (UT/Arlington)	2949.001	2022-08-31			My current research focus on Interdiffusion in Nb and bronze: route for Nb3Sn superconductivity. Also, I worked for failure analysis projects such as corrosion, electron migration, diffusion of intermetallic phases as my phd side-projects.	Metallurgical Exploration of UBM/Solder Microstructure for Suppression of Early Electromigration Failures	PhD

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SRC Scholars for Hire/Internship within 1 yr

PKG

https://www.src.org/student-center/student-directory/?grc-thrust_areas=509

Last Name	First Name	Advisor	Task / Theme	Expected Grad. Date	Internship Avail. Date	Hire Avail. Date	Thesis / Interest	Task Title	Degree
Baek	Jaeil	Minjie Chen (Princeton)	3072.001	2022-08-31		2022-07-01	High-performance miniaturized power electronics systems (architecture, control, magnetics) for broad applications in renewable energy, data centers, eco-friendly vehicles, medical equipment, and robotics.	PMIP: Power-Magnetics-in-Package Technology for Ultra-Compact Vertical 48V-1V CPU Voltage Regulators	Post Doc
Le	Jimmy-Bao	Choong-Un Kim (UT/Arlington)	3075.001	2022-12-15				Advanced Characterization Techniques for Investigating Failure Mechanism of Silicon and Package Interconnects	MS
Das	Ronit	Peter Borgesen (Binghamton - SUNY)	2878.011	2022-12-31	2022-01-01	2023-01-02	Master's Thesis: Evolution of Intermetallic Morphology and Void Formation in Microjoints of Nickel/Tin/Nickel	Fine Pitch Cu-Sn based Interconnection Below Temperatures of 180C	PhD
Liu	Demin	Kuan-Neng Chen (NYCU)	3076.001	2022-12-31			Development of Low-temperature Cu-Cu Direct Bonding Technology Based on Passivation Scheme	A Novel RDL Interposer Fabrication by Low Temperature Hybrid Bonding Method	PhD
Huby	John	Liang Pan (Purdue)	2878.020	2023-05-08				Intra-Die Cooling of Monolithic 3D Stacks using Oscillating Heat Pipe Spreaders	BE
Njuki	Michael	Nikolay Dimitrov (Binghamton - SUNY)	2878.011	2023-05-15	2022-05-01		A STUDY OF RELIABILITY ISSUES IN AN INTERCONNECT TECHNOLOGY BASED ON FINE PITCH SOLDER JOINTS	Fine Pitch Cu-Sn based Interconnection Below Temperatures of 180C	PhD
Wu	Yifan	Carol A. Handwerker (Purdue)	2878.021	2023-05-24	2022-01-11			Microalloying for Stable Low Temperature Solder Microstructures and Reliable Heterogeneous Integration	PhD
Tajedini	Mohsen	Choong-Un Kim (UT/Arlington)	2949.001	2023-08-16	2021-12-10	2022-08-18	Study of Interface Reaction and Electromigration Failure Mechanism in Cu Wirebonds	Metallurgical Exploration of UBM/Solder Microstructure for Suppression of Early Electromigration Failures	PhD

If your company is looking for great candidates, please consider SRC Scholars first!

SRC Select Disclosure



SRC Scholars for Hire/Internship within 1 yr

https://www.src.org/student-center/student-directory/?grc-thrust_areas=509

Last Name	First Name	Advisor	Task / Theme	Expected Grad. Date	Internship Avail. Date	Hire Avail. Date	Thesis / Interest	Task Title	Degree
Kasturi	Madhu Laxminarayana	Pradeep Lall (Auburn)	3077.001	2023-08-31	2021-03-01		Degradation Mechanisms in High-Temperature Packaging Components	Predictive-Models and Characterization-Data for Package-Interfaces under Sustained High-Temperature High-Humidity Operation in Automotive Underhood Environments	PhD
Mendoza	Jorge	Choong-Un Kim (UT/Arlington)	3075.001	2023-12-15	2022-01-03	2022-01-03		Advanced Characterization Techniques for Investigating Failure Mechanism of Silicon and Package Interconnects	MS
Gohl	Jared	Chelsea Davis (Purdue)	2878.013	2023-12-16	2022-05-16			Investigating the Mechanics of Chip/Encapsulant Interfaces Utilizing Mechanophores	PhD
Ufomba	Chinedum	Liang Pan (Purdue)	2878.020	2024-05-11	2022-05-16	2022-08-21		Intra-Die Cooling of Monolithic 3D Stacks using Oscillating Heat Pipe Spreaders	BS
Gaitonde	Aalok	Amy Marconnet (Purdue), Justin A. Weibel (Purdue)	2878.019	2024-05-15	2022-05-16			High Thermal Interface Conductance Metrology	PhD
K	Gaurav Kumar	Shreyas Sen (Purdue)	2878.014	2024-05-31	2022-05-15			Multi-Integrating Receivers (MIR) for >200Gbps, <0.5pJ/b Electrical Links using PAM8 on Connectors over 100mm Channel	PhD
Chiang	Kai-chieh	Marisol Koslowski (Purdue)	2878.009	2024-12-31	2022-05-02			Predictive Multiphysics Models for Solder Reliability	PhD
Mahmood	Atif	Peter Borgesen (Binghamton - SUNY)	2878.011	2025-05-31	2022-06-01	2022-12-05		Fine Pitch Cu-Sn based Interconnection Below Temperatures of 180C	PhD
Jois	Chetan	Ganesh Subbarayan (Purdue)	2976.001	2025-12-16	2022-05-12			Predictive Methodology to Assess Reliability Life Capability of Solder Interconnects	PhD
Ray	Yudhajit	Shreyas Sen (Purdue)	2878.014	2025-12-20	2022-05-16			Multi-Integrating Receivers (MIR) for >200Gbps, <0.5pJ/b Electrical Links using PAM8 on Connectors over 100mm Channel	PhD