PLoP® 2024

PLoP® Conference Proceedings

31st CONFERENCE ON PATTERN LANGUAGES OF PROGRAMS, PEOPLE, AND PRACTICES

October 13–16, 2024, Skamania Lodge Columbia River Gorge, Washington, USA

Proceedings

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The Pattern Languages of Programs, People, and Practices (PLoP) conference is a premier event for pattern enthusiasts to gather, discuss, and learn. Originally focused on software-related patterns and pattern languages, PLoP has expanded into all aspects of the built world—anything that is designed and made by people, including organizations, culture, and individual practice.

PLoP is organized by The Hillside Group. PLoP 2024 was held in cooperation with the ACM.

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Preface

The last P in the PLoP's name now stands not only for programs, but also for people and practices. This decision, made at the Hillside Board meeting held at PLoP 2023, first affected AsianPLoP 2024. Although programs in the PLoP's name were meant more broadly than just computer programs, we felt it would be better to make this intention for interdisciplinarity explicit. It is worthwhile noting that Hillside Europe also recognized this trend and renamed EuroPLoP accordingly.

Nostalgia for Allerton as the original conference site will probably remain forever with those who had an opportunity to experience PLoP there, but we all knew PLoP needed a harbor that would allow it to grow (and also recede for a moment, if that happens). Skamania Lodge offers a similar sense of disconnection from daily life and connection to nature, while being a bit more accessible.

PLoP has always supported its participant in sharing their ideas and interacting over them in other ways. However, this effectively narrowed down to focus groups and lightning talks. For this PLoP, we invited the proposers of such sessions to let their imagination run wild. We ended up with 23 sessions: three plenary talks, one pattern mining session, one panel discussion, eight focus groups, seven workshops, and three lightning talks covering a range of trending and recurring topics. All of them were highly interactive, including the plenary talks. Making all this happen required close collaboration with proposers to find the format that suited them best.

Imagination run wild sessions attracted a number of participants who wouldn't participate in writers' workshops. We consider these sessions to be full-fledged contributions to the conference. While writers' workshops, introduced by Richard Gabriel in the first PLoP, remain the backbone of the conference, we felt we needed to let its muscles run wild a bit. To keep these two aspects of the conference together, we encouraged the organizers of imagination run wild sessions to take a peek at writers' workshop sessions and many of them did. We hope to see them soon as the authors of the papers discussed at writers' workshops. The authors of the papers were naturally attracted to imagination run wild sessions. It was a bit a challenge to make room in the program to let them do so. Now that we learned how to this, it would be easier to organize next conferences.

Valentino Vranić and MaryLynn Manns, PLoP 2024 Program Chairs

Imagination Run Wild Sessions

"Pattern Mining & Writing as a Collective Endeavor (Global Warming Leadership)" (pattern mining session) by MaryLynn Manns, with special guests from MeetGreen: Nancy Zavada and Brianna Warren

"A Holistic Way of Creating Pattern Languages of Practices" (plenary talk) by Takashi Iba

"Moderators Workshop: Learn to be a Writers' Workshop Moderator" (workshop) by Joe Yoder, Rebecca Wirfs-Brock, and Richard Gabriel

"Deliver Your Patterns Through Song: A Hands-On Workshop on Creating Original Pattern Songs with Generative AI" (workshop) by Takashi Iba, Erika Inoue, Mizuki Ota, Kiyoka Hayashi, Sae Adachi, An Hikino, and Mimi Kuwataka

"Adopting Patterns by Analogy Through Drama" (focus group) by Aleksandra Vranić and Valentino Vranić

"The Evolution of the Microservice Architecture Pattern Language" (plenary talk) by Chris Richardson

Plenary Writers' Workshop (workshop) by Rebecca Wirfs-Brock

"Flourishing with Feminism: Patterns to Overcome Workplace Cultures of Domination and Control" (workshop) by Matt Wynne and Elizabeth Ayer

"Pattern Accelerator: Create Patterns Fast, Share Them with the World" (focus group) by Christopher Barney

"Where Are the Patterns when I Need Them?" (focus group) by Antonio Maña

"Like a Puzzle: Assembling RegEx Through Blocky" (focus group) by Brandon Woolman and Laura Albrant

"Capturing Curiousity" (focus group) by Mindi Weik

"The New Emperor's Old, Old Clothes: Patterns & Programming in the Era of AI" (focus group) by Antonio Maña and James Noble

"Examples Make Patterns Comprehensible" (lightning talk) by Valentino Vranić

"Emojis Invade Programing" (lightning talk) by Eduardo Guerra

"Creating a Pattern Language Together with People in Difficulties" (lightning talk) by Erika Inoue

"How to "Live Your Patterns"" (panel discussion) by Kyle Brown, Chris Kohls, Joe Yoder, and Rebecca Wirfs-Brock (moderated by MaryLynn Manns)

"Unraveling the Research Tapestry" (workshop) by Sae Adachi and Takashi Iba

"Boost the Willpower to Face Your Challenges: Using Patterns for Harnessing Manga Characters' Mindset" (workshop) by Mizuki Ota, Mimi Kuwatka, and Takashi Iba

"The Great Data Bake-Off: Creating Delicious Data Analytics Patterns" (focus group) by Mike Salé

"Pattern Illustrations Made Easy" (workshop) by Lula Rodrigues

"Envision the Future of Collaboration" (focus group) by Charles Danoff, Mary Tedeschi, and Sridevi Ayloo

"A Conversation with Christopher Alexander" (plenary talk) by Michael Mehaffy

Papers

Group Wahkeena Falls, led by Valentino Vranić

"A Pattern Language for Nurturing an Exciting Life: Focusing on Patterns for Facing Your Future Life"
by Rio Nitta and Takashi Iba

"The Way of Living Like a Shonen Manga: A Pattern Language to Envision a Life of Bold Challenges"
by Mizuki Ota, Mimi Kuwataka, and Takashi Iba

"Patterns for Bridging the Digital Gender Divide in Afghanistan"
by Mohammad Yusuf Momand, Valentino Vranić, and Jamilurahman Faizi

"A Pattern Language for Weaving Relationships Between Everyday Life and Nature"
by Kiyoka Hayashi and Takashi Iba

"Patterns for Dealing with Typical Situations at Creative Writing Classes"
by Aleksandra Vranić

"Portraits of Passionate Creators of Pattern Languages of Practices in Japan"
by An Hikino and Takashi Iba

Group Wahclella Falls, led by Andrew P. Black

"Evolutionary Design Patterns"
by Jim Applegate

"Connecting Friends over Distance: Patterns for Increasing Closeness in Digital Communication"
by Dominik Deimel

"Pattern Writing as Reflection: Discussion on Pattern Writing as an Approach to Enhancing Reflection"
by Norihiko Kimura, An Hikino, and Takashi Iba

"Philosophical Dialogue Patterns: A Pattern Language for Collaborative Essence Exploration Based on Husserl's Phenomenology"
by Haruka Kimura and Takashi Iba

Group Multnomah Falls, led by Christian Kohls

"Enhancing Undergraduate Proficiency Through the Iterator Pattern in Programming Pedagogy"
by Mary Tedeschi, Deep Mehta, Pulkit Singh, Sejal Arora, Arpit Shah, Nihal Kaniyeri, Chintan Chauhan, and Sergio Belich

"Fundamental Patterns for Crafting Engaging Manga"
by Hiroaki Tanaka and Takashi Iba

"Learning Space Patterns: Bleachers and Media Podium"
by Christian Kohls and Dennis Dubbert

"Pair Learning Pattern"
by Charles Jeffrey Danoff, Sridevi Ayloo, Mary Tedeschi, and Isaih Battiste

"Patterns for Introductory Programming Education"
by Anja Bertels and Leonie Kallabis

"Teach English with Comics"
by Charles Jeffrey Danoff, Mary Tedeschi, Sridevi Ayloo, Joseph Corneli, Raymond Puzio, Charlotte Pierce, and Sergio Belich

Group Elowah Falls, led by Joe Yoder

"Affective and Conative Patterns for Improving Developer Experience"
by Daniel Pinho, Ademar Aguiar, and Vasco Amaral

"Dark Patterns for Unethical Software Engineering"
by Cesare Pautasso

"Design Patterns for Software Sustainability"
by Kevin Lano, Zishan Rahman, and Lyan Alwakeel

"Green Framework Patterns—Strategies for Embedding Sustainability into Application Frameworks"
by Balawal Sultan, Jacopo Ammendola, and Eduardo Guerra

"Towards a Pattern Language for Mixed Microprocessor and Microcontroller (Hybrid) Edge Development"
by Hugo Sereno Ferreira, Basma El Gaabouri, Chris Adeniyi-Jones, and Eric Van Hensbergen

"Transaction Inventory"
by Jim Episale

Group Metlako Falls, led by Kyle Brown

"Toward a Pattern Language for Persona-Based Interactions with LLMs"
by William Schreiber, Jules White, and Douglas C. Schmidt

"Pattern Application Support Framework in Machine Learning Reliability Solution Patterns"
by Takumi Ayukawa, Jati H. Husen, Nobukazu Yoshioka, Hironori Washizaki, and Naoyasu Ubayashi

"Ways of Utilizing Generative AI to Expand Individual Capabilities: Patterns for Academic Writing Translation, Future Vision Visualization, and Video Theme Songwriting"
by Takashi Iba and Erika Inoue

"Patterns for Conversational AI Applications"
by Kyle Brown and Stephen Meier

"Prompt Patterns for Structured Data Extraction from Unstructured Text"
by Max Moundas, Jules White, and Douglas C. Schmidt

"Software Engineering Patterns for Machine Learning Application Systems"
by Hind Milhem and Neil B. Harrison

"What Computers MUST Do (and Humans Too)"
by Michael W. Mehaffy

Imagination Run Wild Reports

"A Holistic Way of Pattern Language Crafting: Process, Forms of Reasoning, and the Grounded Essence Approach (GEA)"
by Takashi Iba

"Adopting Patterns by Analogy Through Drama"
by Aleksandra Vranić, Valentino Vranić, and Zishan Rahman

"Deliver Your Patterns Through Song!—A Hands-On Workshop On Creating Original Pattern Songs with Generative AI"
by Takashi Iba, Erika Inoue, An Hikino, Mizuki Ota, Kiyoka Hayashi, Sae Adachi, and Mimi Kuwataka

"Workshop Report: Flourishing with Feminism"
by Elizabeth Ayer and Matt Wynne

"Pattern Accelerator: Rapid Pattern Generation, Pattern Library, Patterns as Pedagogy, Pattern Ontology for AI Search Training"
by Christopher Barney

Conference Organization

Program Chairs	Valentino Vranić (Pan-European University, Slovakia)
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